

# ANNUAL REPORT

21/22



engineering  
new zealand  
te ao rangahau

# WHO WE ARE.

**We're Engineering New Zealand  
Te Ao Rangahau – a membership  
organisation driven to bring  
engineering to life, so our members  
can engineer better lives for  
New Zealanders.**

**As New Zealand's professional body  
for engineers, we represent you –  
over 23,000 engineers.**



# PRESIDENT'S REPORT

## Ngā mihi nui

It's my pleasure to provide you, our members, with our annual report for the year to 30 September 2022.

This year, the Board and member representatives set about testing our strategy. We embarked on a 'Black Room' exercise, looking at four plausible scenarios of the future to understand what we might have to do – and how our profession may need to change – to realise a vision to 2050. The Board accepted the strategic foresighting statement and work is underway to set the roadmap to reach our vision.

An immediate step was to update our strategy and you'll see this visually come to life as you read on.

Finally, I want to thank all those who've volunteered their expertise and time for Engineering New Zealand this year. Most often, members interact with branches and groups, which are run by volunteers. But our entire professional organisation depends on volunteers, from committees that support our complaints and disciplinary processes, to our advisory committees. I personally want to thank immediate past president Rosalind Archer for leaving our governance in such a good place, and I aim to pay it forward when my term ends.

**Dr Tim Fisher CPEng FEngNZ**  
President



## Strategic foresighting statement

*In 2050 Engineering New Zealand is a sophisticated, global focused, pan-engineering membership organisation that has made a significant positive contribution to the realisation of the transformed post-Anthropocene environment. Engineering New Zealand is recognised as the premium post-Anthropocene engineering organisation and its engineer members are fully engaged with the complex nature of society's and the planet's challenges with respect to climate change, carbon sequestration, energy supply, resilience, environmental rehabilitation, economic circularity, a secure food system, and a balanced and equitable world, devoid of human division, poverty, famine and war.*

# CHIEF EXECUTIVE'S REPORT

## **Kia ora koutou**

I'm now into my third year leading Engineering New Zealand Te Ao Rangahau and have enjoyed meeting and collaborating with you, our members. Your knowledge and foresight helps us design solutions to progress the profession's interests.

We have laid the foundations for Kimihia Rangahaua, our strategy to embrace Te Ao Māori (Māori world view) into our work, our organisation and the engineering profession. In making our profession more inclusive towards Māori, we hope it will become more attractive to Māori who are under-represented among us. In early 2023 we launched the foundational story, as well as a learning module on Te Tiriti o Waitangi, to help engineers understand how our profession honours its relationship with tangata whenua.

Engineering Climate Action is one of our organisational objectives and flagship programmes. This year, we made submissions on the Ministry for the Environment (MfE) report Te hau mārohi ki anamata, Transitioning to a low-emissions and climate-resilient future, Transforming recycling (MfE) and the draft National Adaptation Plan (MfE). Our free Climate Conversations webinar series has proved valuable to members, and we'll continue with these.

Towards the end of 2022 we reconfigured our functions into six groups: Member Services, Regulation, Global, Strategy, Promotion and Digital, and People and Finance. Clustering regulatory functions for members and



Chartered Professional Engineers was a key driver, as was the need for broader functions to better support our new strategy. We expect these changes to position us well to accommodate any decisions from Government's proposals for occupational regulation.

My thanks to you for your support of Engineering New Zealand. Thanks also to the Board for their guidance and staff for their delivery.

**Dr Richard Templer FEngNZ**  
Chief Executive

# OUR STRATEGY

## Our ambitions



### Professional

Technically skilled, credible, trusted and valued by the communities they serve and live in.



### Connected

Nationally and internationally linked with the profession, allied disciplines, government and communities.



### Leading

Champions of the sustainable change needed to solve society's and the planet's complex challenges.



### Thriving

Building a diverse, equitable and inclusive profession where everyone is equipped to succeed.

## Our objectives

### Professional regulation

Changes to the CPEng process and legislation increase public confidence and hold the profession to appropriate standards

### Engaged members

Members are connected and growing professionally and technically.

### Climate action

Engineers, stakeholders and the wider industry are supported to take informed positive action to respond to climate change

### Change makers

Te Tiriti, diversity, equity, inclusion and innovation are central to equipping our profession, and fostering future engineers.

# BY THE NUMBERS

**23,441**

Total membership

**81.7%**

Men

**18.2%**

Women

**0.1%**

Gender diverse



**8,733**

Member queries answered



**223**

Branch events with **15,089** registrants



**272**

Group events with **31,548** registrants



**180**

CPD activities with **2,148** participants.



