



Building on our strong foundation

2014-15 Annual Report

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The year in review

Our changing organisation

We sum up the theme of the last 12 months in one word: “change”.

In Susan's first year as Chief Executive, we're delighted to have welcomed 2,644 new Members to the IPENZ family, and to have improved our financial position from deficit to surplus by year end. Our Board Roadshow gave us a great opportunity to meet you in our Branches, to talk about the future of IPENZ and to get a better understanding of what we can do for you.

At the start of the year, we were in full swing celebrating our centenary. We worked with government on new occupational regulations for engineers following the Canterbury earthquakes. We redeveloped our Code of Ethics, and started reviewing our complaints and disciplinary processes. Plus, we revamped our website and Member database, which we launched in October. We also became a partner in the Engineering Education to Employment programme, run by the Tertiary Education Commission (TEC), to encourage more young people to consider engineering as a career. We supported more integration with architects through BRANZ's annual ArchEng event. And the Prime Minister, the Rt Hon John Key, joined our Engenerate members in Canterbury to share his thoughts on leadership.

Now we need to look to the future. What will the engineering world look like in 10, 20, 50 years' time? Significant changes to technology are impacting people's lives like never before, with the next big innovation just around the corner. Engineers are, and will continue to be, the ones developing this technology through new and exciting disciplines – and shaping our society as a result. The essence of what it means to be an engineer isn't just about technical solutions. In an increasingly scrutinised profession, it's about behaving as a responsible professional – which brings both opportunities and responsibilities. Professionalism is at the heart of everything we do. It means focusing not only on what you do, but also on how you're doing it.

For new engineers, the focus is often on getting technical experience. But there's no such thing as a “full toolbox” – there's always something new to learn. You build your toolbox through the course of your career, collaborating with and learning from others for the best results. And it's not just the technical elements that matter; we need the whole team to take leadership and demonstrate professionalism at every turn.

As your Institution, we're reshaping ourselves so we're in the best position to help you do this; holding onto our heritage while becoming a more modern and accessible organisation. We started 2016 with a re-formed leadership team in place, adding marketing and communications expertise. In the coming months, we'll optimise our website with the aim of making our assessment process a much smoother experience and we'll fine-tune our structure to make sure we're delivering on our goals efficiently and effectively.

Members' needs are our priority; we do our best work when we're representing your interests to government and to the public. Next year, we'll continue what we've started, working with other organisations to make sure your voice is heard and the profession's future is secure.

We can't do any of this alone and appreciate your support and commitment during the year. Here's to the next one and everything we can achieve together for New Zealand's engineers.



Susan Freeman-Greene
Chief Executive



Andrew Read FIPENZ
President



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Professionalism is at the heart of everything we do. It means focusing not only on what you do, but also on how you're doing it.

Our Governing Board

Our Members elect our nine-strong Board to advocate on their behalf. Led by four senior office holders, Board members volunteer their time to oversee the organisation's governance and drive our strategic direction. The Board are actively involved, attending the President's Roadshow, various stakeholder events and meetings.



Andrew Read FIPENZ
President



Elena Trout FIPENZ
Deputy President



Craig Price FIPENZ
Vice President



Kevin Thompson DistFIPENZ
Immediate Past President



Ben Holland MIPENZ



Geoffrey Farquhar FIPENZ



Glen Mitchell MIPENZ



Jan Evans-Freeman FIPENZ



Ron McDowall FIPENZ


Our Membership


Our Membership stands at

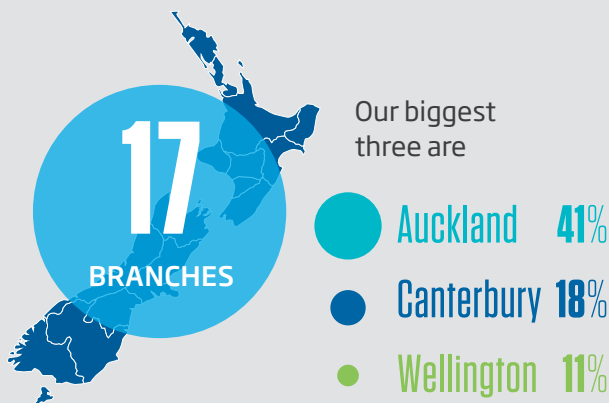
 **16,054**

 **2,644**

new Members joined us

 **11.5%**
female


 **88.5%**
male





We represent

17 FIELDS OF ENGINEERING

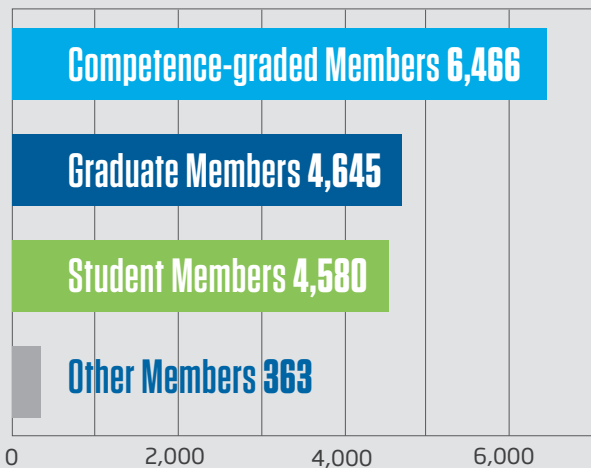
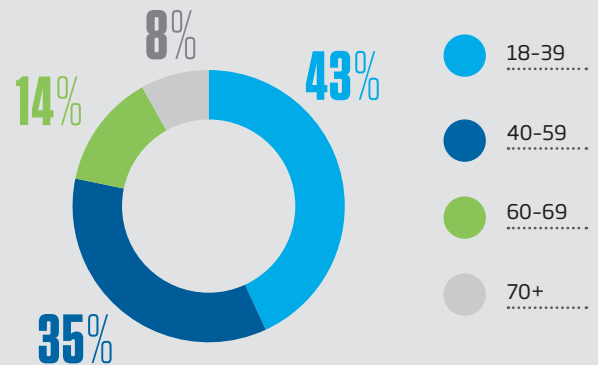
Our largest practice fields are

