

2020  
2021



ENGINEERS  
AUSTRALIA



Annual  
Report



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# 1

## Who we are

With more than 105,000 individual members, Engineers Australia is the profession's peak body. We are the voice of the profession and exist to advance society through great engineering.

Our high standards, globally recognised credentials and international agreements enable Engineers Australia members to live and work around the world, with members in more than 120 countries.

Founded in 1919 as the Institution of Engineers Australia, our work has supported the progress of our nation for more than a century. Engineering plays a pivotal role in society and will continue to shape the future of Australia, creating successful, safe and sustainable communities.

With a future-ready focus, Engineers Australia continues to change with the needs of its members and the wider community – preparing for the future, today.

### About this report

This annual report on Engineers Australia's achievements and challenges for 2020–21 aims to:

- ▶ Inform members of measurable progress against our strategic priorities
- ▶ Ensure transparent and responsible reporting for governance best practice
- ▶ Summarise the main activities and financial performance of our organisation
- ▶ Inform stakeholders, partners, media and government of our focus
- ▶ Include details of Engineers Australia's responses to COVID-19 in relevant sections throughout

### REPORT GOES DIGITAL

For the first time, this comprehensive annual report now appears in digital form only.

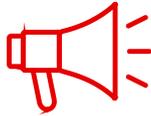
This development reflects our strategic future-ready focus and environmental priorities. It also enables us to share a wider range of content with you in a more accessible and engaging form.

### CONNECT WITH US

-  [linkedin.com/company/engineers-australia/](https://www.linkedin.com/company/engineers-australia/)
-  [instagram.com/engaustralia](https://www.instagram.com/engaustralia) | @EngAustralia
-  [facebook.com/EngineersAustralia](https://www.facebook.com/EngineersAustralia)
-  [twitter.com/engaustralia](https://twitter.com/engaustralia) | @EngAustralia

[engineersaustralia.org.au](https://engineersaustralia.org.au)

# Our work



Speak as the voice of the engineering profession, via government, community and media advocacy



Advance engineering knowledge through our discipline-based colleges and technical societies



Recognise and celebrate engineering excellence through prestigious individual and project awards



Deliver professional development to help engineers build their technical and professional skills



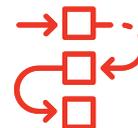
Evaluate members for our internationally benchmarked Chartered credentials, now held by a record 28,447 members



Represent Australia in the International Engineering Alliance and develop agreements for global professional mobility



Maintain the National Engineering Register (NER), which currently includes more than 24,970 engineers



Build a robust, skilled and diverse engineering skills pipeline to serve our future community



Accredit Australian tertiary education programs to international benchmarks including the Sydney, Dublin and Washington Accords



Assess migrant skills applications on behalf of the Australian Government

# 2

## The year in review:

### National President and Board Chair

“I believe engineering is entering a golden era, being uniquely placed to address society’s challenges.”



It is a privilege to lead our profession’s peak body at this time, when engineers are called upon to enable a societal transformation. Whether it’s expanding the frontiers of space, shifting to a circular economy, scaling renewable energy or enhancing healthcare, engineers must deliver new solutions in new ways. In doing so, our profession must exhibit the highest levels of ethical and professional practice. By upholding our trusted status in an increasingly contested world, we best serve our profession and communities.

These issues are front of mind as we strive to advance society through great engineering. At Engineers Australia, we continue to hone our strategy to deliver on this purpose. Building on our proud history, we are ambitious to achieve greater impacts for the benefit of society.

We are increasing public recognition of the value of engineering, creating an even more effective volunteer network, and developing pathways for people from diverse backgrounds to become engineers.

As the voice of the profession, we have been active advocating through the media and with government on issues like climate change, energy, infrastructure and the future of work.

The Board has devoted significant resources to safeguarding Engineers Australia with a thorough re-examination of our risks and risk-mitigation measures.

I am pleased to report that we remain in a strong financial position. Engineers Australia has weathered the challenges of COVID-19 to deliver a strong result. It enables us to reinvest in the profession and our organisation for the crucial years ahead.

The many achievements detailed in this report are a testament to “one EA” – our CEO, employees and volunteers – demonstrating resilience and hard work together over the past year.

We can all look forward with confidence and optimism knowing our profession is well placed to play an exciting role in shaping Australia’s future.

A handwritten signature in black ink, appearing to read 'Nick Fleming'.

**Dr Nick Fleming**

BE(Hons) PhD FIEAust CPEng EngExec NER GAICD  
National President and Board Chair

# The year in review:

## Chief Executive Officer

“We’re building foundations for the future so engineers can keep advancing society through great engineering.”



2020–21 has been a successful year by any measure, despite the ongoing challenges of COVID-19.

Our membership has risen to over 105,000, demonstrating the value engineers place on the support provided for career success through opportunities for networking, professional development and recognition.

We’ve seen record numbers of engineers earn our internationally benchmarked and recognised Chartered credential.

During an evolving skills shortage, we’ve partnered with employers to develop credentialed engineering teams, increased support to assist young engineers to find their professional feet and looked to help Australia better harness the talents of migrant engineers.

Engineers never stop learning, and our members have embraced the convenience of digital professional development, with registrations for our real-time and recorded events up over 60 per cent.

Our wide range of conferences will be complemented by a new flagship event, Climate Smart Engineering, in November 2021. Other initiatives have included a series of roundtables for industry leaders on productivity in infrastructure,

engineering in construction and COVID-19 – and an additional series of roundtables I hosted for young leaders.

Engineers must work within the prevailing conditions and constraints as they create solutions. As their peak body, we have adopted the same approach, choosing to act now to shape our future to continue to support the profession effectively as it enters the coming crucial era – rather than to wait for a perfect post-COVID time.

As with the profession, both human and digital skills will be vital, and these factors have been recognised in our project and customer service investments and changes to our executive team to build on our cultural and technical capabilities.

My thanks go to the Engineers Australia Board and its Chair, and to our volunteers and staff for their contributions to the important work we do to advance society through great engineering, both today and into the future.

A handwritten signature in black ink that reads "Bronwyn Evans".

**Dr Bronwyn Evans AM**

BE(Elec) PhD HonFIEAust CPEng EngExec NER FTSE  
Chief Executive Officer

# 3

## Engineers Australia 2020–21 highlights



236,833

Climate Smart Engineering – new flagship conference established

Award-winning advocacy sees mandatory engineer registration in VIC, NSW from 1 July 2021

Event audiences up 62% – 236,833 registrations



105,000



Supporting the next generation with a jobs board, new tailored webinars and mentoring

Membership increased 4.5% to over 105,000

CEO roundtables – 80+ leaders debate topics including COVID-19, infrastructure and construction

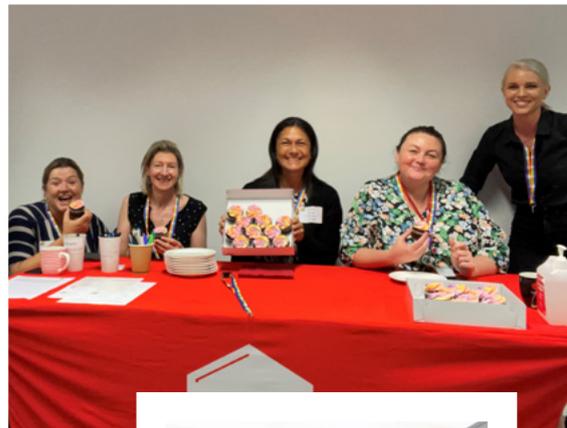


Strengthening leadership – first Chief Engineer, new executive roles for people and technology

Engineering capability – research involving 800+ people to help migrants and employers

Credential growth – 28,447 engineers hold our global Chartered benchmark, up 7.7%

# Engineers Australia in action



# 4

## Our Board

### **Dr Raj Aseervatham**

Board Director

BEng(Aust) MEngSt(Aust)  
PhD(Aust) MBA(Aust)

Since 2019 (elected)

Raj has more than 30 years' professional experience, mainly in the mining, oil and gas, and energy sectors. He has been a board member of mining, consulting and nanotechnology enterprises, and a joint venture board advisor for several large energy projects.

### **Ms Lucia Cade**

Board Director

BE(Civil) BEc MEngSc MBA  
FIEAust FAICD

Since 2018 (elected)

Lucia is an experienced non-executive director and chair with a professional engineering and commercial background in the private, listed and government sectors. Her portfolio currently spans utilities, manufacturing, waste recycling, energy research and investment.

### **Dr Kourosch Kayvani**

Board Director

FIEAust CPEng NER FTSE MAICD

Since 2021 (elected)

Over a 30-year career, Kourosch has played leading roles in major projects across Australia and internationally. Between 2017 and 2020, he was Aurecon's Global Managing Director - Design, Innovation & Eminence. His current roles span consultancy, directorships and academia.

### **Dr Nick Fleming**

National President and Board Chair

BE(Hons) PhD FIEAust CPEng  
EngExec NER GAICD

Since 2017 (elected)

Nick has consulted across the infrastructure, natural resources, water, mining, energy and defence sectors in Australia and internationally. He provides business advisory, strategy and innovation services across multiple sectors and delivers executive education with the ANZ School of Government.

### **Mr Hurol Inan**

Board Director

BSc(Ind Eng) MS

Since 2018 (appointed)

Hurol is a company director and advisory board member. He is an investor in and advisor to multiple technology start-ups in Australia and Europe, assisting them with their business, sales and marketing strategies. He has 30 years' experience in management consulting, technology, digital transformation and marketing. Hurol stepped down in August 2021.

### **Hon Trish White AM**

Board Director and Past President

BE(Elec) BA FIEAust CPEng  
EngExec NER FAICD

Since 2016 (elected)

Trish is a professional company director who serves on and chairs the boards of large organisations in the transport, infrastructure, property, manufacturing and university sectors. She is also the Executive Director of consultancy Slingsby Taylor.

### **Dr Marcus Thompson AM**

Board Director

BE(Elect) BBus M Defence  
Studies MA Strategic Studies  
PhD FIEAust CPEng EngExec

Since 2020 (elected)

Marcus is an internationally-recognised expert in cyber engineering who brings experience gained over a distinguished military career - including as Australian Defence Force's Head of Information Warfare between 2017 and 2020 - to his work as a professional company director and consultant.



In 2020–21, the Board considered a wide range of issues including the COVID-19 response, climate change, compulsory registration, mutual recognition, risk, migration, professional indemnity insurance challenges and many more

The Board refined our corporate strategy in the light of the current environment, with considerations including a review aimed at maximising the future impact of the Learned Society in advancing our purpose.

Member and volunteer engagement is always a priority and, this year, included a series of eight online Leadership Forums that enabled the Board to communicate with office bearers around Australia.



National President and Board Chair Dr Nick Fleming (left) celebrates a member's engineering achievements.



In addition to holding three Board meetings online and meeting in person in Melbourne, Sydney and Canberra, the Board also participated in committees and forums including the:

- ▶ Audit and Risk Committee
- ▶ Governance Committee
- ▶ Board Nominations Committee
- ▶ People and Culture Committee
- ▶ College Chairs Forum
- ▶ Engineering Practice Advisory Committee (EPAC)
- ▶ National Congress
- ▶ Presidents Forum
- ▶ International Advisory Panel
- ▶ Accreditation Board
- ▶ Professional Standards Committee
- ▶ Honours and Awards Committee
- ▶ EEA Board
- ▶ EngInsure Board
- ▶ EngMedia Board



The Board and senior staff with Senator Penny Wong, Leader of the Opposition in the Senate.

The Board refines Engineers Australia's future strategy at a workshop in Sydney.

# 5

## Progress against strategic priorities

Our long-term strategic priorities are:

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Be the trusted voice of the profession

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Provide a professional home for life

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Uphold professional standards

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Create tomorrow's engineers

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Operate sustainably

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# 5.1

## Be the trusted voice of the profession

Engineers Australia works in partnership with decision-makers in government, industry and academia to provide evidence-based guidance.



