



enewsforindustry

NUMBER 28 | NOVEMBER 2008



2 Futureintech abroad

Facilitator Gay Watson's experience of a conference in British Columbia



4 Industry support grows in 2008

At the end of a busy year, it's time to look back at a few significant milestones



6 Futureintech news

Ambassadors help in TNEA wins
Third Futureintech video

7 About Futureintech

Futureintech of interest abroad

Futureintech Facilitator Gay Watson was recently invited to British Columbia, Canada to offer

Futureintech's approach as a possible solution to the Canadian skills shortage.

The response? "Fantastic!"

Global challenges

New Zealand isn't the only country struggling to find skilled labour in today's economic climate. Recent reports in Canada are finding that the country has a severe lack of engineers, ICT professionals, and scientists. At a time of global labour shortages, Canadian educators and industry leaders are searching for ways to grow their own skilled employees.

A June 2007 report from the British Columbia Chamber of Commerce states that "BC is at a 'skills crossroad' and now we are significantly behind the eight-ball on this issue. ... Without pre-emptive action on the key skills gaps ... BC small businesses and policy makers will increasingly lose the competitive talent war."

The Canadian Chamber of Commerce takes it a step further in a report released earlier this month, *Building a 21st Century Workforce: A Business Strategy to Overcome Canada's Skills Crisis*. Their major concern is that the number of Baby Boomers reaching retirement age will accelerate rapidly by 2011, and the skilled workforce isn't growing fast enough to replace them.

"It is vital to explore new ideas now and examine the measures that can be taken," the report states. "All of the economic partners – governments, businesses, academic institutions and labour – must work together to mitigate the economic impact and turn Canadian labour skills from a shortage to a competitive advantage."

One of those searching for new ideas is Dr Carolyn Labun, a science instructor and researcher of student development and engineering communication at the



University of British Columbia. She was one of the organisers behind the "Fuelling Our Future" conference in Kelowna, BC. After hearing about Futureintech from an Opus engineer who was supporting Gay's work, Carolyn became curious about the situation in New Zealand and invited Gay to fly to Canada for the conference.

Gay was among an impressive line-up of speakers, including Isabelle Blaine from the Natural Sciences and Engineering Research Council of Canada (NSERC); Catherine Roome, CEO of the British Columbia Safety Authority; and by video, Nobel Prize-winning physicist Carl Wieman.

"There were a number of interesting presentations from people who gave their points of view on the issues," says Gay. "For instance, the infrastructure in Canada is over 75 years old and will need to be replaced in the next ten to 15 years. Who will do this? How can they make engineering look like an attractive career?"

New ideas

Futureintech faces very similar issues in New Zealand – and if the response to Gay’s presentation was any indication, our solutions make a lot of sense. “It was fantastic – there’s no other word,” says Dr Labun. “People are still talking about it.”

Gay focused mainly on the Ambassadors – young, enthusiastic professionals who interact directly with students. She showed Futureintech’s promotional videos of two Ambassadors and described the different ways they can promote their careers, such as visiting classrooms, acting as mentors for school projects, participating in teacher workshops and attending careers events.

“There was a lot of head nodding going on when I talked about the need for Ambassadors to have face-to-face contact with the kids,” says Gay. “They need to be young people, and they need to be able to show the relevance of



maths, science, and technology in their jobs. They also need to show the variety in their work.”

One question many of them had concerned the support Futureintech receives from local industries. Gay was pleased to report that industry leaders have been crucial to Futureintech’s progress.

Dr Carolyn Labun, University of British Columbia

“We’ve received amazing support from the CEOs and management of our firms in New Zealand. In fact, there are a number of industries who are very keen to involve all of their graduates with Futureintech, as they see this being a useful part of their graduate programme. It’s a two-way relationship.”

Dr Labun was delighted with the interest and enthusiasm generated by Gay’s presentation. “She presented right before lunch, after a long morning of presentations, and kept about 80 people riveted throughout. Most of the people who filled in the evaluation form listed her as the most valuable aspect of the day.”

During the breaks and at the end of the conference, Gay was surrounded by representatives of the local school board, professors, government employees, and industry professionals, all of them wanting to find out more about the programme. “I felt proud to be telling the Futureintech story,” she says. “I was especially proud to be representing New Zealand, showing off the wonderful work that our graduates do in schools.”

While there needs to be discussion about how the Futureintech model could be applied to the unique issues in British Columbia and Canada in general, Dr Labun looks forward to exploring the possibilities.

“We’re still debriefing and planning how to move forward, but there was enormous interest in Futureintech. Judging by the enthusiasm, it’s certainly something we want to learn more about.”



Top: Futureintech Facilitator Gay Watson and Ambassador Carl Salmons from Birch Surveyors Ltd at a teacher’s workshop in Auckland.

Bottom: Ambassador Carl Salmons prepares to give a presentation on surveying. “There was a lot of head nodding when I told the people at the Canadian conference about the need to have face-to-face contact with the kids,” says Gay.

Industry support keeps growing in 2008

As another busy year draws to a close, it's time to look back at a few significant milestones.



Futureintech Ambassadors are the core of our efforts to highlight the opportunities of a career in technology, engineering, and science, and their numbers continue to grow. Currently we have 416 Ambassadors, up 116 from last November. In 2008, Ambassadors have contributed approximately 3,500 industry hours to schools across the country. We've reached over 20,000 students, 2,000 teachers, and nearly 300 careers advisors. Again this year Futureintech has exceeded all but one of our targets.

Our list of Industry Partners remains strong, with 245 companies providing resources for our Facilitators, providing an industry perspective, and supporting employees who volunteer as Ambassadors.

Promotional materials are another important way to keep students and teachers informed, and we've had a number of successes in this area. Collaborating with key stakeholders, we've produced two promotional videos, available on our website, which spotlight careers in ICT and engineering. At least one more video is planned for next year (see Futureintech News, page 6).