**33/38**

Complaints received/closed



**37**

New Fellows and Distinguished Fellows



**34**

engineers contracted as subject matter experts for government-commissioned projects



**16,650**

students reached with Rocket Challenge, across **555** classes



**OUR  
WORK.**



  
Wonder  
Project

# CONNECTING OUR PEOPLE

Our branches and groups are at the heart of members' engagement with Engineering New Zealand Te Ao Rangahau, and keep our profession connected.

Engineers embraced the opportunity to meet face to face at branch events. Online events were still popular, and participation at both increased with more registrants than the previous 12 months.

Hydropower Group hosted its inaugural conference, as did the Electrical Engineering and Mechanical Engineering groups with their joint EMCONZ conference.

One new group – the Ventilation Engineering Group – was formed.

We joined the Health and Safety Association of New Zealand to help groups prioritise workplace health and safety when their people are on site.

We piloted a panel of Engineers to the Contract, funded by the Construction Sector Accord, to help ensure clients have expert non-partisan support when working with contracts. The pilot proved extremely successful, and the panel will continue.

Young Engineers took part in the World Federation of Engineering Organisations Future Leaders Climate Action Working Group, meeting with other young engineers from across the globe to discuss national responses to climate change.

Young Engineers organised over 40 events nationally – including a number of wellbeing events – as Covid restrictions eased and workplaces and sites reopened.

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The Wonder Project, our programme to get kids excited about STEM, saw the piloted Power Challenge reach 236 classes and 7,000 students.



# UPSKILLING THE PROFESSION

We're re-designing how we deliver professional development for members and non-members – a need highlighted in the 2021 Member Survey.

We're creating content to populate the new CPD Learning Framework, including a suite of short, self-guided, online modules that will provide an essential learning platform for an engineer's professional development. The rollout of these courses began in February 2023 and are complimentary to paid members.

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Our vision is to empower our community to engineer better lives for people by collaborating with experts and building relevant knowledge that enhances engineering capabilities.

A future enhancement is a new self-assessment portal for learning, a resource centre, and upgraded navigation and tracking capabilities to provide career guidance, all supporting members' evidence of learning.



# ADVOCATING FOR BETTER REGULATION

In March 2022, the Government confirmed its intention to proceed with proposals for stronger regulation of our profession. All practicing engineers would need to be registered. Those working in fields posing a higher risk to life, health, property, economic interests, public welfare or the environment would also need a licence.

We support these proposals. Members have called for stronger regulation and this call has been received by the main political parties.

In the short term, our CPEng Review will strengthen processes to build greater trust and confidence in the CPEng system and Chartered Professional Engineers.

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Currently, CPEng offers New Zealand's only protected title for engineers and is a recognised quality mark, particularly by the building system.

Our Sector Programmes initiative continues to provide high-quality technical expertise to Government. New geotechnical modules by the New Zealand Geotechnical Society now form part of regulatory guidance for the Building Code. Waka Kotahi has approached us to help design and develop training material for Manufacturing Certifiers and Heavy Vehicle Specialist Certifiers, and MBIE has commissioned a project to develop an accreditation scheme for Recognised Engineers in dam safety.

Senior seismic experts also provided input on the inter-agency National Seismic Hazard Model. While there are no changes to regulation at this stage, we encourage engineers to read our interim advice and think about what the new data might mean for future designs.



# LEADING FOR A SUSTAINABLE FUTURE

The Chartered Professional Engineers Board was established this year – a subcommittee of the Governing Board with delegated responsibility for all Registration Authority functions. These include CPEng registration, complaints and discipline. To ensure there is no perception of conflict of interest, the CPEng Board has no common members with Engineering New Zealand's Governing Board.

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The Competence Assessment Board processed approximately 800 reassessments – a doubling on the previous year. It also helped develop new guidance for Chartered Professional Engineer assessments and reassessments, and continued professional development.

Engineering Practice Advisory Committee led the Black Room strategy work, which resulted in the strategic foresighting statement. A backcasting exercise and roadmap to 2050 are the next steps needed to realise our strategic foresighting statement.

The Standards Assessment Board (SAB) were busy with a lot of accreditation activity due to impacts of the Covid-19 pandemic. Much of this activity was either deferred from the previous year or required physical visits to validate prior virtual reviews. Our accreditation process relies on many people contributing, and we're proud of the 63 volunteers (including international representatives) who participated during the year. Internationally, SAB continues to oversee our engagement with the International Engineering Alliance, and both SAB Chair Craig Price and Engineering New Zealand General Manager Brett Williams hold roles on the Alliance's governing group.