Engineers Australia testifies before the Joint Standing Committee on Migration's inquiry into Australia's skilled migration program.

Engineers Australia's CEO, Dr Bronwyn Evans AM, has an active calendar of public speaking engagements.

Through these partnerships, along with establishing ourselves as subject-matter experts for media comment, we build visibility and increase the profession's credibility and impact.

In 2020–21 we had a successful year, with quality media coverage, numerous government submissions, and productive meetings with parliamentarians and business leaders – as well as a series of roundtables convened by our CEO.

In recognition of the value our members place on Engineers Australia having 'a seat at the table', we significantly expanded our advocacy team in 2020–21. Under our [External Voice Project](#), we added specialist roles to lead engagement in the priority areas of climate, energy, infrastructure, and technology and industry.

To increase member accountability, Engineers Australia continued to run its free [public complaints service](#) in 2020–21.

# Policy advocacy

Engineers Australia engages with government ministers and other decision-makers to promote engineering interests and ensure our profession contributes to decision making.

## Submissions

Engineers Australia regularly develops government submissions and responses, drawing on the expertise of our colleges, technical societies and other groups on subjects such as energy, infrastructure, security and technology. We made more than 30 submissions in 2020–21 on [topics including:](#)

- ▶ Registration of engineers (Victoria, New South Wales and Western Australia)
- ▶ Mutual recognition (Commonwealth)
- ▶ Australia's skilled migration program (Commonwealth)
- ▶ Infrastructure and critical infrastructure (Commonwealth, Victoria, Queensland, Western Australia)
- ▶ Future fuels strategy (Commonwealth)
- ▶ National Priorities and Industry Linkages Fund (Commonwealth)
- ▶ Water reform (Commonwealth)
- ▶ Future of Australia's aviation sector (Commonwealth)
- ▶ Medical gas safety (New South Wales)
- ▶ Paradise Dam (Queensland)
- ▶ Insurance (Insurance Council of Australia strategic review)
- ▶ Protection of 'movable' heritage (New South Wales)

## SAVE LANE COVE CAMPAIGN

A unique high power electrical testing facility slated for closure has won a temporary reprieve following a campaign spearheaded by Engineers Australia.

Lane Cove Testing Station is the only facility in Australia that can test under certain very high currents and that is approved to certify to ASTA global standards. Its closure would damage innovation, supply chains and manufacturing in sectors such as transport, energy, infrastructure, defence, mining and other heavy industries.

Engineers Australia joined forces with the Australian Industry Group to raise the issue directly with the facility owner while advocating with the Commonwealth and New South Wales Governments to identify a long-term solution for Australia's benefit.



# Registration headway

This year, we have built on the success of our longstanding advocacy for mandatory registration.

Legislation mandating registration for many engineers passed in Victoria and New South Wales in 2019–20, and was fleshed out with regulations in 2020–21, ahead of phased introduction from 1 July 2021.

**Engineers Australia has worked to support governments in implementing registration systems so that they are practical, affordable and as consistent as possible across jurisdictions.**

We are not a regulator but we have an important role to play in assisting government in assessing the suitability of engineers for registration.

In Victoria, we became one of three approved 'assessment entities' while the New South Wales Government has sought our expertise in assisting with more complicated assessments.

We are developing our capability to further support assessment in future.

## Mutual recognition

Engineers Australia advocates for mutual recognition so that engineers registered in one state can practise in another with ease.

In 2020–21, we succeeded in advocating for the inclusion of engineering in an intergovernmental agreement to facilitate an additional 'automatic deemed registration' pathway for mutual recognition across borders.

Commonwealth legislation to amend the Mutual Recognition Act passed in June 2021. Engineers Australia is monitoring implementation at the state level to help ensure engineers can benefit from the additional measures that the amendment makes possible.

More than 60 CEOs and senior leaders attended the CEO Roundtable series [COVID-19: Business as unusual](#).

# Industry roundtables

- ▶ **COVID-19: Business as unusual.** Engineers Australia hosted a series of eight online roundtables addressing the impacts of COVID-19. Sixty CEOs and senior leaders attended, from sectors including government, construction, professional services, tertiary education and defence.
- ▶ **Enhancing productivity in infrastructure delivery.** Part of Engineers Australia's External Voice Project, this series of online roundtables canvassed project pipeline management, contracts and project management, knowledge sharing and workforce planning. It was summarised in a directions paper.
- ▶ **Building confidence: How to use engineers to improve building and construction.** Engineers Australia convened a building industry working group to develop better practice including the introduction of key roles in project delivery, namely Engineer of Record and Proof Engineer.
- ▶ **Young leaders roundtables.** In these wide-ranging sessions, young leaders agreed that the profession needed to highlight the work's purpose and benefits to the community to position engineering as an attractive career choice.



# Forging personal connections

Engineers Australia's executive leaders have developed and cemented many new personal connections to advance the profession in 2020–21 through: one-on-one meetings with political, academic and business leaders; keynote speeches; roles as guest judges for competitions and hackathons; and participation in, and leadership of, industry groups and panels.

Speaking engagements on the calendars of our CEO and our Chief Engineer in 2020–21 included:

- ▶ Engineering a hopeful future, University of Newcastle
- ▶ The state of the engineering profession in Australia, ACT Government Engineers Community of Practice
- ▶ Tech innovation, Vogue Codes Visionary Women's Dinner
- ▶ EngFest, Charles Sturt University
- ▶ TechCon Australia/NZ
- ▶ National Roads and Traffic Expo
- ▶ Chiefs of Professions Roundtable in Evidence-based Policymaking
- ▶ Women in Construction, Engineering & Infrastructure Leadership Summit
- ▶ How STEM careers can shape the world for the better, University of Wollongong
- ▶ Project Controls Virtual Expo

Chief Engineer Ms Jane MacMaster (to right of picture, with host Ms Melissa Doyle AM) addressed the Vogue Codes Visionary Women's Dinner as part of efforts to encourage more women into engineering.

**“Engineers are good at solving problems with multiple inputs. We tend to do that unconsciously. Maybe we need to articulate that more, not be scared of pushing the envelope.”**

**Simon Pikusa**  
FIEAust CPEng NER  
Director, MPN Consulting



# Media presence

## A key role for Engineers Australia is raising public awareness and appreciation of engineers and the benefits they bring society.

In 2020–21 our media presence helped build the profile and importance of the engineering profession. Known as reliable subject-matter experts, we are consulted by journalists for comment as the trusted voice of the profession on a range of topics.

Engineers Australia featured in over 1020 TV, radio and print media stories in 2020–21, appearing in publications including *Sydney Morning Herald*, *The Australian*, *The Australian Financial Review*, *The Daily Telegraph* and *The Mercury*.

### Media topics included:

- ▶ Commonwealth Government university fee changes. Engineers Australia's statement led to two stories in *The Australian*, and interviews on ABC TV and 2SM in NSW
- ▶ Skilled migration program shortcomings, and the need for an overhaul to resolve long-term skills supply challenges – ABC radio news, 2SM, *Build Australia* and other trade publications
- ▶ Merits of engineering careers, as part of an article on 'pandemic-proof degrees' – Newscorp titles nationally
- ▶ Supply chain issues and potential future disruptions – *The Australian Financial Review* covered in both print and online
- ▶ Importance of quality maths and science teaching in schools using real-world contexts – online and print Newscorp publications nationally

## HOLD THE FRONT PAGE ... FOR MUM!

The Australian Engineering Excellence Awards featured extensively in the media, including a front-page story on the Victorian Engineer of the Year.

Award recipient Ms Emma Miller-Olsen FIEAust CPEng EngExec NER featured in the *Geelong Advertiser* after her proud 11-year-old son Lachlan contacted the publication to let them know about her win. The story was syndicated around Australia in related publications, including the *Herald Sun*.



# Keeping members informed

## Our create portfolio

We tell the stories about how engineers create the world around us, and engineer ideas into reality, through our *create* portfolio. This includes a magazine for members, and a free enewsletter and website for anyone who is curious about the latest engineering trends, innovations, challenges, people and projects.



## Engineering News

Launched in May 2021, *Engineering News* newsletter cuts the number of emails members receive by combining news, advocacy updates, professional development opportunities, events, resources and other benefits in one weekly publication tailored by location. It has been embraced by members, with email open rates exceeding industry benchmarks.

*Engineering News* also includes a monthly update on policy and advocacy initiatives to inform members on our work as the voice of the profession in communicating with government.



## Social media in 2020-21

We continued to enjoy a successful social media program in 2020-21, with a large and engaged audience that includes engineers, employers, government and the wider community. To align with the changing social media landscape, we are setting fresh reporting benchmarks in this report:

► **Paid and organic results.** From this year onwards, we are reporting the entirety of our results, both 'organic' (non-sponsored) and 'paid', where previously our reporting focused on organic content. Our decision to report on impressions and engagements from all content, and all audiences, is in line with best practice. With social media businesses deprioritising organic content, our holistic metrics will more accurately reflect our visibility and relevance going forward.

**in** 5.7M Impressions  
124K Engagements  
LinkedIn

**f** 31M Impressions  
1.1M Engagements  
Facebook

**ig** 429K Impressions  
12K Engagements  
Instagram

**bird** 856K Impressions  
13K Engagements  
Twitter

### Definitions

**Impressions:** how many times content is served to users

**Engagements:** total number of recorded actions e.g. shares, clicks, reactions, etc.

A #throwbackthursday Instagram post by CEO Dr Bronwyn Evans AM from her early days at the Electricity Commission of NSW.



# 5.2

## Provide a professional home for life



With more than 105,000 members around the globe, Engineers Australia provides a professional home for all engineers, in all locations and through all stages of their careers.

We are investing in the future of the profession through a range of initiatives tailored to support and guide students and graduates.

We provide continuing professional development for engineers across a wide range of disciplines.

# Membership

Despite the challenges of COVID-19, in 2020–21 Engineers Australia membership continued to grow. Our total membership is now at 105,406, representing an increase of 4.5 per cent on the previous year, with non-student membership reaching an all-time high.

Reflecting our commitment to the future of engineering, Engineers Australia includes graduate membership numbers as an organisational KPI. By the end of May, the full financial year target for graduate membership had been exceeded by over 9.5 per cent.

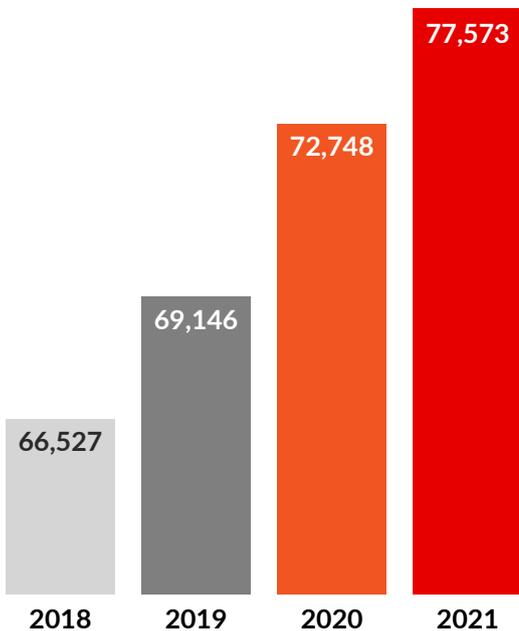
# Member retention

Our member retention for 2020–21 was a strong 91.5 per cent. Member net promoter scores remain high and positive. We regularly survey members to better inform our decisions.



▶ Click to watch the Engineers Australia membership campaign video.

## Growth in non-student membership:



## Total membership:

Grade	30 June 19	30 June 20	30 June 21
Hon. Fellow	179	182	184
Fellow	7,233	7,571	7,981
Member	48,527	51,088	54,289
Affiliates & Companions	299	376	469
Graduate	12,908	13,531	14,650
Student	27,813	28,163	27,833
<b>Total non-student</b>	<b>69,146</b>	<b>72,748</b>	<b>77,573</b>
<b>Total</b>	<b>96,959</b>	<b>100,911</b>	<b>105,406</b>

# Supporting early-career engineers

Engineers Australia continues to focus on graduates and early-career engineers as the foundation of the profession's future.