 **Civil 22%**

 **Structural 20%**

 **Transportation 9%**

Age of our Members (excl. students)



We support

21
Interest Groups



The year in numbers

Financial overview

Our total income was

\$11.2m

 **9.8%**



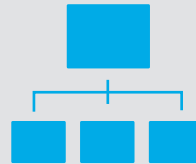
35%

came from Member subscriptions

Our total expenditure was

\$10.9m

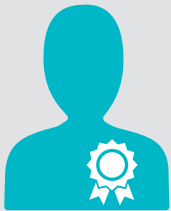
 **1.3%**



45%

went to staff costs

Recognising our profession



24

new Fellows and Distinguished Fellows



\$24,000

in scholarships awarded by the IPENZ Foundation

722

IPENZ Fellows in total



\$16,000

in prizes awarded in the Transpower Neighbourhood Engineers Awards



12

new engineering heritage records



14

awards presented at the New Zealand Engineering Excellence Awards

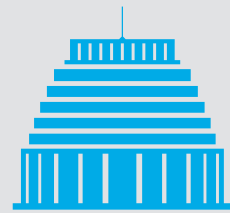
Our services



24 complaints
about engineers
received

69 complaints
resolved

11



submissions made to Government
on behalf of our Members



157

CPD courses run

2,321

course attendants



6

newly-accredited
tertiary institutions

1,100

successful
assessment
applications



60,314

students engaged by
Futureintech Ambassadors

3,522

IPENZ Practice College
members including

66

Technical
Members

121

Associate
Members

3,335

Professional
Members

The Practice College is for Members who have proven current competence as Professional Engineers, Engineering Technologists or Engineering Technicians.

Our strategic objectives

Our Board set our strategic objectives; the goals we're working towards. These define our plans and drive the way we serve our Members.

Professional standards

We aim to: set and enforce internationally-benchmarked educational competence and ethical standards

The Canterbury earthquakes and Pike River disaster put New Zealand's engineers under unprecedented scrutiny. In the wake of these events we've worked hard to make sure the standards we set and maintain stand up to any future scrutiny. We need to be rigorous, trusted and credible so the public know they can rely on our industry. As a result, we've reviewed our code of ethics and are reassessing our Membership structure, putting professionalism at its heart.

This year we:

- continued work as the Registration Authority for Chartered Professional Engineers.
- approved 437 Members for registration and/or competence-based IPENZ Membership.
- reviewed our code of ethics – the backbone of our industry's professionalism.
- started developing a competency standard for professionalism, so everyone has the same understanding of what it means to be a professional engineer and can be held to account.
- accredited six new institutes of technology and polytechnics (ITPs) for the first time, meaning they can offer accredited New Zealand Diplomas in Engineering (Dublin Accord level) and/or Bachelors of Engineering Technology (Sydney Accord level) programmes.
- began a review of our complaints and disciplinary processes. We'll be completing this work in 2016.
- became a founding provisional signatory to the [Agreement for International Engineering Technicians \(AIET\)](#). This Agreement establishes a benchmark for international standards of skills and qualifications for competent engineering technicians. A key aim is to develop an International Engineering Technicians (IETn) register to promote mutual recognition and mobility of engineering technicians around the world.
- appointed Mike Fermanis as our new registrar and began reviewing our assessment processes.

Engineering leadership and informed engagement

We aim to: lead the development and promote the application of good engineering practices; provide a respected voice to inform and influence leaders and decision makers on national and community issues.

As your representative body, it's pivotal we provide leadership and share knowledge and expertise. Strong relationships with interest and international groups are key to this. We're committed to helping you access the most up-to-date engineering knowledge, providing leadership on key industry issues and offering guidance on best practice through our practice notes and guidelines.

This year we:

- delivered the successful 2015 Engineering Professions Forum – Looking Forward to our Next Century.
- represented engineers on the Construction Industry Council, Construction Safety Council, the International Engineers Association, the World Federation of Engineering Organisations (WFEO) and various Ministry of Business, Innovation and Employment (MBIE) stakeholder groups, including the Built Environment Leadership Forum.
- continued working with WorkSafe New Zealand, the New Zealand Society for Safety Engineering and the MBIE Engineering Design reference group to develop guidance supporting the new Health and Safety at Work Act.
- began a review of the Construction Industry Council Design Guidelines.
- published [practice guidance](#) on screw pile design and dairy housing.



Informed engagement plays a big role in our engineering leadership work. We're the respected voice, informing and influencing leaders and decision makers on national and community issues. We consulted widely for our [submissions to government](#) on topics including the Building (Earthquake Prone Buildings) Amendment Bill; Standards and Accreditation bill; Proposals to Change the Occupational Regulation of Engineers in New Zealand; Draft New Zealand Heritage List and Draft National Historic Landmarks Policy. We worked closely with various industry bodies to draft these submissions, including the New Zealand Institute of Architects, the New Zealand Society for Earthquake Engineering and the Institute of Public Works Engineering Australasia.

Above right: delegates in group discussion at the 2015 Engineering Professions Forum.

Enduring capability and enhanced understanding

We aim to: foster the development of a capable and diverse engineering community sufficient to meet future needs; improve public understanding of the critical role engineering plays in modern society.

We started reviewing our Membership structure this year, making professionalism the core focus of what we do. We're helping build a strong, forward-looking engineering industry made of a diverse range of professionals. Next year, our Women in Engineering programme will expand into a broader Diversity and Inclusion programme and we'll host the annual Asia and Pacific Nations Network (APNN) Summit in Wellington. While we won't lose sight of the women in engineering component, we recognise diversity comes in many forms and shapes and we need to build the breadth and depth of our profession to best help our future engineers.

This year we:

- elected 24 new Fellows and Distinguished Fellows of IPENZ.
- ran 157 professional development courses around New Zealand across 37 topics, including safety engineering, retaining wall design practice and NZS3190 conditions of contract.
- celebrated the inspirational vision, innovation and teamwork of our Engineering Excellence Award winners.
- reviewed and developed our IT systems and website, which we launched in October 2015, to share news more easily and make it easier for members to use.
- developed our Women in Engineering programme, where we successfully bid to host the 2016 meeting of the Asia Pacific Nation Network (APNN); completed research into support available for engineers who take career breaks – we'll share our findings and what this means for you next year; we also profiled engineers who are working flexibly, and the organisations in our industry who help them to do so, on our website.
- planned our successful 2015 Pickering Lecture series, "Nanogirl and the Incredible World of Nanotechnology".
- launched our Engineering Heritage Tours mobile app, which showcases the engineering feats that shaped New Zealand through a range of self-guided tours.