We also have two new publications – a brochure on the Biotechnology industry (pictured, left) and a very popular careers poster. Several more publications are underway, including brochures on ICT, environmentalism, and science. And on behalf of the Institution of Engineering and Technology, we've distributed free posters that illustrate basic concepts of electricity for primary school science classes.

In June, we had a unique opportunity to send a team of students to the 2008 International Hydrogen and Fuel



Top: Ambassador Emily Hodgkinson from Opus International Consultants mentors Redwood Primary's TNEA team.

Bottom: A January 2008 Ambassador training session in Auckland adds a fresh selection of Ambassadors to last year's total.

Promotion in schools

Cells Student Forum in Brisbane, Australia. In partnership with the Ministry of Economic Development and the Royal Society, we supported four students and their teacher from St. Peter's College as they represented New Zealand in the debate over hydrogen fuel cells as a renewable energy source.

Our Visiting Industry Professionals Scheme continues, with seven successful applicants for 2008. The VIP Scheme provides funding for senior professionals from local industries to spend up to three weeks in a tertiary institution. Their role can involve teaching, advising on research and curriculum, and otherwise providing an important real-world perspective on theoretical subjects.

In all of these areas, the response from schools and industry leaders has been extremely positive.

Mark Segedin, Laurence Carey, Jonathon Miranda and Stallone D'Souza from St. Peter's College experiment with hydrogen fuel cell technology in Brisbane, Australia.



Thank you to all our stars... we couldn't do it without you!

In our last e-news for industry of the year, we would like to extend our warmest thanks to our **AMBASSADORS**. Futureintech relies on technology, engineering, and science graduates to provide students, teachers, and caregivers with better information about career opportunities. Your support, expertise, and most of all your enthusiasm have been crucial to our ongoing success.

Our Facilitators receive valuable resources and insight from our **HOST PARTNERS**, who provide them with working space in an industry environment.

Special thanks go out to:

- ★ Fraser Thomas Engineering Consultants, South Auckland
- ★ CHH Pulp & Paper, Tokoroa
- ★ Riley Consultants Ltd, North Auckland
- ★ Stormwater Solutions, Central/West Auckland
- ★ Fulton Hogan, Dunedin
- ★ Meyer Consulting, Christchurch

Finally, we couldn't be where we are today without our **INDUSTRY PARTNERS**, who have supported their employees as they volunteer to be Futureintech Ambassadors. With your help, the Ambassadors have captured the imaginations of students across the country, laying the foundation for the next generation of skilled employees.

Futureintech would like to wish you all a wonderful holiday season, and we look forward to working with you in 2009.



Ambassadors + TNEA = Success

Futureintech Ambassadors helped Auckland school students with projects for their schools, and to win some of the top prizes in this year's Transpower Neighbourhood Engineers Awards (TNEA).

For the Awards, every year, teams of teachers, students, and local engineers submit their engineering projects to a panel of judges. Prizes are awarded to projects that show the most innovation, teamwork, and benefit to the school and the community.

Three Auckland schools have taken the \$2,000 prize in their respective categories:

Beachlands Primary School teamed up with Futureintech Ambassador and civil engineer **Amy Clore** from **MWH New Zealand Ltd**, Auckland, to figure out how to heat the school pool. "Learning about new tools that Amy introduced added to the importance of our task," says teacher Kathleen Cullen. "Amy is a good role model, showing that engineering is no longer a male-dominated industry."

Milford Intermediate and Ambassadors **Carolyn Simpson** from **Airey Consultants Ltd** and **Richard Powles** from **MSC Consulting Group Ltd** went through the full lifecycle of a project, from initial design to issuing a proposal to the Board of Trustees, to create outdoor shade areas for their school. "I enjoyed working with the students and explaining engineering concepts in a way they could understand," says Richard. "When I'd arrive at a new session, they would be pleased to show me the work they'd done since the last session."



Milford Intermediate's TNEA team develops a plan for building shade areas for their school.

Senior student Kevin Anderson represented **Otumoetai College** as he worked with IPENZ Professional Engineer **Brian Jackson** from **Jackson Engineering Advisers Ltd** to develop a portable wind-powered battery charger. "I'm very happy with the quality of work that Kevin produced," says his client, who needed something that would provide power on a weeks-long camping trip. "The device has thoroughly solved my issue."

Prizes and certificates will be awarded by Matthew Gnad from **Transpower** and IPENZ Chief Executive Andrew Cleland. Merit Award winners, including Onehunga Primary, Sunnybrae Intermediate, Kopuarahi School, Orewa Primary, and Cambridge High School, will each receive a cheque for \$500.

Learn more about the Transpower Neighbourhood Engineers Awards at their website, www.nea.org.nz.

New video on the way

Futureintech's third promotional video is in the works. **Heinz Wattie's** and the **New Zealand Institute of Food Science and Technology** (NZIFST) have teamed up with Futureintech to highlight a career in the food industry.

The latest addition to our video series will feature **Michelle Lucke** (pictured), a Product Development Technologist at Heinz Wattie's. She's in charge of developing recipes, making samples, conducting factory trials, and communicating with people from all areas of production, from factory workers to the marketing team.

"What I like best about food technology is being in contact with a wide variety of people, and the fact that each day is different," she says. "No-one could ever get bored in this job."

Michelle's video will be appearing on our website early next year. We're also planning to organise a video for a career in science, rounding out our promotion of maths, science, and technology related fields.

To find out how you can get involved in a similar project for your industry, contact us at enquiries@futureintech.org.nz.

Michelle Lucke, Futureintech Ambassador and Product Development Technologist from Heinz Wattie's, is the subject of our next promotional video.



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