Key initiatives to support this strategy in 2020–21 included:

- ▶ **Mentor Match.** A unique online networking and development program giving early-career engineers invaluable access to senior engineers, with 165 mentors and 165 mentees participating in the first round.
- ▶ **Victorian student engineers' competition.** Young Engineers Australia Victoria attracted almost 500 entrants to their competition to transform Melbourne's historic Queen Victoria Market.
- ▶ **Engineers Without Borders partnership.** The Engineers Without Borders Challenge is a pioneering program teaching first-year engineering students to design creative solutions to real-world problems. Engineers Australia offered participants membership, resulting in over 3000 new student members.
- ▶ **Young Engineers Australia CPD Series.** A Young Engineers Australia working group has helped us better understand unmet professional development needs, leading to the launch of our YEA CPD Series in November. The 12-month program of graduate-specific content has already attracted over 6400 registrations.
- ▶ **Force Forty Engineers.** This program provides an opportunity for South Australian engineers aged under 40 to hone their leadership skills at six industry workshops.
- ▶ **Bite Sized Learning.** Two new modules on sustainability have been added to this successful online portal for microcredentials, bringing the total learning modules for graduate members to six. Two new modules are added each quarter.
- ▶ **Elevation.** This series of events connects students and graduates with engineering employers actively recruiting graduates. A total of 34 companies participated in events across the country, with Darwin participating for the first time. Virtual Elevation 2021 supplemented the in-person events.
- ▶ **Engineers Australia Jobs Board.** This free resource saw more than 184,300 page views, with almost 9400 click-throughs to job applications.

## Virtual careers fairs

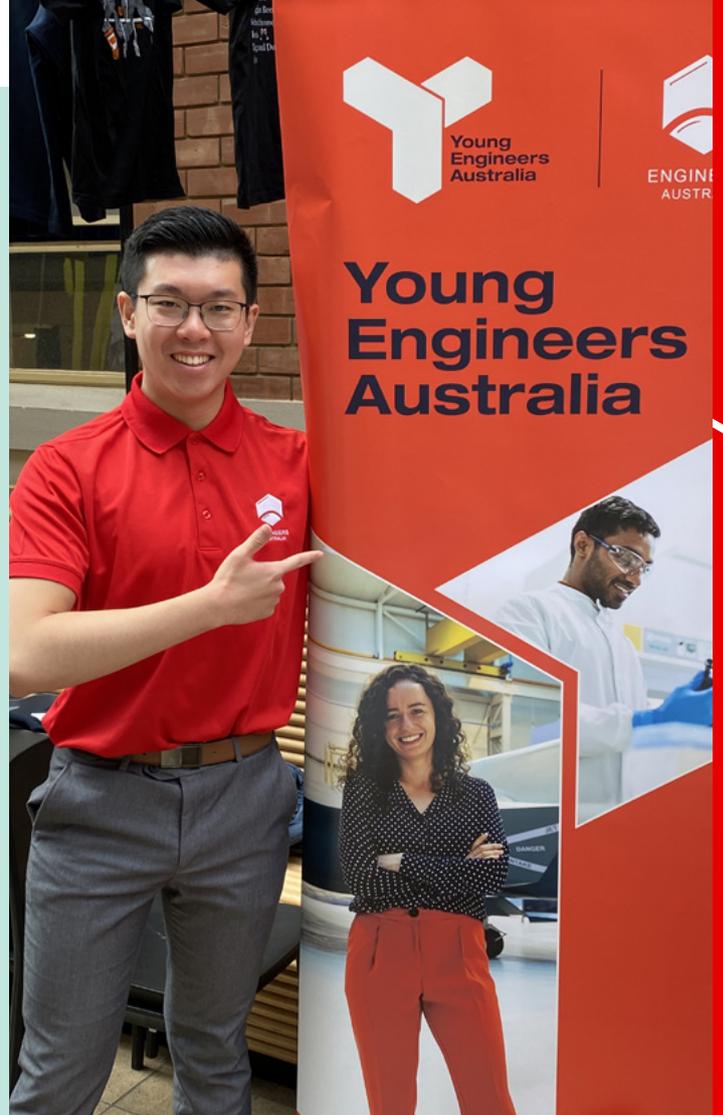
Held in March 2021, GradAustralia's Engineering Careers Super Fair saw Engineers Australia rated by students in the top five most popular booths among a field of almost 100 engineering organisations. Over 9000 students registered for the event, with more than 300 subsequently becoming Engineers Australia members.



## Bequest to benefit engineers

Engineers for years to come will benefit from a generous bequest by the late [Mr William 'Bill' Hickson FIEAus CPEng\(Ret\)](#), a Fellow of Engineers Australia who worked on some of the country's most prominent projects. The \$1.58 million endowment will be used to fund scholarships for postgraduate education for Engineers Australia members in mechanical engineering.

Engineers Australia is immensely grateful for this contribution towards the future of our profession.



“There are many wonderful things that will never be done if you do not do them. Even as students, we can make a difference through volunteering – and it gives you a lot in return. The contacts I developed led to an internship at TMK Consulting Engineers, and work at WSP.”

**Hardy Hu StudIEAust**  
2021 Engineers Australia Student Ambassador, University of Adelaide, and Structural Engineering Intern

## Embracing progress

- ▶ **Auditorium equipment upgrades.** Engineers Australia has equipped member facilities in Sydney, Canberra and Perth with additional audiovisual equipment including a second camera to facilitate recording of audience-speaker interactions. Similar upgrades are planned for Newcastle and Melbourne.
- ▶ **Expert AV support.** A specialist role has been created to support the smooth operations of audiovisual and web conferencing systems and equipment for our in-person and online events.
- ▶ **Website overhaul.** In 2020–21 we began our project to overhaul the Engineers Australia website. The planned upgrade will improve the quality of content and make information easier to find, supporting greater member engagement in future. Our website attracted 23.5 million page views in 2020–21, a slight increase on the previous year.
- ▶ **EA Xchange.** Our opt-in member-only discussion forum grew 12 per cent to almost 5500 active users at 30 June 2021, with discussions including requests for advice on major projects, standards and credentials.



**EngInsure.**  
INSURANCE + RISK SERVICES

EngInsure is committed to providing greater certainty for engineering businesses through the effective management of insurance and risk.

2020–21 has been EngInsure’s most commercially successful year to date, with a growth in client numbers, as well as strong policy renewal rates.

Our marketing, brand-building and business development activities over the past year have continued to position EngInsure as a trusted and knowledgeable brand that understands engineers at every career and life stage.

The EngInsure communications channels keep engineers informed on issues such as professional indemnity insurance requirements, including run-off cover, cyber-insurance in the context of working from home due to COVID-19 and contract risks.

EngInsure has been developed by the profession for the profession and is backed by Whitbread Insurance Brokers and Engineers Australia.

Our comprehensive suite of products includes business, personal and life insurance.

# 5.3 Uphold professional standards

Engineers Australia is committed to high standards among members and the entire profession.



Our accreditation standards are internationally benchmarked, and our Chartered credential is globally respected.

We encourage every engineer to aspire to achieve Engineers Australia credentials, and strive to ensure they are seen as valuable among not only engineering practitioners but also governments and employers.

We are passionate about sustaining world-class engineering education, qualifications and standards of practice, and we support engineering professionals in achieving them through a clear pathway of professional standards. The number of people with our Chartered and Engineering Executive credentials reached a record high in 2020–21, as did the number on the National Engineering Register.

# Professional development digital growth

Engineers Australia delivered unprecedented access to online professional development in 2020–21, as members embraced the convenience of digital delivery.

More than 236,800 people registered to attend conferences, seminars, networking sessions and site visits.

## In 2020–21, registration for real-time events increased 62%

In addition, EA OnDemand, our library of recorded webinars, enjoyed its first full year of operation attracting almost 38,600 site visits and boasting more than 900 hours of quality content. The vast majority of these recordings are available to members at no additional charge.

In early 2021, we reintroduced some face-to-face and 'hybrid' events when COVID-19 restrictions allowed, but most engagement remained online.

Engineers Australia would like to thank all involved in delivering our major events and awards for their flexibility, resilience and persistence in overcoming the many challenges presented by COVID-19.

## EA OnDemand

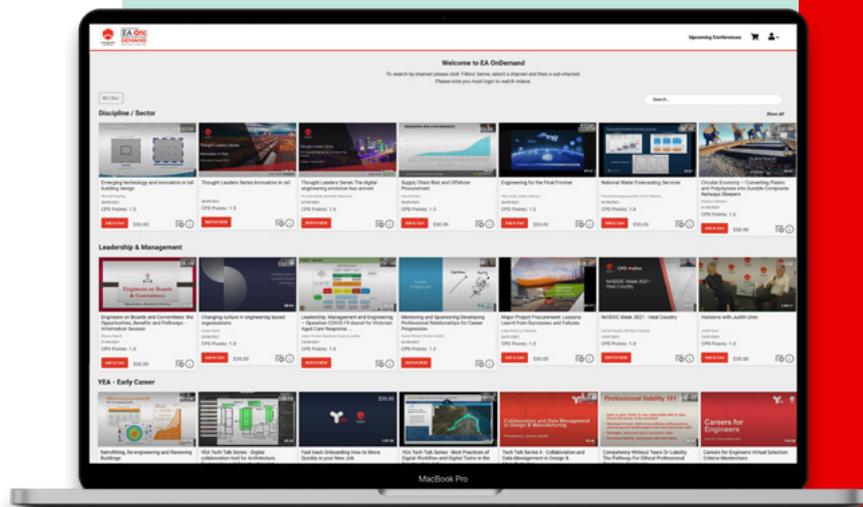
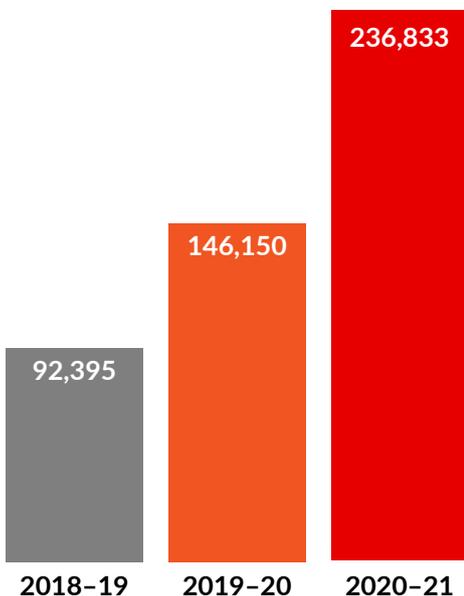
Engineers have taken up the opportunity to access free and low-cost professional development through EA OnDemand.

In its first full year of operation, there were almost 38,600 visits to the growing library of more than 900 hours of recorded webinars across over 50 channels.

Popular subjects included information on getting Chartered, leadership and management skills, and the environment. The most-watched EA OnDemand recorded webinars in 2020–21 were:

- ▶ Chartered Evidence Workshop: Competencies 1, 4, 11 & 14 (1083 views, free to members)
- ▶ AS/NZS 3000 - What Electrical Designers Must Know Part 1 (759 views, \$50)
- ▶ Implementing Safety in Design: Determining What is Reasonably Practicable (683 views, \$50)
- ▶ Structures and Seismic Design (621 views, free to members)
- ▶ Becoming Chartered with Over 15 Years of Experience (491 views, free to members)

## Growth in event registrations:



## Chartered record

In 2020–21, the number of Chartered engineers rose to 28,447, an increase of more than 2000 on the previous year.

**Chartered engineering professionals exhibit internationally benchmarked standards of expertise, professionalism and safety.**

In turn, these engineers enjoy challenging and creative career opportunities within their industries.

More members than ever before are Chartered today, showing that support for the Chartered credential continues to grow among engineers and their employers.