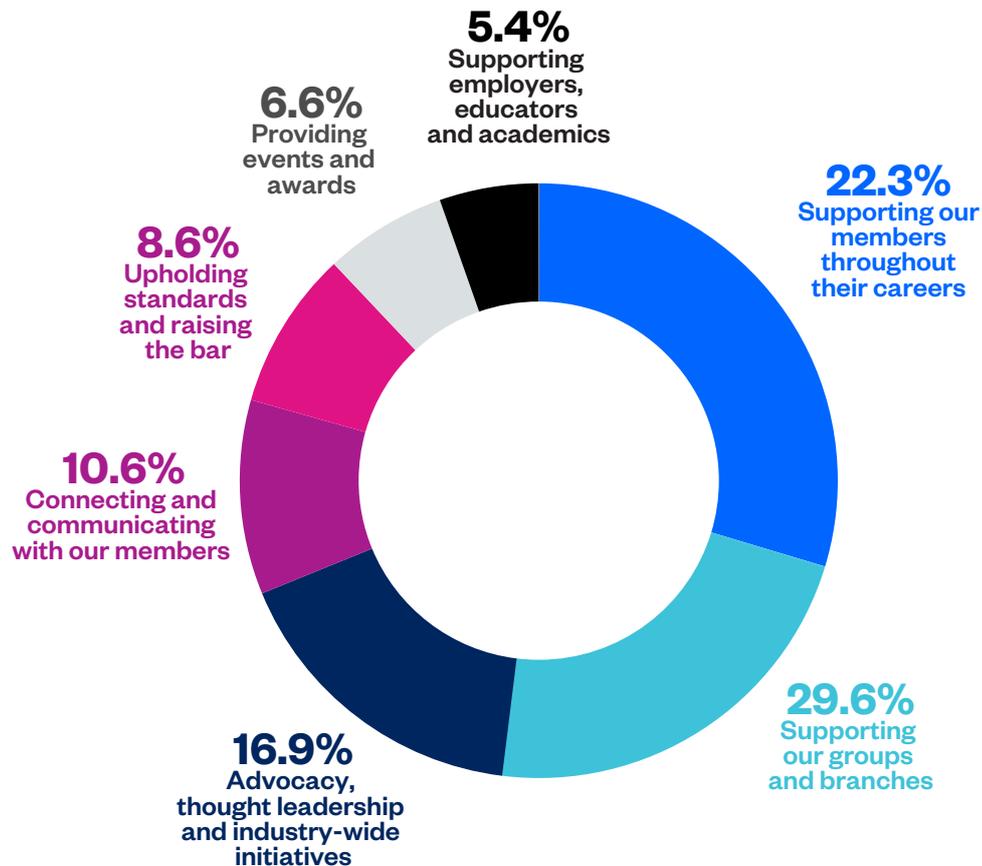
The Heritage Board added the Dawson Falls Hydroelectric Power Scheme (Taranaki) and Makatote Viaduct (Manawatū-Whanganui) to the online heritage register. We captured oral histories from Bryan Leyland and John Duder, and launched a heritage walking tour of Christchurch. Sadly, we had to cancel the Australasian Engineering Heritage Conference due to Covid restrictions but made the presentations and papers available on our website.

# FINANCIAL OVERVIEW

**TOTAL  
REVENUE.  
\$15.64m**

**TOTAL  
EXPENDITURE.  
\$15.49m**

## WHERE YOUR MONEY GOES.



# 2021-22 BOARD



**Tim Fisher** FEngNZ CPEng  
President



**Glen Cornelius** FEngNZ CPEng IntPE(NZ)  
Deputy President



**Jan Evans-Freeman** DistFEngNZ  
Vice President



**Rosalind Archer** FEngNZ  
Immediate Past President



**Geoffrey Hunt** DistFEngNZ  
Board Member



**Kennie Tsui** CMEngNZ CPEng IntPE(NZ)  
Board Member



**Sheila Karimi** CMEngNZ CPEng IntPE(NZ)  
Board Member



**Sue-Ellen Fenelon** CMEngNZ  
Board Member



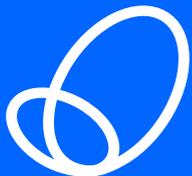
**Wharehuia Dixon** MEngNZ  
Board Member



**Ann Williams** FEngNZ  
Board Member



**Hamish McKenzie** FEngNZ IntPE(NZ)  
Board Member



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**Engineering New Zealand Te Ao Rangahau**

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