Left: Shaun Ryan accepts the award for Engineering Entrepreneur of the Year, jointly won with his brother, Grant Ryan at the 10th New Zealand Engineering Excellence Awards.



Left: Futureintech Ambassadors Anneliese Sabrowski GIPENZ, Sheena Chen GIPENZ, June Chin GIPENZ and Ritu Arora at a Steam Ahead event. Above: Students at Royal Oak Intermediate in Auckland build and program their own electronic kits for Project X.

Seeking the next generation of engineers

- Our [Futureintech programme](#) encouraged more than 60,000 school students from across New Zealand to consider careers in technology, engineering and science fields this year. Our 861 amazing volunteer Ambassadors, who are mostly early career engineers, scientists, food technologists and software developers, visited schools to make connections between maths, science and technology subjects and careers in technology, engineering and science-rich industries. Our new online training made it easier for our Ambassadors to get ready to visit schools.
- The Ministry of Business, Innovation and Employment's (MBIE) Unlocking Curious Minds contestable fund granted us \$16,000 to run a series of Family Science Workshops in four Auckland primary and intermediate schools this year. These workshops aimed to raise "science capital" in families by empowering and encouraging parents and caregivers to talk about science with their children.
- Project X, our collaboration with the Institution of Engineering and Technology (IET), gave year 7 and 8 students some practical experience of engineering projects. Students build and program their own electronic kitset, learning about electrical circuits and components, and developing basic soldering and computer programming skills.
- We supported other initiatives, including a series of STEAM Ahead events, introducing young women and their mothers to careers in traditionally male-dominated fields, such as IT and engineering. We secured funding from Callaghan Innovation for the 2016 school year and additional funds from the Ministry for Primary Industries to promote technology, engineering and science-rich careers in farming, fishing and forestry sectors.
- The [Engineering Education-to-Employment](#) (Engineering E2E) programme, established by the Tertiary Education Commission (TEC) and BusinessNZ, continued its work to highlight key pathways into engineering and to help the Government achieve its target of increasing engineering graduate numbers by 500 per year from 2017. Our General Manager - Outreach, Angela Christie, was seconded to the role of Programme Manager of Engineering E2E, with close liaison between the project and Futureintech. Highlights from this year include the Techlink Pathways Project scoping work and research into what the engineering sector requires of graduates moving into industry, led by the University of Western Sydney's Emeritus Professor Geoff Scott. Investigation also began into the benefits of sponsored degrees, led by Massey University's Professor Jane Goodyer FIPENZ and Dr Greg Frater, who published their report, [Stepping into One Another's World](#).

Looking ahead

Our strategic focus for 2015-16

Our theme of change continues next year as we work to become a smarter, more relevant organisation for today's world. Here's a snapshot of our plans:

Engineering Leadership

As the professional body representing engineers, we'll continue to provide leadership, advocating for engineers across industry sectors and to government, and provide you with guidance in core practice areas.

- We'll roll out our new Code of Ethical Conduct, along with a revision to the Practice Note – Engineers and Ethical Obligations explaining what the Code means for your day-to-day practice.
- Thought leadership is about shaping the debate. We want to have a more powerful voice, underpinned by a strong policy platform and informed thinking. 2016 will be the year we really find our voice and speak up more on the issues that matter to you.
- In an increasingly complex legal environment, we'll focus on building relationships with government and working to make sure legislation is practical and fair.
- We're forging stronger ties with our technical interest groups so we're more closely aligned and providing the best possible support to the profession.
- Our CPD courses will keep covering the most relevant knowledge and skills, so you can keep upskilling and will always know exactly what's required of you.

Professional Standards

Professionalism is paramount to our industry's reputation and success. IPENZ sets, maintains and upholds the rigorous standards required to be a professional engineer.

- In 2016, we'll be more clearly defining what we mean by professionalism. We'll develop a specific competency standard around professionalism and examine its relationship with the IPENZ Membership classes.
- We'll continue reviewing our complaints and discipline processes, making sure they are effective, fair and relevant.
- Representatives will head to Malaysia for the annual [International Engineering Alliance](#) (IEA) Forum.

Membership

Members are at our core. Next year, we'll be making fundamental changes to how we serve you.

- From better communications to more relevant services, everything we do next year will be focused on supporting and promoting our Members and growing our engineering community.
- We'll be looking for your feedback on the services we currently provide and input into what ideally we should be providing. We'll use that information to restructure our Membership offering, so you get the most up-to-date, relevant services you need to be the best engineers you can be.

Corporate Services

We can only serve our Members well if we're organised effectively.

- Last year we began a transformation to better align our organisation with our Members' needs and to make sure we're spending Members' funds as prudently as possible. Completing this work will be a key focus in 2015-16.

Outreach

We're helping to build our profession to last, and our outreach work with children and young people is fundamental to creating the engineers of the future.

- Our Futureintech programme will increase its scope, with more facilitators extending their reach to more schools across New Zealand.
- The Engineering Education-to-Employment programme will continue, with a public awareness campaign contract between IPENZ and TEC signed in February 2016.
- The [New Zealand Board for Engineering Diplomas](#) (NZBED) has a new Executive Officer who will be working to raise awareness of careers in engineering. Now more closely aligned with our Outreach team, NZBED will take a broader and more strategic approach to supporting high quality engineering education.



Our Branches and Interest Groups

Across the country, our regional Branches and Interest Groups have been busy. Here, they share a few highlights from 2014-15.

Branches

Our Branches provide Members with locally-based services and events including site visits, presentations and networking opportunities.