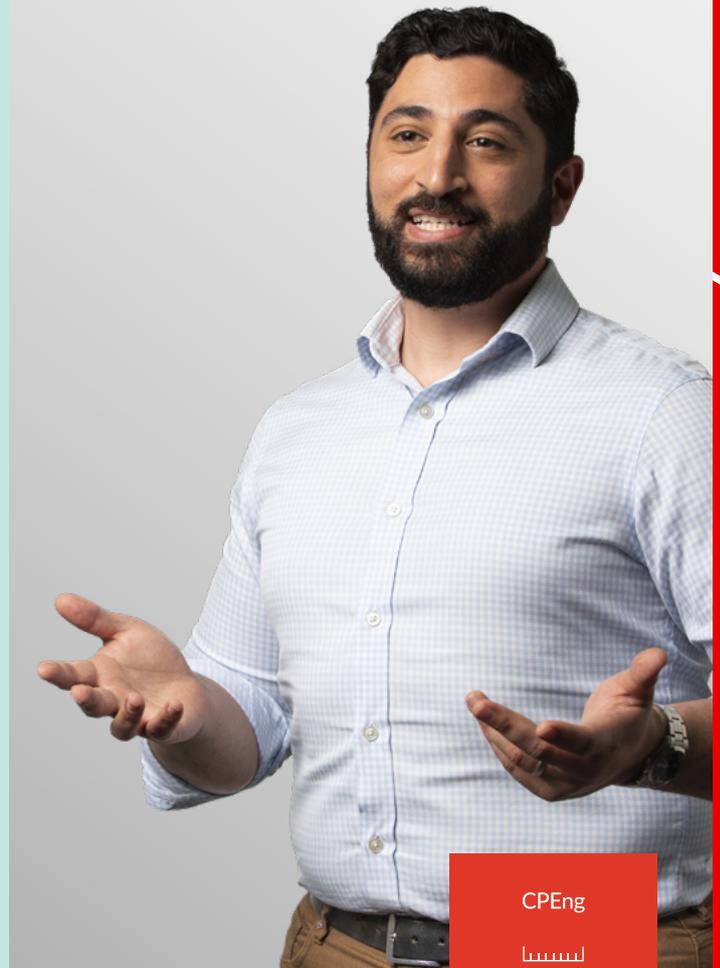
Our 'Chartered: The measure of excellence' campaign targeting mid-career engineers continued in 2020–21, with the call to action 'Get Chartered, get started. Start your self-assessment today'.

## National Engineering Register

Aside from the Chartered credential, our strategy to uphold professional standards can be seen in our commitment to the registration and accreditation of engineering practitioners in Australia. The number of National Engineering Register registrants at 30 June 2021 stood at 24,971, up 1.9 per cent on the previous year.

**In 2020–21, we introduced verified digital NER badges, enabling engineers to show the world they are registered.**

Badges are available at no additional cost, and can be used on LinkedIn, email signatures, websites and online proposals.



CPEng

للسبب

Respect in 8mm

**“What’s great about Chartership is it really allows you to understand how your profession actually ties in to the broader community.”**

**Nabeel Darwish**  
MIEAust CPEng NER  
Principal Fire Safety Engineer

Click to hear more from Mr Nabeel Darwish and other Chartered engineers.

# Engineering Executive credential

Our invitation-only Engineering Executive (EngExec) credential recognises engineers working at the highest levels of industry, defence and government for their leadership – people whose decisions affect engineers, the profession, business and the Australian community more broadly.

**Our EngExecs are powerful advocates who introduce others to Engineers Australia.**

The impressive roll call of organisations they are involved in includes AECOM, AirBus, Arcadis, Arup, Aurecon, BAE Systems, BMD, Caltex Australia, Cisco Systems, Fulton Hogan, GHD, Jacobs, John Holland, KPMG, Laing O'Rourke, Mott MacDonald, Northrop Grumman Corporation, Nova Systems, Rail Planning Services, Royal Australian Airforce, Thales, Santos and WSP.

In 2020–21, more than 150 engineers became EngExecs, bringing the total to almost 1300.

# Industry engagement

Engineers Australia engages with industry to forge ongoing partnerships that serve to uphold professional standards. These agreements currently fall into two main categories: engineering workforce credential partnerships and corporate engagement partnerships.

## Credentialing partnerships

Employers work with Engineers Australia to recognise, demonstrate and independently benchmark the skills and experience of their engineering teams. These agreements demonstrate the value employers place on credentials such as NER, Chartered and EngExec.

In 2020–21, our new Engineering Workforce Credentials partners included Ammjohn, Ampcontrol, ARTC, Beca, BMA Alliance (BHP), Consep, Consolidated Power Projects, Cross Yarra Partnership Joint Venture, Energy Australia, Fulton Hogan Construction, Greater Western Water, Leidos, Northrop Grumman, Rail Planning Services, Roberts Co, Stratco, Thales and UGL.

This year also saw Defence's Maritime and Land Divisions activate our Defence Engineers and Senior Technicians Recognition Agreement. The agreement recognises Defence Force engineers and senior technicians for Chartered status and for inclusion on the National Engineering Register. Ranking personnel can also apply for Fellow and Engineering Executive status.

## Corporate engagement partnerships

These partnerships provide our members and the wider engineering community with access to industry leaders and subject matter experts, both here in Australia and globally. This year, most of these thought leadership style events were delivered online.

**Members continue to embrace the model with registrations increasing from 20,000 last financial year to over 69,000 this year, as well as strong audience feedback ratings and expanding numbers of industry partners.**

New partners in 2020–21 included: ABB, ACO, Bentley Systems International, Bluebeam, BQE Software, Con-Form Group, Dassault Systems Australia, Department of Transport and Main Roads (Qld), Emerson, Engenium (now Stantec), Hewlett Packard, Hilti, IFS, Kaeser Compressors, Nearmap, Optus, Powerlink, Queensland University of Technology, Sherwin Williams, Water Corporation and WeBuild.

Renewing partners included: Autodesk, Brickworks Building Products, Cadgroup, Cardno, Caterpillar, Dulux Protective Coatings, GeoFabrics, Hexagon, Impex, McConnell Dowell, Oracle, RMIT, Swinburne, Territory Generation, University of Melbourne and Victoria University.

# Towards a century of standards

A century ago, Engineers Australia played a formative role in creating what would become known as Standards Australia, as recorded by our handwritten meeting minutes from 1921, pictured right.

**Engineers Australia is still the biggest provider of expertise to the standards development process, with 252 seats on 199 active committees.**

Our participation in the development of standards is critical for both public safety and the competitiveness of Australian businesses, and we encourage our members to contribute.

Engineers Australia congratulates Standards Australia on its upcoming centenary in 2022.

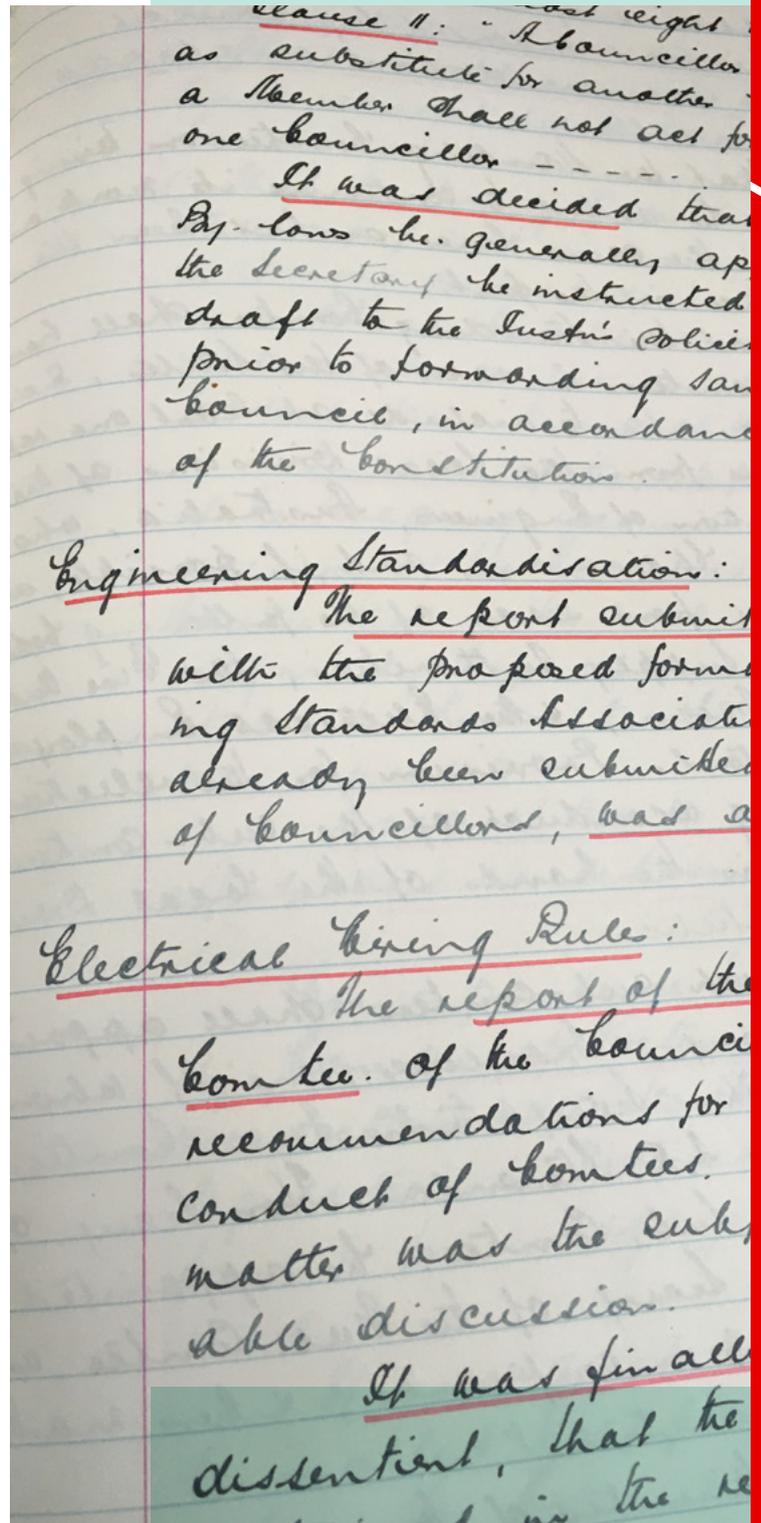
# Learned Society review

The [Engineers Australia Learned Society](#) has played a valuable role in advancing the engineering body of knowledge over the decades.

For engineering to be future-ready, we must ensure our Learned Society remains continually relevant for the profession.

To that end, throughout 2020-21 we have engaged closely with the Learned Society with a view to maximising its impact in furthering our purpose. We thank Learned Society leaders for their positive contribution to this ongoing process.

Engineers Australia members receive complimentary access to our [seven technical journals](#).



## Tertiary accreditation

In 2020–21, we assessed and accredited 166 tertiary engineering programs, upholding the standards of professional engineering qualifications. Due to COVID-19, the 24 detailed reviews we undertook this year were conducted online.

The Australian Council of Engineering Deans' Engineering 2035 Project's report, *Engineering Change*, highlighted the importance of Engineers Australia's accreditation program, and signatory status with the Washington Accord, to 'maintaining the current high international standing of Australian engineering schools and engineering education programs'.

## Medal update

The winner of the 2021 Peter Nichol Russell Medal will be announced in February 2022, and featured in next year's annual report.



“I have the best job in the world... There is nothing I could do that would be more effective in helping society succeed — bringing great jobs, great prosperity and helping people achieve their potential.”

**Professor Elizabeth Croft**  
FIEAust CPEng EngExec NER  
Dean, Monash University

# Engineering Education Australia

Engineering Education Australia (EEA) exists to enable the development of workforce capability in a dynamic and changing environment for the benefit of the community.

Now in its 31st year, Engineers Australia's subsidiary business EEA has a rich history of engineering education in Australia.

EEA continues to develop and deliver high-quality training in collaboration with Engineers Australia, and in partnership with respected education and engineering organisations.

With training that is relevant, flexible and trusted, EEA is well attuned to the needs of today's engineer.

## Major developments

In 2020–21 EEA's major developments included:

- ▶ The first graduates from the new Diploma of Engineering Infrastructure (Rail), a course developed by EEA in partnership with Transport NSW and the University of Tasmania amid a surge in rail infrastructure projects
- ▶ Development of EEA Online, our new on-demand learning platform
- ▶ New digital Engineering Skills Framework for employers (see below)
- ▶ EEA's new website, enabling us to deliver more complex education packages with best-practice, user-friendly design
- ▶ Our Graduate Program won a Platinum award for Best Blended Learning Model, 2020, at the LearnX Impact Awards

## NEW WORKFORCE CAPABILITY MANAGEMENT SYSTEM

EEA's new digital [Engineering Skills Framework](#) offers employers a one-stop-shop solution for managing workforce capability.

It embeds EEA's well-established framework in a digital system developed by global skills management software leader SkillsTX to enable employers to better understand workforce capability at an individual, team and organisational level.

The software records employees' existing competencies, and continuing professional development underway, including progress towards Chartered status, as well as identifying skills gaps and enabling employers to provide personal development plans.

Employers can also use the solution to easily identify people with the right skills for new project teams.



Click to explore EEA's workforce capability management system.

## EEA courses

The range and depth of EEA courses continued to expand in 2020–21, with options for digital delivery now available across our full range amid resurgent demand from corporate clients for virtual workshops, webinars and courses.

All EEA content aligns with Chartered competencies, and participant feedback continues to be strong. In addition to redesigning our previous courses for online delivery, we launched 49 new digital learning options in 2020–21.

This included 10 courses on our new platform EEA Online, launched in June 2021, which delivers on-demand self-paced elearning modules including:

- ▶ Fundamentals of Geotechnical Engineering
- ▶ Systems Thinking in Engineering
- ▶ Starting in the Australian Engineering Workplace

EEA's 39 other new courses and webinars developed for live delivery, in-person or online, include:

- ▶ Criminal Manslaughter – How Not To Do It
- ▶ Risk Management Fundamentals
- ▶ Implementing Safety in Design: Effective Hazard Identification & Risk Assessment
- ▶ AS/NZS 4777.2:2020 Updates – What You Need To Know
- ▶ National Construction Code 2019 Section J: School Design

While student satisfaction remains high for our Professional Year in Engineering Program, we have seen a small decline in enrolments due to COVID-19.

## ENGINEERING EDUCATION AUSTRALIA 2020–21 HIGHLIGHTS



**426,000+**

Hours of professional development delivered

(2019–20: 309,000+)



**5100+**

Engineers trained from 181 organisations

(2019–20: 4800+ from 172 organisations)



**72%**

Enrolments from Engineers Australia members with 15% discount

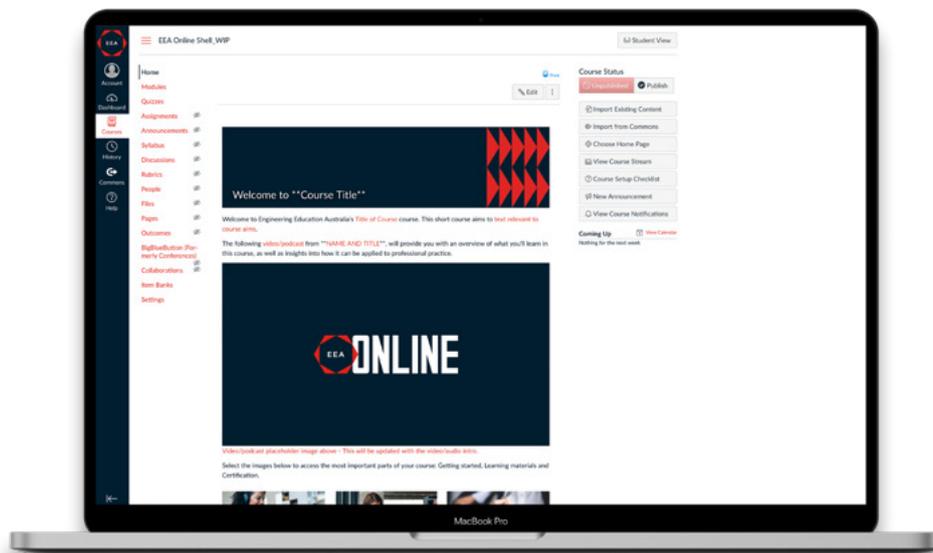
(2019–20: 74%)



★★★★★

4.5-star attendee feedback rating for webinars

(2019–20: 4.5 stars)



# 5.4

## Create tomorrow's engineers

More than 70 per cent of the fastest-growing occupations in Australia require science, technology, engineering and maths (STEM) skills, and a healthy pipeline of engineers is vital to help the country grow and thrive.

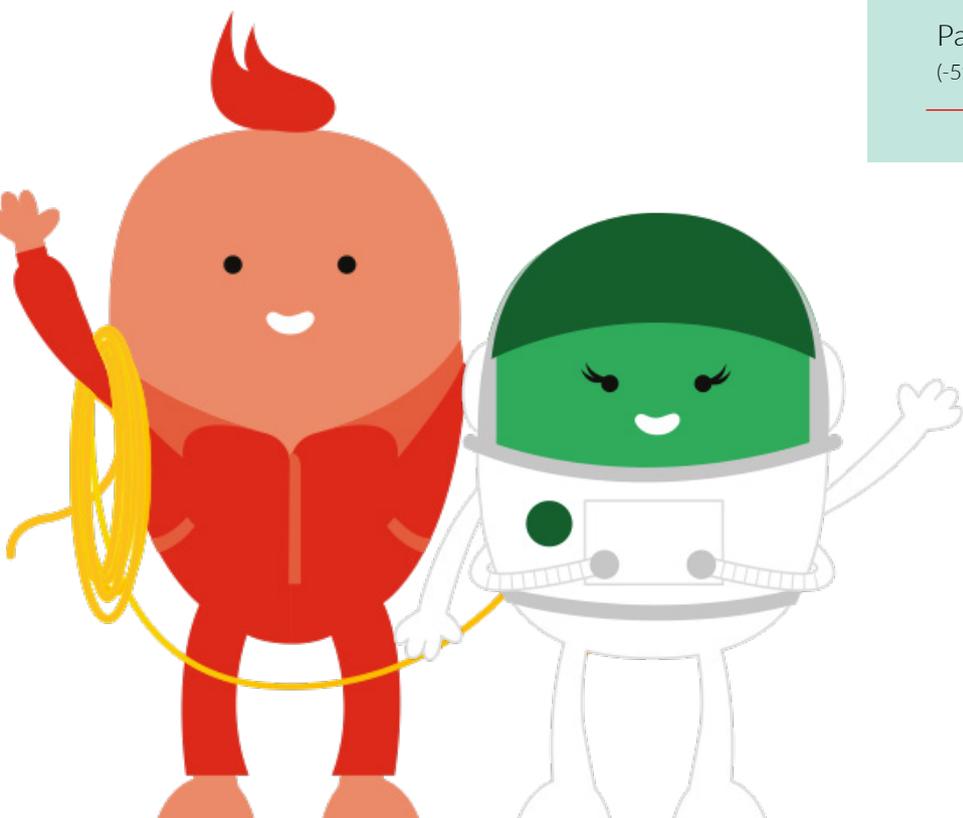
Creating tomorrow's engineers is a priority for Engineers Australia. We work to raise awareness about the wide range of rewarding career opportunities in engineering, promote the benefits engineers bring to communities and encourage school children to choose STEM subjects.



Engineers Australia engages with young people around the country through events, camps and competitions. We work to increase the participation of young women and girls in the profession. In some states, we run professional development activities for teachers.

## STEM strategy

This year saw Engineers Australia maintain its focus on sharpening the focus, scale and effectiveness of our existing efforts to promote STEM from primary school up.



Wave hello to Raf and Ziggy, two of our clever EngiMites from EA Junior Club. [Click here to meet the whole crew!](#)

## STARportal

Engineers Australia owns and manages Australia's largest searchable database of STEM activities for children, STARportal, on behalf of the Office of the Chief Scientist. In 2020-21, the number of site users, activity providers and activities all rose. Total page views fell due to the completion of a grant that had funded promotion to 30 June 2020.

### STARportal statistics

<b>57,456</b>	<b>1673</b>
Site users (+2.4% on 2019-20)	Activities (+11% on 2019-20)

<b>104,539</b>	<b>347</b>
Page views (-51% on 2019-20)	Activity providers (+4% on 2019-20)

## EA Junior Club

EA Junior Club is our new primary school program to foster future engineers. It provides activities and resources to parents and teachers to help encourage a love of problem solving and build relevant skills.

The club is promoted in a new and engaging animated presentation to spark interest in engineering titled 'Become a problem-solver: Reinvent the world with engineering'.



## Events and activities

- ▶ **Year13.** Engineers Australia teamed up with Year13 for their Virtual Careers Expo. Under the banner 'Engineering Your Future', our virtual tent included livestreams, virtual site tours, videos and webinars such as this one, the fifth most-watched of over 90 available. More than 900 students registered, almost half of them female, as well as over 100 teachers and parents.
- ▶ **Experience it!** In 2020–21, this program was delivered online, enabling greater reach and increased participation. A total of 300 Year 7 to 10 girls from 15 schools across New South Wales enrolled. They were supported by students from seven universities and almost 50 volunteer young engineers. Student feedback was positive, with 89 per cent of participants requesting further information on engineering.
- ▶ **The Future – Happening Now!** Engineers Australia's trilogy of live-streamed presentations on quantum technology, the future of the Australian space industry and the increasing importance of engineering in solving medical problems attracted 700 students from Years 9 to 12.



## TEACHER ENGAGEMENT

The benefits and opportunities that engineering careers offer students will be promoted to 4500 teachers at 2500 schools nationally under a new partnership with Explore Careers inked in 2020–21.

Promotional channels will include webinars and events, podcasts, interviews, social media and a careers guide.

There will also be a new teacher toolkit hosted on Engineers Australia's website.

Other teacher engagement in 2020–21 included:

- ▶ Engineering Studies teacher program. With roots in a pilot program in Newcastle, this Engineers Australia program works with teachers of the current New South Wales year 11 and 12 syllabus. In 2020–21, we engaged with about 100 teachers. This involved hosting eight online sessions, each of which related to a different module in the syllabus. We provided current industry information and examples of how the theory is applied in practical applications.
- ▶ Pilot program in Victoria supporting primary school teachers. Under development, this program pairs volunteer engineers with teachers to embed engineering in the teaching program. Fifteen engineers have been trained as volunteers in 2020–21, and four schools identified for implementation in 2021–22.

# 5.5

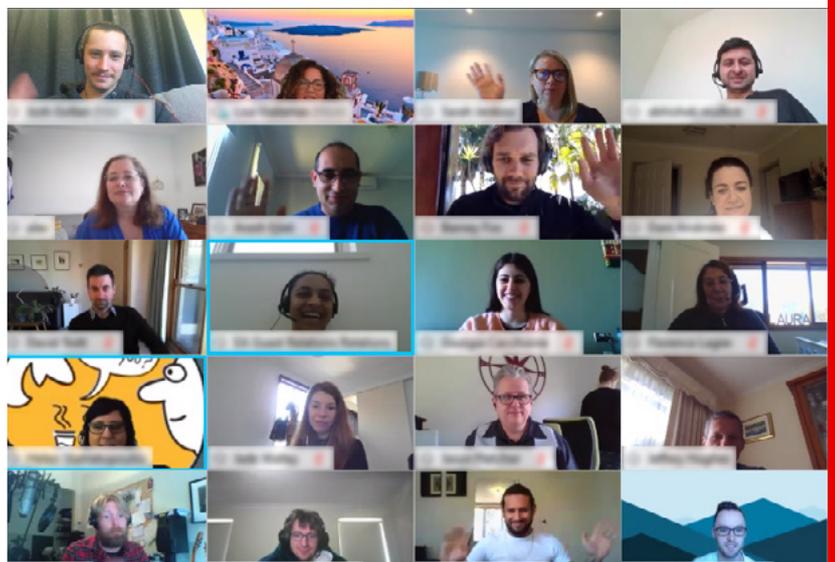
## Operate sustainably

Recognising the need to be future-ready, we are committed to a dynamic approach to meet the changing needs of our people, and we are continually adapting and improving our ways of working.