Auckland

 **Chair:** Tim Fisher MIPENZ

 **Membership:** 6,589

This year's highlights:

- The [IPENZ Engineering Tours app](#) launched this year, including a walking tour of engineering features on the Auckland waterfront.
- Representatives from Auckland Council presented on the Building Consent Process.
- The Branch presented its annual Arthur Mead Merit Awards to two small projects. Morphem Environmental, Auckland Council and Auckland Transport won the Award for applying environmental awareness to an engineering project for Alexandra Stream Enhancement Project. Watercare and Brian Perry Civil also won for their environmental awareness on the Eastern Interceptor Pipe Bridge project.
- The second annual Luminary Award was presented to John La Roche FIPENZ at the Auckland Branch's Professional Recognition and Awards Evening in September. The Luminary Award was created in IPENZ's centenary year "to recognise an Auckland Branch member who has actively and positively promoted IPENZ and the engineering profession".
- The annual GT Murray Memorial Award for best presentation was given in association with the region's five tertiary institutions offering engineering degrees, and the Branch co-funded two IPENZ Foundation engineering student scholarships.
- Site visits included Watercare's Hunua pipeline project; the Waterview Connection roading project; Fonterra's new office building; the Onehunga Foreshore Restoration; and tours of the Auckland Harbour Bridge.

Canterbury

 **Chair:** Matt Cameron MIPENZ

 **Membership:** 2,923

This year's highlights:

- The Branch held the inaugural IPENZ Canterbury Branch Communications Competition in late 2014, and worked with Cathedral City Toastmasters to run communication workshops for engineers in the region.
- The Branch collaborated with New Zealand Institute of Architects (NZIA), New Zealand Institute of Building (NZIOB), SESOC, Toastmasters, Engineers Without Borders (EWB), Institute of Civil Engineers (ICE) and the University of Canterbury to offer Members a wide range of events. These included:
 - the IStructE Gold Medal address, at which 2014 winner Tristram Carfrae presented on the topic "designing with computers"
 - the annual Hopkins Lecture, delivered by Crown Fibre Holdings, focused on the deployment of Ultra Fast Broadband throughout New Zealand.
- Presentation topics included Port Hills geohazards; decommissioning the old police buildings; financial management advice; and electric vehicle motorsport.
- Site visits included Fonterra's Darfield development; Synlait Milk; Burwood Hospital's new facility; SCIRT Vacuum Station VS5001; and Fletcher Construction's "Grand Central" project.



Left: Alexandra Bridge, Otago.

East Coast

Chair: Willem van den Worm MIPENZ
Membership: 29

This year's highlights:

- The Branch provided prizes and judges for the Te Tairāwhiti Science and Technology Fair 2015.
- Branch members launched a new Trophy associated with the IPENZ 2014 Centenary Engineering Challenge – Best Project, which the Branch introduced in 2014.
- Site visits included the War Memorial Theatre Redevelopment site in Gisborne, and the Pultron Composites factory.

Hawke's Bay

Chair: Arthur Budvietas MIPENZ
Membership: 200

This year's highlights:

- The Branch Committee started a project to create an emergency response database of Hawke's Bay Branch members.
- Nathan Dunn of HSE Solutions Ltd visited the Branch to present on the Health and Safety Reform Act.
- Hastings student Georgia Lock won an IPENZ-sponsored prize at the Hawke's Bay Science Fair for her project on cantilever beam action.
- The Committee is continuing to develop the Hawke's Bay Geotechnical Database.

Manawatu

Chair: Annette Sweeney MIPENZ
Membership: 306

This year's highlights:

- The Branch enjoyed presentations from Carys Everett, Executive Director of Engineers Without Borders NZ; Rob Sinclair of GHD on Food and Beverage Processing Facilities; real-time aircraft traffic company Spidertracks and the Palmerston North Wildbase Recovery Centre.
- Site visits included Ohakea Air Force Base, where members learnt about the Maintenance Support Squadron and experienced the Helicopter Flight simulator. Branch members also visited the historic Keith Street Power Station.
- Branch members and local students made a splash on the new water slides at the Lido Aquatic Centre in Palmerston North.

Nelson/Marlborough

Chair: Jenna Voigt GIPENZ and Avik Halder MIPENZ
Membership: 258

This year's highlights:

- Student committee New Engineers of Nelson (NEON) formed at the Nelson Marlborough Institute of Technology for young engineers in the region.
- Site visits included trips to Richmond Water Treatment Plant; Dashwood Overbridge; Maitai Walkway; Richmond Materials Recovery Facility; and the Waitohi Wharf upgrade.
- Networking evenings in Nelson and Marlborough and the Young Engineers Presentation Competition gave local engineers the chance to get to know each other and practise their communication skills.

Northland

 **Chair:** Ben Perry MIPENZ

 **Membership:** 215

This year's highlights:

- Presentation topics included NZ Transport Agency's One Network Road Classification and LIDAR aerial survey technology.
- Established a formal relationship with Northtec.
- Centenary celebrations in late 2014 included a black tie dinner in Kerikeri and a community bike ride along the Hatea River Loop.
- The Branch sponsored prizes at two Northland science fairs.
- Site visit to the Kotuku Detention Dam in Whangarei.

Otago

 **Chair:** Jon Visser MIPENZ

 **Membership:** 561

This year's highlights:

- MWH hosted a "Road to Recognition" workshop for people interested in obtaining or advancing their professional membership or registration.
- The Branch held a combined meeting with the Institute of Public Works Engineering Australasia (IPWEA) and ACENZ with presentations on infrastructure asset management.
- Site visits included NZ Transport Agency's Caversham four-laning improvements project; Delta's South Dunedin electrical substation; Opus/Fulton Hogan bridge strengthening projects throughout the Otago Region, including Alexandra Bridge, Victoria Bridge and Kawarau River Bridge; and the new Lookout Point bridge construction project at Caversham with NZ Transport Agency and Downer.
- The Branch continued to sponsor the annual Aurora Otago Science and Technology Fair.

South Canterbury

 **Chair:** Antoni Facey MIPENZ

 **Membership:** 59

This year's highlights:

- Apex Environmental presented on designing and supervising construction of the Darfield dairy factory. Alpine Energy also visited the Branch to talk about their challenges in a difficult regulatory environment.
- The Branch helped illustrate a career pathway through to tertiary education for school children from Timaru by helping form connections between local high schools and CPIT.
- A scholarship pilot project for a South Canterbury student to go to university is underway with the IPENZ Foundation.
- Site visits included the Holcim cement dome in Port of Timaru, the Redruth refuse centre and the wood pyrolysis plant.