It is vital that Engineers Australia delivers services to our members effectively and efficiently.

Our data-driven and performance-based approach ensures that we manage our costs. Work to diversify our income streams continues.



## Our values



**Focus on customers**



**Achieve together**



**Embrace progress**



**Act with integrity**

We expect and encourage our people to demonstrate our Engineers Australia values. We promote their importance to employees via performance appraisals, signage and recognition in our STAR and Spotlight Awards programs.

## Our people, our plan

Our People and Transformation Team aims to develop a future-ready Engineers Australia that can support the profession in advancing society through great engineering.

We value our people, and work to support them to do their best work for the profession as part of a high-performing organisation.

Our people-first approach prioritises safety and enabling our team members to perform at their best through a collaborative and inclusive culture as well as structured talent and leadership development opportunities.



## Work health and safety

We are unconditionally committed to ensuring the highest standards of work health and safety (WHS) in all regards, and in all work sites. We report monthly on WHS to the Executive Team and to the Board each time it meets. The Board People and Culture committee met four times in 2020–21. In addition to measures designed to protect physical safety, Engineers Australia has focused on employee wellbeing and our people have access to free, independent and confidential counselling through our employee assistance program.

## Leading change

In 2020–21, our Executive Team was reshaped. Reporting to the CEO, new executive positions recognise the importance of people and technology in enabling high performance at Engineers Australia – and the need to ensure engineering leadership of our engagement and advocacy.

The new roles are: Chief Engineer (filled July 2020); Executive General Manager, People and Transformation (appointed April 2021); and Chief Digital and Technology Officer (started in August 2021).

The Executive Team is supported by a smaller and more focused Leadership Team and, together with additional change management specialists, they are working to create the Engineers Australia of the future.

## Enabling transformation

Named as a result of a competition among our people, the Enable Program will deploy cross-functional, innovative teams to accelerate change towards a future-ready Engineers Australia.

## Culture Roadmap

With research including an employee survey and numerous workshops, a Culture Roadmap is being developed to build on our strengths and shift the way we work for even greater impact across several key areas in future.

Our culture survey found that 93 per cent of our people reported knowing and understanding how their work contributes to Engineers Australia's purpose, and 85 per cent were proud to work here.

# Flexible work program

## EA says 'yes' to flex

Engineers Australia's new 'Our Flex' program will see us continue to work more flexibly even after COVID-19 challenges recede.

An employee survey in October 2020 showed 96 per cent wanted to keep working flexibly beyond COVID-19 restrictions, and 88 per cent felt supported in working flexibly.

**Our Flex facilitates continued collaboration, teamwork and engagement while meeting organisational requirements and responding to the preferences of our people amid a changing external environment.**

Our Flex includes a range of options. Within role requirements and other limits, it enables employees to stagger their start/finish times, work longer daily

hours and one less day per fortnight, temporarily work from a different office, purchase leave or work '3/2' – up to three days a week from home and two days in the office.

Engineers Australia has invested in additional equipment necessary to support employees in working safely from home over the longer term. Implementation continues to progress amid shortages of equipment available for purchase due to COVID-19.

By 30 June 2021, we received 160 Our Flex applications, with 3/2 the most popular option. We will continue to refine and adapt the program.



## Workforce demographics

Engineers Australia, including subsidiary businesses, currently has 347 employees who, on average, have been with us for 4.3 years. Our overall workforce is predominantly female (56 per cent). Of 33 Executive Team members/business unit leaders, 58 per cent are female.

## Investing in our people

We are strongly committed to the ongoing development of our workforce.

In 2020–21, Engineers Australia again offered employee access to online courses via LinkedIn Learning. Almost 200 of our employees accessed the service. The most popular choices for our team included:

- ▶ The Six Morning Habits of High Performers
- ▶ Project Management Foundations
- ▶ Communicating with Confidence
- ▶ Microsoft Teams Tips and Tricks
- ▶ Critical Thinking for Better Decision-Making

In 2020–21, our national training calendar continued, with subjects including:

- ▶ Leadership and Management Essentials
- ▶ Building Resilience
- ▶ RU Okay Day, Preparation for Managers
- ▶ LGBTQI+ Awareness

In addition, we offered employee access to on-the-job and induction training, technical and information and communications technology development, and the opportunity to attend external conferences, seminars and webinars.

## Cyber security

In 2020–21, all employees were required to complete additional online cyber security training, with a program of test emails replicating common cyber threats used to verify levels of understanding and security compliance.

# 6

# Diversity and inclusion

Engineers Australia works to achieve an engineering profession as diverse as the community it serves. As the peak body, we must lead the way.

We aim to increase diversity in the profession not only as a matter of fairness, but to deliver better solutions by harnessing the full range of talents and perspectives.

Engineers Australia undertakes a range of activities to promote gender diversity and inclusion and is increasingly active in our support for members of the LGBTQI+ engineering community and Indigenous engineers.

This year, we launched a major research project into the barriers facing Australia's migrant engineers, a group that is essential to our nation's engineering capability.

We are committed to creating, supporting and celebrating [a profession for all](#).





**Dr Bronwyn Evans** HonFIEAust CPEng EngExec FTSE  
CEO, Engineers Australia



**Dr Mae Jemison MD**  
Engineer, Physician, former NASA Astronaut, and Principle, 100 Year Starship

## International Women's Day

Engineers Australia celebrated International Women's Day 2021 on 10 March.

Our keynote was Dr Mae Jemison MD, astronaut, engineer, physician, entrepreneur and educator. Watched by in-person audiences in our nine division locations around Australia, Mae was streamed in from Chicago, joining panellists from around Australia.

The events attracted more than 1300 participants, most of them (58 per cent) non-members. These numbers were lower than previous years due to COVID restrictions but, in the circumstances, we were nevertheless thrilled with the result.

Engineers Australia also celebrated International Women in Engineering Day in June, with a webinar connecting speakers from around the world.

## Gender diversity awards

Engineers Australia's Diversity Awards Program seeks to identify, recognise and reward companies that strive towards engineering excellence through greater gender diversity.

The winners for 2020 were:

### Most Outstanding Company

Winner: pitt&sherry  
Highly commended: GHD

### Most Encouraging Student or Not-for-profit Group

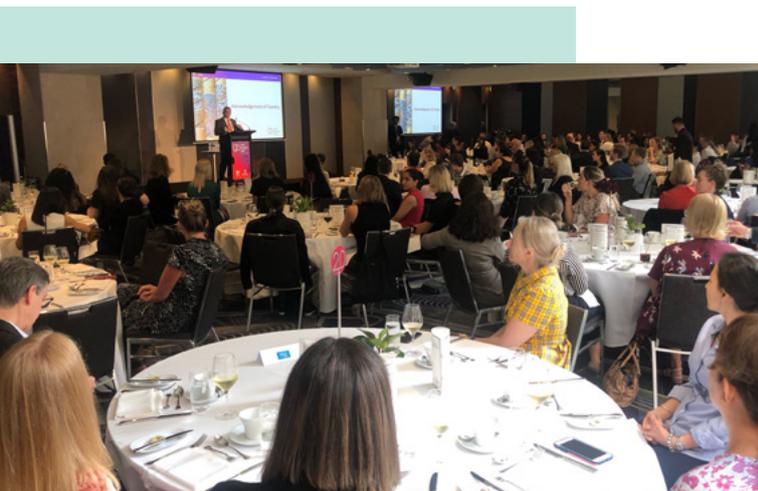
Winner: University of New South Wales, Faculty of Engineering  
Highly commended: Women in Engineering and IT at University of Technology Sydney

### Most Ambitious Company

Winner: Water Modelling Solutions Pty Ltd

## Volunteer leadership gender diversity 2020-21

Office bearers	% Female
EA Board	29%
Congress	22%
College boards	39%
Technical society committees	24%
Other national committees	37%
<b>Total</b>	<b>33%</b>



## LGBTQI+ engagement

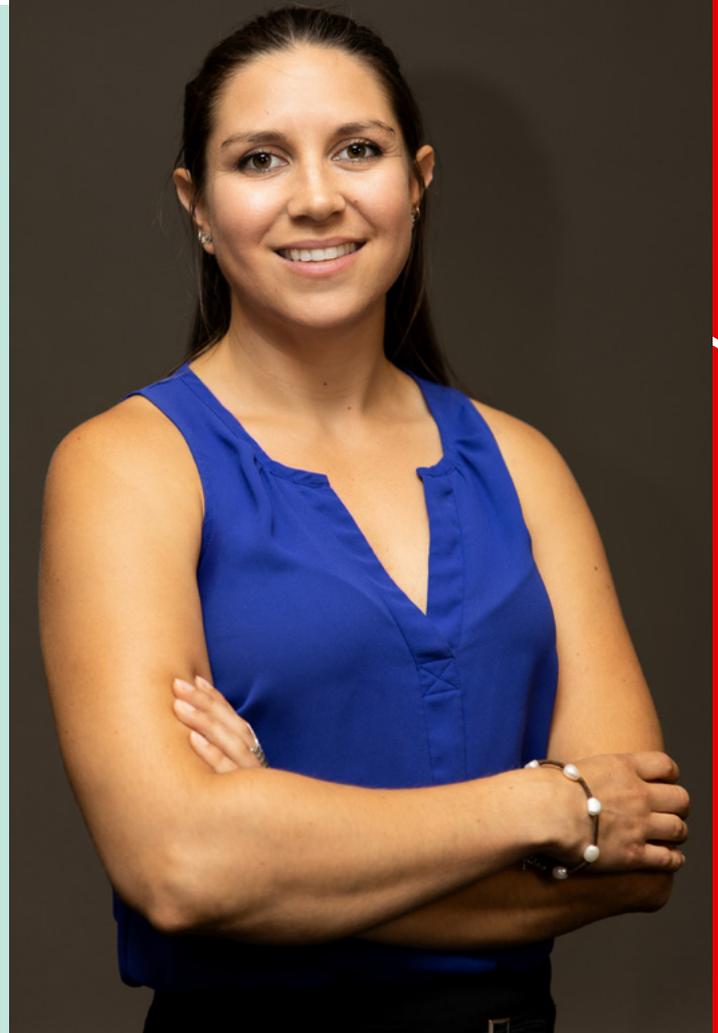
Following the launch last year of InterEngineer, an external group creating pathways for LGBTQI+ engineers and allies to connect, communicate and advocate, Engineers Australia's internal Pride Network launched in February 2021. The network is committed to encouraging all employees to bring their whole selves to work and to spreading awareness, understanding and sensitivity to build a safe, respectful and supportive work environment that creates a culture of inclusion, equality and respect for all.

## Indigenous engineers

Engineers Australia's Indigenous Engineers Group (IEG) connects inspired and educated professional Aboriginal and Torres Strait Islander people from an engineering background.

In 2020–21, highlights from our range of programs and initiatives included:

- ▶ Engineers Australia's Board endorsed the Uluru Statement from the Heart, and its call for a Voice to Parliament.
- ▶ Engineers Australia partnered with Engineers Without Borders during NAIDOC Week to support their Giving Day Appeal. The appeal funds their Engineering On Country program, which works with people living in remote Indigenous communities to build capacity and achieve positive, sustainable and long-term change.
- ▶ To celebrate the 20th anniversary of Reconciliation Week, Engineers Australia held a webinar, 'More than a word, reconciliation takes action'. Mr Grant Maher FIEAust CPEng NER, a Founding Director of Jabin Group and Chair of our Indigenous Engineers Group, led the panel discussion, which focused on the value and process of developing a reconciliation action plan.
- ▶ Mr Michael Hromek, Technical Executive Indigenous (Architecture), Design and Knowledge, spoke at the World Engineers Symposium in November, in a session titled 'Reconnecting Kulin National Songlines: Cultural Driven Outcomes on the Level Crossing Removal Project'.



**“Aboriginal people believe if the land is sick, we are sick, and if we are sick, the land is sick because we are completely linked. So it’s not just about Healing Country; it also has to be about healing people.”**

**Ruby Heard CPEng NER**  
**Director, Alinga Energy Consulting**

## Migrant engineers and barriers to employment

Australia benefits from the skills of migrant engineers, who are essential to our national engineering capability.

Just over half of those currently working as engineers in Australia are migrants however underemployment is common, and there is potential to harness the skills of migrant engineers more fully.

In 2020–21, Engineers Australia launched research involving migrants, employers and recruiters to explore the barriers to employment, including a survey of more than 800 people.

The next step will be report on the findings, and to work to co-design solutions in collaboration with government, industry and academia.

Furthering our commitment to securing Australia’s engineering future, in 2020–21 Engineers Australia made a written submission and gave evidence to the Commonwealth Government’s Joint Standing Committee on Migration.

### Research reveals ‘local’ barriers (% of migrants surveyed)



“They don’t care about your overseas experience. They only believe in Australian experience.”

“They’re saying, ‘You’re overqualified. We are looking for entry level.’ Then I reply, ‘Okay, I am accepting entry level.’ Because I just want to show my experience – but no response.”



**MIGRANTS**

“We tell people to anglicise their name on their CV, then they’ll get seen.”

“There’s still a subconscious bias towards local experience.”



**RECRUITERS**

“All employers want someone who’s worked for the competition, and unfortunately that’s not these guys.”

“We’ve got to bite the bullet, to train these people, get them up and give them the local experience... It starts here. It’s got to start somewhere, doesn’t it?”



**EMPLOYERS**

# 7

## Environmental sustainability

Engineers Australia recognises the scale and urgency of the challenges presented by climate change. Our profession will play a pivotal role in enabling a just, affordable and sustainable transition to a net zero emissions society.



The development of Granville Harbour Wind Farm, a remote facility which took Tasmania to 100 per cent renewable energy, featured in our magazine *create* in June 2021. (Image credit: Granville Harbour Wind Farm)

Like sound engineering practice, our perspective is grounded in science and concerned with risk management.

Immediate action is clearly required to avoid the worst effects of climate change, as articulated by the [Intergovernmental Panel on Climate Change](#), whose findings we acknowledge, recognise and respect.

Action must include rapid, large-scale reduction in greenhouse gas emissions, as well as work to increase community and environmental adaptation and resilience.

Governments, the private sector, capital markets and the community must work together with the engineering profession to formulate and deliver these changes.

Engineers Australia's work towards sustainability includes advocacy, business engagement and professional development for engineers – as well as efforts to reduce our own emissions.

Our Code of Ethics requires members to promote sustainability by fostering the health, safety and wellbeing of the community and the environment.

# CLIMATE SMART ENGINEERING

Global environmentalist and former US Vice President Al Gore will headline Engineers Australia's inaugural Climate Smart Engineering conference in November 2021.

The result of extensive planning, the conference will showcase engineering solutions, and support our profession in both mitigating and adapting to climate change amid changing expectations from investors, voters, employees and the wider community.

The extensive two-day program will feature a range of webinars and panel talks. Sessions will cover corporate sustainability, leadership, energy, transport, buildings and infrastructure delivery, education and structural issues.

Engineers Australia expects the event to become a regular flagship conference.



▶ [Click here to see a video about the Climate Smart Engineering conference.](#)



**Terence Jeyaretnam**

Partner, Climate Change and Sustainability Services, EY



**Katharine Tapley**

Head of Sustainable Finance, ANZ



**Fiona Cousins**

Director, ARUP



**Emilio Granados Franco**

Head of Global Risks and Geopolitical Agenda, World Economic Forum

**Al Gore**  
Keynote speaker

## Walking the talk

Engineers Australia has set out on a journey towards becoming carbon neutral in future.

This ongoing effort will include reducing our direct emissions where possible, as well as using renewable energy and offsetting residual emissions.

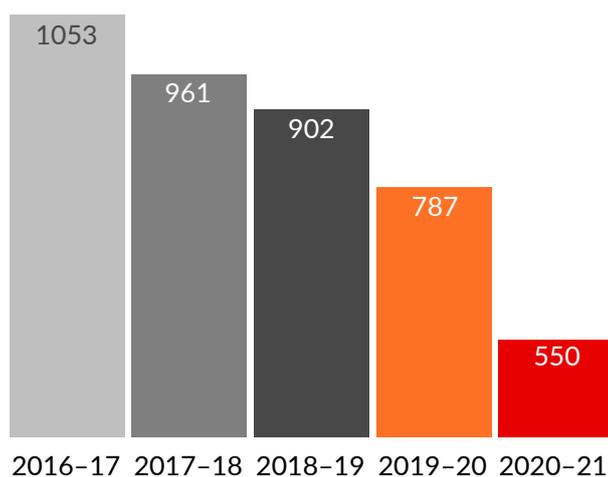
In 2020–21, our initiatives have included:

- ▶ Completing upgrades of all office lighting to energy-efficient LED
- ▶ Purchasing 'green energy' where possible for our offices
- ▶ Appointing a partner, Pangolin, to help us accurately audit our energy use and the entirety of our emissions as we work towards reducing our impact
- ▶ Offsetting our known emissions (825 tonnes) for electricity, gas and air travel for the 2020 calendar year, with partner Greenfleet

This work builds on the continued implementation of our *2015 Sustainability Action Plan*, and accreditation of our Canberra office under the ACT Government's Actsmart business recycling program.

COVID-19 has contributed to continued falls in our carbon dioxide emissions from energy use and air travel in 2020–21. In addition, our ongoing workplace flexibility initiatives will help to permanently reduce emissions from employees commuting.

### Emissions from our gas and electricity consumption – tonnes of CO<sub>2</sub>



## GREENFLEET OFFSETS 'GOLD STANDARD'

Engineers Australia rejected far cheaper 'carbon credits' available on the international market, in favour of those from Greenfleet, which we considered to be the highest quality available.

Greenfleet is a not-for-profit Australian company that only reforests areas where trees planted are likely to survive, undisturbed by development or bushfire, for at least a century.

This means we can be confident we are making a real difference, with carbon captured for the long term.



### Future sustainability reporting

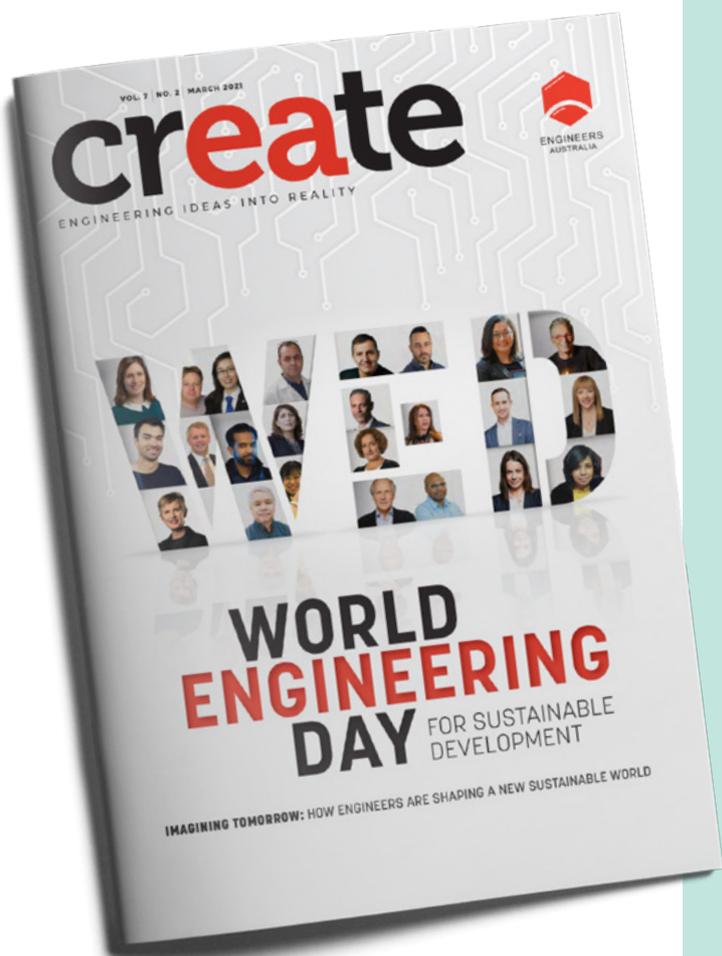
As we move towards becoming carbon neutral, Engineers Australia is changing the way we report on environmental sustainability.

We are adopting independent external audits. To accommodate the time necessary for this additional accountability measure, we will in future report our emissions on the calendar year rather than the financial year. The audited results of our 2021 calendar year emissions will be published in the *2021–22 Annual Report*.

# World Engineering Day for Sustainable Development

Engineers Australia celebrated the second World Engineering Day for Sustainable Development on 4 March with a free webinar for the engineering community.

Professor John Thwaites AM gave an update on Australia's progress in relation to the United Nations Sustainable Development Goals. Professor Thwaites' presentation was so popular that he also produced an offline recorded response, available on EA OnDemand, to address the many questions he received.



“Rather than sitting back and saying, ‘Tell me what you want us to build’, we need to be stepping up and saying, ‘Tell me your problem, then let’s co-create the solution’.”

**Louise Adams**  
FIEAust CPEng EngExec NER  
Chief Operating Officer,  
Aurecon

# 8

## Executive team

### Ms Jane Hanks

Executive General Manager  
Membership and Growth

BEc/LLB ComplEAust GAICD  
FAMI CPM

Jane was appointed Executive General Manager Membership and Growth in 2018. She has significant experience in the services sector with senior roles in Novotel Brisbane (Accor), Griffith University, Mallesons Stephen Jaques and Dentons Australia.

### Mr John Lau

Executive General Manager  
Corporate Services

BCom FCA ComplEAust

John is a Chartered Accountant with 20 years' experience in senior leadership positions. His broad experience helps to ensure that Engineers Australia's corporate services will continue to capably support the delivery of the group's strategic objectives.

### Dr Bronwyn Evans AM

Chief Executive Officer

BE(Elec) PhD HonFIEAust CPEng  
EngExec FTSE

Appointed as Engineers Australia CEO in October 2019, Bronwyn has over 35 years' experience. She was previously CEO of Standards Australia, and has also held senior executive roles at Cochlear and GE Healthcare. Her board experience encompasses the construction, medical technology, innovation and digital business sectors.

### Mr Ricky Peña

Executive General Manager  
People and Transformation

BSc(Psych)(Hons) CAHRI GAICD

Ricky is a human resources leader with a breadth and depth of national and international experience in implementing people initiatives that align with company strategy. He has held a number of leadership roles, most recently as the Director Human Resources for the CSIRO, leading a team of over 100 professionals across Australia.

### Ms Jane MacMaster

Chief Engineer

BE(Mech) MA(IR) FIEAust CPEng  
EngExec

Jane has worked as an aerospace, mechanical and systems engineer in Australia and internationally. She has previously worked as a senior advisor within the strategy unit of the Department of the Prime Minister and Cabinet, and as Founder and Director of Ponder Enterprises, where she used her engineering skillset to address complex societal challenges.

### Mr Jeff Hughes

Executive General Manager  
Member Engagement

BBus/Acc CA ComplEAust

Jeff has 17 years of experience in professional membership bodies, having previously worked at CPA Australia. Prior to his career in membership, he held senior finance roles within professional services firm PwC and the Rio Tinto group. Jeff retired in July 2021.