Southland

 **Chair:** Malcolm Loan MIPENZ

 **Membership:** 101

This year's highlights:

- The Branch focused on professional development, arranging three IPENZ Training Seminars and a Professional Recognition Seminar by video link.
- Venture Southland presented on Wood Energy Technology Developments in the region.
- Site visits included the new Alliance rendering facility at Lorneville, and the Waikaia Gold Dredging operation.

Taranaki

 **Chair:** Nick Ramsay GIPENZ

 **Membership:** 334

This year's highlights:

- Presentation topics included coping with extreme ocean conditions; remote area power supply; the impact of the Health and Safety Reform Bill on high hazard industries; stainless steel panels for the Len Lye Centre.
- Site visits included the demolition of the New Plymouth Power Station.

Tauranga

 **Chair:** Mark James MIPENZ

 **Membership:** 402

This year's highlights:

- Presentations included the Rena shipwreck resource consent process; a joint event with the New Zealand Planning Institute with a presentation from Smartgrowth; an in-depth report on the history of the Kaituna River Diversion by Bay of Plenty Regional Council; and a presentation from Opus about the TEL Domain Fire.
- Site visits included the Tauranga Eastern Link road, hosted by Fulton Hogan; the new Trustpower Building on Durham Street led by CBC Construction; and a visit to the Paige McRae site.

Waikato - Bay of Plenty

 **Chair:** Judith Makinson MIPENZ

 **Membership:** 1,016

This year's highlights:

- Lana Davison GIPENZ and Michael Eschenbruch GIPENZ won the Young Engineers Presentation Competition. Lana's topic was "How the Takamore Development Reduced Cultural Impacts in Expressway Construction", while Michael presented on "Reliability Analysis of Shear Pin Failures at Tokaanu Power Station".
- The Branch sponsored prizes and provided judges for regional fairs, competitions and shows.
- The Branch also hosted a shared meeting with NZIA, ACENZ and IPENZ investigating the Royal Commission report into the Canterbury earthquakes and the role of collaboration between engineers and architects.
- Site visits included a joint visit with the Institution of Chemical Engineers to McDonald's Lime at the Oparure Quarry and to the Otorohanga processing plant.

Wanganui

 **Chair:** Kritzo Venter MIPENZ

 **Membership:** 41

This year's highlights:

- Site visits included the Open Country Dairy drier extension, Ohakea Air Base extension and a rare visit to the Tokaanu power station and Tongariro Power scheme.
- The Branch were involved in a stream planting day at Lake Kaitoke, teaching engineers about the environmental impact of their everyday decisions.
- Presentation topics included the amendments to the new Health and Safety Act.
- The annual IPENZ golf day took place with the Manawatu and Hawke's Bay Branches. The event has been running for 50 years.

Wellington

 **Chair:** Leighton Duke GIPENZ

 **Membership:** 1,751

This year's highlights:

- The Branch collaborated more closely with the Institution of Engineering and Technology (IET) and the Institution of Electrical and Electronics Engineers (IEEE), organising new and diverse events.
- The newly-launched [IPENZ Engineering Tours app](#) included a walking tour of Wellington, which Branch Members tried out in June.
- The Branch sponsored two prizes awarded at the NIWA Science and Technology Fair.
- Presentation topics included aspects of health and safety in the context of new legislation, and three success stories of earthquake strengthened buildings in Wellington.
- Site visits included the Mackays to Peka Peka roading development site.



West Coast

 **Chair:** Stuart Challenger MIPENZ

 **Membership:** 28

This year's highlights:

- Presentation topics included the Mayor of Grey District Council speaking about his vision of "how we can make the West Coast grow"; a member presentation about their involvement with the Christchurch rebuild; and a GNS Science Earthquake Geology presentation in Franz Josef and Hokitika on new research into the Alpine Fault.
- Regular networking meetings around the region.

United Kingdom

 **Chairs:** Andrew Delugar MIPENZ
and Jonathan Gammon FIPENZ

 **Membership:** 166

This year's highlights:

- A technical talk on the Christchurch Earthquakes by Professor Michael Davies FIPENZ (former Dean of School of Engineering at the University of Auckland).
- Graduate evening to assist and encourage graduate engineers with their professional recognition and IPENZ Membership.
- Social events included a Christmas Soirée hosted by Engineers Australia, a Chinese New Year dinner celebrating our newly-formed link with the Hong Kong Institution of Engineers UK Chapter, and an annual summer family barbecue held by the riverside at Henley-on-Thames Rowing Club.
- The Branch Chair attended a service at Westminster Abbey to mark the centenary of ANZAC Day.

Left: IPENZ Wellington Branch and Heritage Chapter members and families observe the Beehive building – one of many sites included in the IPENZ Engineering Tours app.

Student Engineers New Zealand

SENZ – the special interest group for our Student Members – helps students learn where their engineering degree or diploma could take them.

All of our Student Members automatically become members of [SENZ](#). The SENZ Council is made up of volunteer representatives from IPENZ-accredited tertiary institutes, who take on the role for one year. The representatives are responsible for organising events at their institution, to engage students and give them opportunities to meet engineers already working in industry. We provide the funding to help them do this.

The University of Waikato held their annual MacGyver Challenge, where engineering students created Rugby World Cup-inspired devices from everyday materials to propel ping pong balls between a set of scaled-down goal posts. Massey University Albany's yearly dodgeball tournament in Auckland saw teams of students and industry compete for the coveted trophy and bragging rights.

The national speed interviewing nights were very popular once again. Students dressed to impress and brought along their CVs to practise their interview skills and to make industry contacts within their field of interest. Following speed interviewing nights, some students received job interviews and offers of employment.

Around the country, SENZ groups took part in panel discussions, site visits, barbeques and final year dinners. Thanks to the 2015 SENZ Council, and their Chair Jonathan Barnard, who made it all happen.

Below left: Rob Heebink FIPENZ (Gallagher) with student engineers Juan Martinez (left) and Mark Thomson (right) at an 'In the Know' evening at Wintec. Below right: a student engineer practises his job interviewing skills with Kevin Everett (Building Recruitment) at the Auckland speed interviewing night.



Engenerate

Engenerate – our special interest group for graduate engineers – has had an exciting year featuring some high profile events.



The voluntary Emerging Professionals Council (EPC) run [Engenerate](#). Regional Chairs volunteer for one year to organise presentations, workshops, site visits and networking events for their branches.

[Engenerate Canterbury hosted the Prime Minister the Rt Hon John Key](#) in June, at which he shared his thoughts on leadership. The Prime Minister, who lived and went to school in Christchurch, talked about his experiences of leadership in the private sector and government, and outlined his own leadership strategies.

New engineers in their first role after graduating often find themselves in a new town. Joining an Engenerate branch is a great way to network and meet other engineers. This year, each branch's busy event calendar included quiz nights, comedy evenings, movie nights, mid-winter dinners and other social events.

Engenerate Chairs focused on professional development this year. Nearly all the branches held events on ethics in engineering, and many regions held workshops on gaining

professional recognition. Site visits remain a very popular way for Engenerate members to learn more about the engineering industry and what's happening in their areas.

WAYD (What Are You Doing) events in Canterbury and Auckland introduced a quick-fire style of presenting, where multiple presenters talked to the group on engineering themes. Some Engenerate branches invited people from other industries, such as planners and lawyers, to share knowledge across professions.

Thanks to the 2015 EPC, and their Chair Rachel Blewden GIPENZ, for all their hard work this year.

Above left: Emerging Professional Council Members Eli Maynard GIPENZ, Luke Boys GIPENZ, Lucy Abraham GIPENZ, Dipal Raniga GIPENZ and Fritha Bevin-McCrimmon GIPENZ at the 2015 Engineering Professions Forum. Above right: Prime Minister the Rt Hon John Key speaks to Engenerate Canterbury about leadership.

Interest Groups

Our Interest Groups represent specific fields of engineering. They promote and advocate for their members' interests and concerns. We work with Interest Groups to provide technical leadership and promote good practice in specific fields of engineering.

Heavy Vehicle Engineers (HVE)



Chair: Nick Watson GIPENZ



Membership: 66

This year's highlights:

- The main 2015 HVE Conference was held in Brisbane to coincide with the biennial Brisbane Truckshow in May. Members gained insight into the Australian heavy vehicle industry, initiatives and issues, from vehicle manufacturers, a local engineering consultancy and legislators, and from the Truckshow itself.
- The group held a mini conference combined with its AGM in Auckland in October. The conference involved a number of key site visits to local industry. It also included a workshop with NZ Transport Agency (the Agency) on improving national data collection and storage relating to heavy vehicles. The group presented a paper to the Agency, outlining members' recommendations and guidelines they'd developed for interim use.
- The group discussed practical ways of encouraging and supporting those on the engineering qualifications staircase.

Maintenance Engineering Society of New Zealand (MESNZ)



Chair: Karl Hayward



Membership: 350

This year's highlights:

- The Society held its annual National Maintenance Engineering Conference in Hamilton.
- Became affiliated with the Health and Safety Association of New Zealand (HASANZ).

- Launched Competenz and MESNZ joint guidance for the Mechanical Engineering Governance Group on the development of new Mechanical Engineering qualifications at Certificate and Diploma level.
- Worked closely with WorkSafe New Zealand on safety related areas, as part of its work to improve the outcomes of professional health and safety advice.

Mechanical Engineering Group (MEG)



Chair: Tim Lynch GIPENZ



Membership: 512

This year's highlights:

- The group hosted Mark Hunt, President of the United Kingdom's Institution of Mechanical Engineers (IMechE) on his visit to New Zealand.
- Sponsored the Formula SAE Teams from engineering schools at the University of Auckland, the University of Canterbury and the University of Waikato.
- Held collaborative meetings with IMarEST (Institute of Marine Engineering, Science and Technology) on topics including marine energy, wind farms and the search for Malaysian Airlines Flight 370.
- Judged and presented prizes for the Final Year Student Projects Display Day at the University of Auckland's Mechanical Engineering Department.
- Held site visits to Newcomen Engine at the Auckland Steam Engine Society, Mangere Wastewater Treatment Plant, and Wiri Electric Train Maintenance and Stabling Facility.

New Zealand Coastal Society (NZCS)

 **Chair:** Rick Liefing

 **Membership:** 435

This year's highlights:

- Contributed towards the Environmental Defence Society's (EDS) publication *Sustainable Seas: Managing the Marine Environment*.
- Presented the inaugural Professional Development Award to Shane Orchard for developing participatory GIS (geographic information systems) for coastal mapping.
- Awarded annual student research scholarships to Masters of Science and PhD students at the University of Canterbury and the University of Otago.
- Sponsored the Coasts and Ports 2015 conference in Auckland.
- Regional events including: Sea Cleaners in conjunction with the New Zealand Association for Environmental Education's (NZAEE) Sea Week; bathymetry talk in conjunction with the New Zealand Institute of Surveyors; a coastal economic issues seminar with Waikato University; Fisheries Resources in Hauraki and the pressure of recreational fishing, a joint presentation from LegaSea, NIWA and Coast and Catchment.
- Sponsored Seaweed's Ocean Champion Award, which was presented to conservationist, campaigner and founder of Earthrace Conservation Pete Bethune.

Right: Delegates of the National Maintenance Engineering Conference attend a site visit at Huntly Power Station.

New Zealand Society for Safety Engineering (NZSSE)

 **Chair:** Joe Bain MIPENZ



 **Membership:** 41

This year's highlights:

- The NZSSE brand was established.
- The Society built links with key people at WorkSafe New Zealand (WorkSafe), ACC, the Health and Safety Association of New Zealand (HASANZ), and other IPENZ Interest Groups.
- Delivered the one-day IPENZ CPD course across New Zealand, telling engineers about the Health and Safety Reform Bill and giving them tools to help satisfy the requirements of the law.
- Took part in WorkSafe and ACC workshops on developing the manufacturing sector safety action plan.
- Group member Dr Dirk Pons MIPENZ, began research into engineers and safety.