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## Thank you to our volunteers and office bearers

Engineers Australia has more than 2000 volunteers occupying about 2500 volunteer roles. Our volunteers both drive and support the breadth of our work to advance the science and practice of engineering for the benefit of the community.



We value the immense contribution and shared leadership of our volunteers. The strength of our groups and committees comes from the members who bring their skills, expertise and enthusiasm to advancing the profession through working in partnership with employees. They devote many hours to our profession, and add to the body of engineering knowledge.

Volunteers provide guidance on our advocacy and policy, represent us on external groups, deliver technical professional development, help to accredit universities and much more. We would like to express our appreciation for their voluntary contributions including, this year, their continued support and flexibility when it comes to COVID-19-related changes and restrictions.

Our volunteers are our ambassadors – their ability to talk knowledgeably and passionately about the benefits of being part of Engineers Australia contributes enormously to our success.

### National Volunteer Week

To celebrate National Volunteer Week 2021, Engineers Australia held a presentation, 'Making a Difference', by Ms Trang Pham MIEAust, a civil engineer with Aurecon, who shared her experiences as a volunteer.

To further mark the occasion, Dr Bronwyn Evans AM recorded a video message of thanks.



▶ Watch Dr Bronwyn Evans AM's video message to our valued volunteers.

### Our groups:

Number of:	Total
Technical societies	29
Centres and special interest groups	2
National committees and joint boards	11
Congress	1
Division committees	9
College boards	9
Overseas chapters	6
Other groups and committees	200+



**Engineers Australia is grateful to our volunteers, who contribute to our work in a wide range of areas.**



Expand engineering knowledge



Facilitate professional development



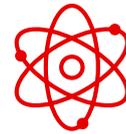
Accredit university courses



Develop Australian standards



Act as ambassadors



Create tomorrow's engineers



Mentor others



Provide access to networks



Share expertise



Shape policy development



Inform our media and government advocacy



Share business insights



Recognise outstanding achievements



Celebrate engineering heritage



Represent us in external groups

## Division presidents



### Sydney

**Ms Jessica Qiu**  
FIEAust CPEng NER



### Victoria

**Ms Astrid Kauffman**  
FIEAust CPEng NER



### Queensland

**Ms Suzanne Burow**  
FIEAust CPEng NER



### Canberra

**Dr Therese Flapper**  
FIEAust CPEng EngExec NER



### Newcastle

**Mr Pierre Gouhier**  
FIEAust CPEng NER



### Western Australia

**Mr Brian Haggerty**  
FIEAust CPEng EngExec NER  
GAICD



### South Australia

**Mr Michael Scott**  
MIEAust CPEng NER



### Tasmania

**Ms Kate McIntosh**  
FIEAust CPEng NER



### Northern

**Mr Richard McAllister**  
FIEAust CPEng EngExec NER

## College chairs



### Biomedical

**Mr Mike Flood**  
FIEAust CPEng NER



### Chemical

**Mr Grant Scott**  
FIEAust CPEng EngExec NER



### Civil

**Mr Paul Collier**  
FIEAust CPEng EngExec NER



### CLM College of Leadership and Management

**Dr Anne Hellstedt**  
FIEAust CPEng EngExec NER



### Environmental

**Ms Lara Harland**  
FIEAust CPEng NER



### Electrical - Co

**Dr Peter Sokolowski**  
FIEAust CPEng EngExec NER



### Electrical - Co

**Ms Nee Nee Ong**  
FIEAust CPEng EngExec NER



### ITEE Information, Telecommunications and Electronics Engineering

**Dr Walter Green**  
FIEAust CPEng



### Mechanical

**Mr Roderick McDonald**  
FIEAust CPEng NER



### Structural

**Mr Peter Statton**  
FIEAust CPEng NER

## International chapter presidents



### Hong Kong

Mr Alex Cheung

FIEAust CPEng EngExec NER GAICD



### Malaysia

Mr James Lau

MIEAust CPEng NER



### Singapore

Mr Philip Kok Leong Chan

FIEAust CPEng NER



### Qatar

Mr Mahmoud Fahmy

FIEAust CPEng



### United Arab Emirates

Mr Hazem Hassan Aly

FIEAust CPEng EngExec NER



### United Kingdom

Ms Nicola Telcik

FIEAust CPEng NER



“The whole nation’s economy is dependent on space-based services... We have been buying other people’s technology and we’re now dependent on those technologies and, where you have a dependency, you have a vulnerability. We have to address that vulnerability with sovereign development.”

**Roger Franzen**

HonFIEAust CPEng EngExec NER

**National Committee of Space Engineering**

## Committees

Engineering Heritage Australia	Mr Merv Lindsay
Indigenous Engineers Committee	Mr Grant Maher
Joint Board for Aerospace Engineering	Prof Murray Scott
Joint Board for Naval Architecture	Mr Gordon MacDonald
National Committee for Engineering Associates and Technologists	Mr George Scott
National Committee on Applied Mechanics	Dr Raj Das
National Committee on Clinical Engineering	Mr Melvin Mazid
National Committee on Coastal and Ocean Engineering	Mr James Carley
National Committee on Control Engineering (Industry 4.0)	Ms Jodey Brockhurst
National Committee on Rehabilitation Engineering	Dr Iain Brown
National Committee on Space Engineering	Mr Roger Franzen
National Committee on Water Engineering	Dr Brendan Berghout
Women in Engineering National Committee	Ms Zhenya Pavlinova
Young Engineers Australia National Committee	Mr Robert Hoffmann

## Technical societies

Asset Management Council	Dr Anne Gibbs
Australasian Association of Engineering Education	A/Prof Anne Gardner
Australasian Fluid and Thermal Society	Prof Tilak Tissa Chandratilleke
Australasian Particle Technology Society	A/Prof Yansong Shen
Australasian Tunnelling Society	Dr Harry Asche
Australian Composite Structures Society	Dr Rodney Thomson
Australian Cost Engineering Society	Mr Leonardo Ferro
Australian Earthquake Engineering Society	Mr Trevor Allen
Australian Geomechanics Society	Dr Nina Levy
Australian Shotcrete Society	Dr Stefan Bernard
Australian Society for Bulk Solids Handling	Prof Mark Jones

## Technical societies continued

Australian Society for Defence Engineering	Mr Denton Bocking
Electric Energy Society of Australia	Mr Jeff Allen
Electromagnetic Compatibility Society of Australia	Mr Mark Mifsud
Institute of Industrial Engineers Australia	Mr David Karr
Institute of Materials Engineering Australia	Dr Roger Lumley
Institute of Public Works Engineering Australasia	Mr David Jenkins
Mine Subsidence Technological Society	Mr Richard Walsh
Mining Electrical and Mining Mechanical Engineering Society	Mr Dominic Posavec
Mining Electrical and Mining Mechanical Engineering Society	Mr Murray Timpson
Railway Technical Society of Australasia	Mr Roy Unny
Risk Engineering Society	Mr Geoff Hurst
Society for Building Services Engineering	Mr Alan Coote
Society for Engineering in Agriculture	Mr Glen Riethmuller
Society of Fire Safety	Dr Jonathan Barnett
Sustainable Engineering Society	Mr Benjamin Hanley
Systems Engineering Society of Australia	Mr John Nasr
Transport Australia society	Mr Shalendra Ram

## Affiliated group

RedR Australia Ltd	Dr Robert Care
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## Overview of financial results

Despite the operational and financial challenges of COVID-19, the Engineers Australia consolidated group maintained a strong financial position in 2020–21 while delivering a broad range of services and making strategic investments in our future-readiness.

With prudent financial management and without any Federal Government JobKeeper subsidies, the Engineers Australia group delivered an operating surplus of \$9.3m (up from \$6.8m in 2019–20) and generated operating cash flows of \$16.7m (up from \$13.5m). Although revenues decreased to \$77.4m (down from \$80.0m), expenses also decreased to \$68.1m (down from \$73.2m).

**We are grateful for the continued strong support of our members, with high levels of membership renewal.**

In view of the impact of COVID-19 on the profession, in 2021, for the second consecutive year, general membership fees have again not been increased. We have continued to make fee concessions available to members requiring assistance.

With members' funds totalling \$68.6m in net assets (up from \$59.6m in 2019–20), the group is in excellent financial health. Our reserves will enable the group's continuing development to better serve our community, our profession and our members in line with our strategy, 20|20<sup>+</sup> Vision.

During 2020–21, we have made strategic investments in many of our operational areas. This has included expanding our employee team by approximately 10 per cent to build our

capability, as well as further progressing our digital transformation initiatives.

Other notable factors that drove the result included:

- ▶ Engineering Education Australia surplus of \$5.5m. Our education business enjoyed a strong result due to the success of its Professional Year program. We expect the pandemic will impact future student numbers in the program – however we are well progressed in the establishment of new and diversified income streams.
- ▶ Investment portfolio gain of \$2.2m, from group investments managed by Morgan Stanley.
- ▶ Business travel savings of \$1.3m due to COVID-19-related restrictions
- ▶ Savings of \$0.8m from a new publication contract for *create* magazine.
- ▶ Reductions in conference and sponsorship income of \$5.1m, largely offset by reductions in operational expenses due to restricted face-to-face activity. (Note: there was no equivalent to the 2019 World Engineers Convention in 2020–21.)

As we emerge from the COVID-19 pandemic, the group's strong financial position will be leveraged in a financially sustainable manner to seek to maximise the opportunities ahead to further our purpose of advancing society through great engineering.

## Five years 2016–17 to 2020–21

	2016–17	2017–18	2018–19	2019–20	2020–21
	\$m	\$m	\$m	\$m	\$m
<b>Total income</b>					
Net membership subscriptions	23.254	24.116	25.402	27.737	29.222
Courses, conferences/meetings and CPD	11.600	12.160	22.526	26.416	23.669
Assessment and registration fees	19.684	19.960	20.575	20.035	18.721
Sponsorships, grants and commissions	3.751	3.207	2.456	3.250	1.892
Publishing	1.207	1.019	0.841	0.807	0.818
Other revenue	1.685	1.651	1.566	1.777	3.069
	61.181	62.113	73.366	80.022	77.391
<b>Total expenses</b>					
Employee and consultancy expenses	27.467	29.198	32.015	32.463	34.808
Administration, travel, publication and IT expenses	10.673	11.555	13.358	12.532	10.585
Premises expenses (excluding depreciation)	3.410	3.418	3.529	2.126	2.085
Depreciation and amortisation	2.485	3.801	3.390	5.392	4.917
Courses and conference/meeting expenses	9.447	8.554	15.897	17.459	14.468
Other	0.429	1.368	0.635	3.233	1.233
	53.911	57.894	68.824	73.205	68.096
Operating surplus/(deficit)	7.270	4.219	4.542	6.817	9.295
Asset revaluation	3.982	0.361	0.445	(0.147)	(0.254)
Transfers and net profit from joint ventures	-	-	-	0.062	0.009
Increase/(decrease) in members' funds	11.252	4.580	4.987	6.732	9.050
<b>Total members' funds</b>	<b>43.300</b>	<b>47.880</b>	<b>52.867</b>	<b>59.599</b>	<b>68.649</b>

\*The consolidated entity comprises the Institution of Engineers Australia and its subsidiaries, Engineers Australia Pty Ltd, Australian Engineering Foundation Ltd, EngInsure Pty Ltd and Engineering Education Australia Pty Ltd and its subsidiary (The Moreland Group Pty Ltd).

### Board remuneration

The Board of Engineers Australia consists of up to eight directors. Total director remuneration is capped annually at \$290,000 (last approved by National Congress in November 2017), indexed to the Wage Price Index each year. For additional details about related party transactions, see Note 19 of the annual consolidated [financial statements](#) for the financial year ended 30 June 2021.

### More information

Engineers Australia's current and recent previous annual reports, and full annual consolidated financial statements, can be found on our [website](#). Audited annual consolidated financial statements for the financial year ended 30 June 2021 will also be presented at the Annual General Meeting on 9 December 2021.



ENGINEERS  
AUSTRALIA