New Zealand Society on Large Dams (NZSOLD)

 **Chair:** Peter Lilley
 **Membership:** 208

This year's highlights:

- Completed a detailed review of the *Dam Safety Guidelines*, published for members on 18 May 2015. The *Guidelines* were officially launched at the NZSOLD Symposium, held in August, with the theme "Guidance for the New Zealand context".
- Launched the NZSOLD Young Professionals Group in February with an inaugural trip to dams in the Waitakere Ranges.
- Society delegates attended the 83rd International Commission on Large Dams (ICOLD) Annual Meeting and Congress in Norway.
- The Society continues to be represented on four ICOLD technical committees: Public Awareness and Education; Environment; Public Safety Around Dams; and the Multipurpose Water Storage Committee.

Railway Technical Society of Australasia (RTSA)



 **Chair:** Muriel Seeley
 **Membership:** 60

This year's highlights:

- Formed a relationship with the Institution of Railway Signal Engineers (IRSE).
- Held the Joint RTSA/IRSE Rail Conference and Automatic Train Protection (ATP) workshop in October 2014.
- Presentations included: Identification of Optimum Capacity-Improving Measures in South East Queensland; Auckland Electrification – commissioning and compliance testing; Matangi II – Procurement and Manufacture of the Follow-up Fleet; Auckland European Train Control System (ETCS); 36 Hour Bridge Replacement; and Wagon Manufacturing Quality Control and Pre-cast Crossings.

Right: Mike Jakkett receives his Transportation Group life membership from Chair Pravin Dayaram MIPENZ.



Recreation Safety Engineering (RSE)

 **Chair:** Stewart Gutsell MIPENZ
 **Membership:** 32

This year's highlights:

- The Group's AGM and conference was held in Palmerston North in November 2014.
- Held a mini conference in Wellington in June 2015 covering health and safety, design safety and inflatables.
- Worked with WorkSafe New Zealand (WorkSafe) to develop guidelines for safe use of land-born inflatable devices.
- Worked with IPENZ and WorkSafe to consider implications for engineering certifiers under changing Health and Safety legislation.

Rivers Group

 **Chair:** Kyle Christensen MIPENZ
 **Membership:** 237

This year's highlights:

- Ran a Rivers Course in association with the New Zealand Institute of Highway Technology. The course, titled "Managing Infrastructure Affected by Rivers", took place in September and October 2015 in Hamilton, Palmerston North, Christchurch, Dunedin and Auckland.
- Awarded the Arch Campbell Prize to Peter Blackwood for outstanding lifetime contribution to river engineering and management in New Zealand.
- Awarded research funds to projects at Massey University and the University of Canterbury.
- The Group's technical presentations were on the topic of Geomorphology and Geophysics for rivers/stream management.



Society of Fire Protection Engineers - New Zealand Chapter (SFPE)



Chair: Claire Williams MIPENZ



Membership: 222

This year's highlights:

- Worked with stakeholders to review the Practice Note *Guidelines for Documenting Fire Safety Designs*.
- Joint SFPE/SESOC presentations on structural fire rating and steel in fire.
- A presentation and careers evening at Auckland University, held in conjunction with the University of Canterbury fire engineering department, on fire engineering and fire protection consultancies.
- Investigated establishing and funding an additional research scholarship for fire engineering students.

The Sustainability Society



Chair: Caleb Clarke GIPENZ



Membership: 233

This year's highlights:

- Inaugural webinar series on sustainability themes including improving urban water outcomes and renewable energy.
- Ran a workshop on Infrastructure Sustainability and Resilience at the Water New Zealand Stormwater conference.
- Gave the keynote presentation on Construction Waste at the Unitec Building Today, Saving Tomorrow conference.
- Made submissions and hearing presentations across several areas of the Auckland Council Unitary Plan.
- Gave input into the Productivity Commission's *Land Use for Housing* report.
- Established organisational membership for the Society to facilitate development of strategic relationships with sustainability leaders across the industry.
- The Society was part of the Water Sensitive Wellington Forums and Waitoru Te Aro collaborative project with Victoria University's Landscape Architecture students, to develop integrated, sustainable and innovative detailed designs for the Te Aro region in Wellington.

IPENZ Transportation Group



Chair: Pravin Dayaram MIPENZ



Membership: 1,147

This year's highlights:

- The Signals NZ User Group (SNUG) held its annual workshop in Christchurch in November 2014, and the NZ Modelling User Group's (NZMugs) conference was held in Auckland in September 2015.
- The Trips Database Bureau established closer links with equivalent trip generation organisations in the United Kingdom and United States of America at their AGM in September.
- The Group's research sub-committee liaised with the Ministry of Transport and the NZ Transport Agency about how to input to their respective research programmes.
- The Group made a submission to the Cycling Safety Panel on the draft *Safer Journeys for People Who Cycle* document.
- Six members were awarded life membership, which recognises exceptional service to the transportation engineering profession, and the work of the Transportation Group, over the course of an individual's career.

We also provide administrative support to the following Collaborating Technical Societies:

- Civil Engineering Testing Association of New Zealand Inc (CETANZ)
- New Zealand Geotechnical Society (NZGS)
- New Zealand Institution of Gas Engineers Inc (NZIGE)
- New Zealand Society for Earthquake Engineering Inc (NZSEE)
- New Zealand Timber Design Society Inc (TDS)
- Structural Engineering Society of New Zealand Inc (SESOC)
- Society of Materials New Zealand Inc (SMNZI)

IPENZ Foundation

The IPENZ Foundation plays a benevolent and supportive role as the “heart of the profession”. It helps Members and their families when they need assistance and encourages school leavers into tertiary education by offering scholarships.

In 2015, the Foundation expanded its scholarships scheme to encourage applications from a wider range of engineering students. It's working in partnership with the Tauranga, Hawke's Bay and South Canterbury Branches to offer pilot regional scholarships schemes. If the pilot project is successful, the Trustees' will look at working with other Branches to roll out the scheme across the country.

This year, the Foundation also gave assistance to Members with health issues. It made a financial contribution to the IPENZ Engineering Heritage Board's schedule of recognition for significant engineering achievements, unveiling a plaque at the Wellington Cable Car. It also launched a new postgraduate engineering scholarship offered from 2016 for at least 10 years, thanks to an endowment from a past President of IPENZ.

Summary results for the year ended 30 September 2015

The full financial statements were authorised by the IPENZ Foundation Trustees on 7 December 2015 and signed by two Foundation Trustees. They have been subject to audit and an unqualified audit report was issued on 7 December 2015. You can view and download the full financial statements at www.ipenz.nz/annual-report

The financial year ended 30 September 2015 resulted in total operating revenue of \$63,995 and total operating

expenditure of \$53,931. There was an unrealised gain on investments of \$49,048.

As a result, the year ended with a surplus of \$59,112. This was 47% ahead of that from last year due to unrealised gains. The figures below provide further detail of the main areas of revenue and expenditure.

The balance sheet remains healthy with net assets of \$968,865.

	2015 \$	2014 \$
Income		
Dividends and Interest Received	53,366	52,691
Realised Investment Gains (Losses)	(5,828)	851
Donations and Sundry	16,457	15,151
Total Operating Income	63,995	68,693
Expenditure		
Scholarships and Branch Scholarships	24,000	31,000
Sponsorship	8,000	9,200
Sundry Expenses	21,931	21,457
Total Expenditure	53,931	61,657
Net Income before Unrealised Gains (Losses)	10,064	7,036
Unrealised Gains (Losses)	49,048	33,008
Net Surplus/Deficit	59,112	40,044

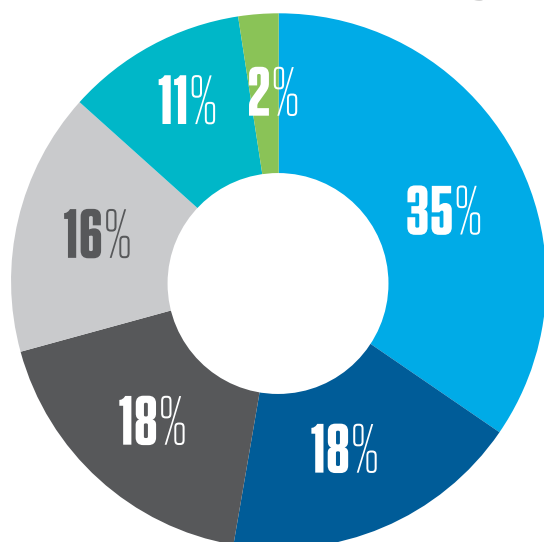
Financial summary

The full financial statements were authorised by the IPENZ Board on 7 December 2015, signed by the President and the Chief Executive and have been subject to audit and an unqualified audit report was issued on 7 December 2015. You can view and download the full financial statements at www.ipenz.nz/annual-report

The financial year ended 30 September 2015 resulted in total revenue of \$11.2 million and total expenditure of

\$10.9 million. As a result, the year ended with a surplus of slightly more than \$300,000. This was slightly in excess of that originally budgeted for and is a pleasing result. The charts below provide a summarised picture of the main areas of revenue and expenditure. The balance sheet remains healthy with total assets of \$7.9 million and liabilities of \$2.1 million. This leaves net assets, represented by member's funds, of \$5.8 million.

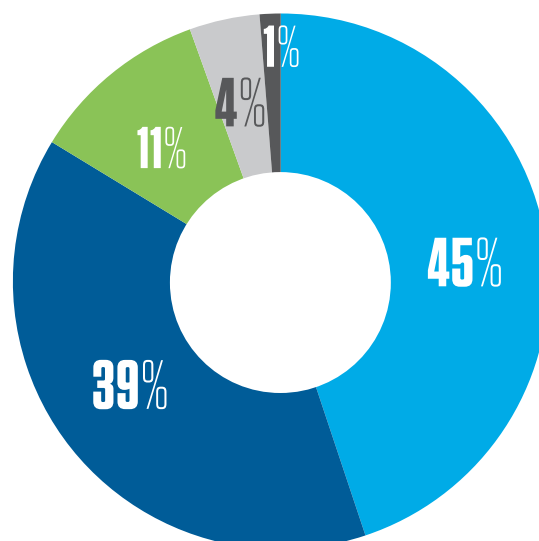
BREAKDOWN OF INCOME



Member subscriptions	\$3,892,000
Registry and Assessment fees	\$2,043,000
Other income eg CPD fees, advertising	\$2,031,000
Contract income eg Futureintech, NZBED	\$1,791,000
Technical and Special Interest Groups	\$1,231,000
Interest	\$273,000
Total income	\$11,261,000

BREAKDOWN OF EXPENDITURE

Staff costs	\$4,909,000
Other expenses eg publications, disciplinary legal fees, CPD costs, office costs	\$4,247,000
Technical and Special Interest Groups	\$1,181,000
Consultancy Competency Assessments	\$464,000
Depreciation and amortisation	\$138,000
Total expenditure	\$10,939,000



Thank you

Our volunteers

Volunteer support is the backbone of any membership-based organisation. IPENZ is no exception. We're fortunate to enjoy a high level of volunteer support.

We acknowledge and thank the countless number of volunteer hours contributed by:

- Members of our:
 - Governing Board
 - Committees
 - Engineering Practice Advisory Committee
 - Audit and Risk Committee
 - Performance and Remuneration Committee
 - Competence Assessment Board
 - Standards and Accreditation Board
 - Heritage Board and Chapters
 - Emerging Professionals and Student Engineers Councils
 - Award committees
- Competency Assessors (staff and practice area)
- IEA Review panels
- Standards Committee Representatives
- Practice note authors and reviewers
- The code of ethics review committee
- Investigating and disciplinary committee chairs
- Investigating and disciplinary committee members
- Contributors to publications and learned papers
- Futureintech Ambassadors
- Transpower Neighbourhood Engineers
- Branch committee members
- Technical and Special Interest Group committee members

Our sponsors

We rely heavily on ongoing support from our sponsors.

We acknowledge the generous contributions made by:

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The Institution of Professional Engineers New Zealand Inc.

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