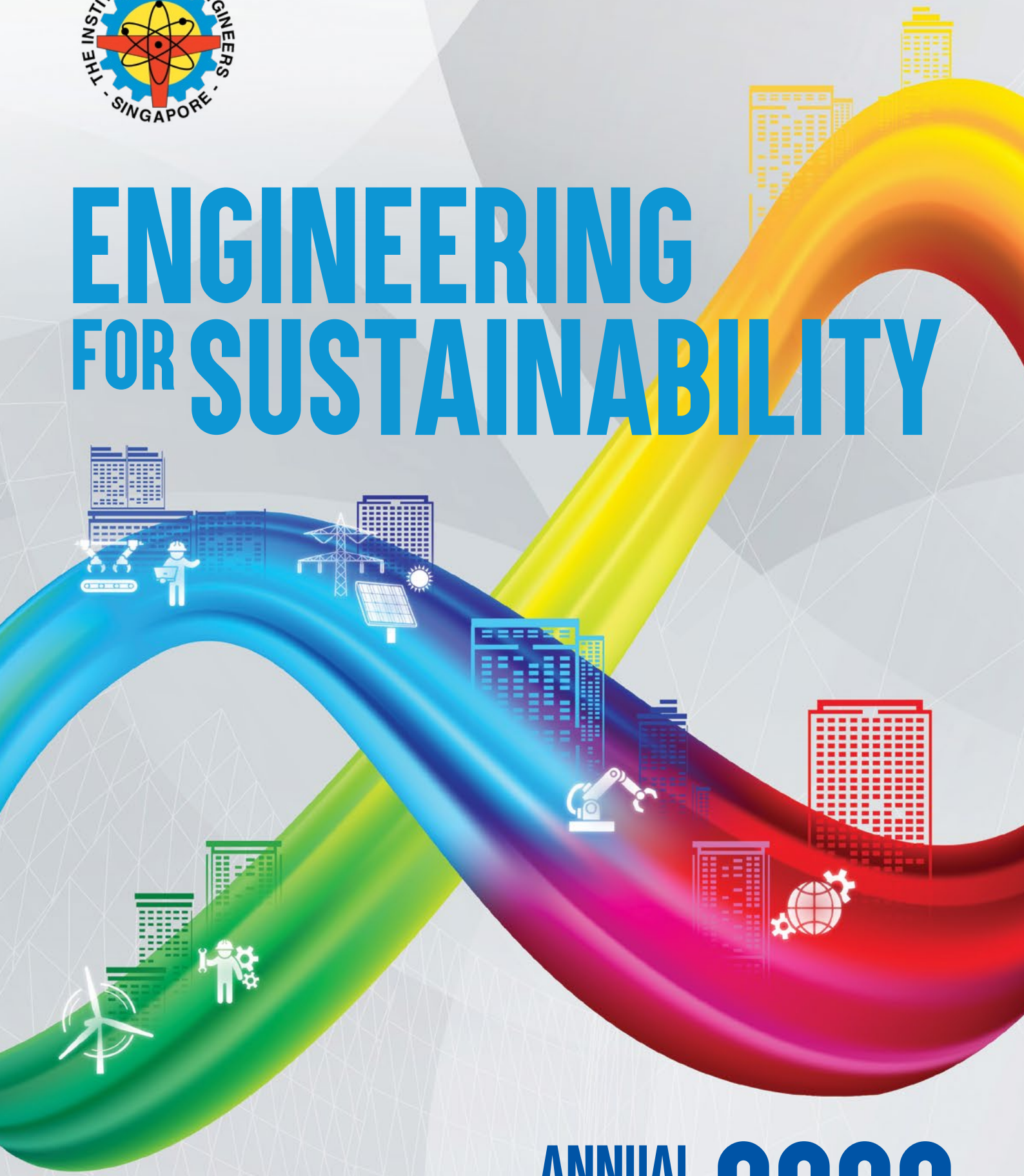
ENGINEERING FOR SUSTAINABILITY



ANNUAL REPORT 2022

CONTENTS

MISSION

To advance and promote the science, art and profession of engineering for the well-being of mankind and national development of Singapore

VISION

To be the heart and voice of engineers and the national body and home for engineers in Singapore

VALUES OF IES

In achieving our vision and roles, we embrace the following core values:

- **INTEGRITY**
- **PASSION**
- **PROFESSIONALISM**
- **SOCIAL RESPONSIBILITY**

ROLES OF IES

IES will focus on the following roles to add value to our members and the engineering community in Singapore:

- **REPRESENTING** engineers nationally and internationally
- **ADVANCING** the knowledge and expertise of engineers
- **UPHOLDING** the status and image of engineers
- **PROVIDING** a platform where engineers gather for social business, professional and career development.

IES 57TH AGM NOTICE OF MEETING

The Institution of Engineers, Singapore
70 Bukit Tinggi Road, Singapore 289758
Tel: (65) 6469 5000 Fax: (65) 64671108
E-mail: ies@iesnet.org.sg
Website: http://www.ies.org.sg

Date: 2 May 2023

To: IES Members

57th ANNUAL GENERAL MEETING

Notice is hereby given that the 57th Annual General Meeting of The Institution of Engineers, Singapore will be held at **1pm on Saturday, 27th May 2023 at Suntec Singapore Convention and Exhibition Centre,** 3 Temasek Boulevard Singapore 038983, **Level 3 Rooms 324-326**

Registration will start at 11.30am and buffet lunch will be served.

The Minutes of the 56th Annual General Meeting held on Saturday 28 May 2022, President's Annual Report for Session 22/23, Treasurer's Report and Statement of Accounts for the Year 2022 will be posted at the Members' Corner on the IES website.

Corporate Members who wish to have any motion tabled for discussion at the AGM are kindly requested to submit them together with notes of explanation to the Honorary Secretary at honsec@iesnet.org.sg by noon on Friday, 12 May 2023.

Please submit the completed e-Proxy Form via the link below latest by Thursday, 25 May 2023 if you are unable to attend the AGM.

Link or e-Proxy Form: https://form.jotform.com/231071998867472

For catering arrangements and to ensure seats are reserved for you, please click https://form.jotform.com/231062224526446 to register online, by Friday, 19 May 2023.

(Associate Members are welcome to attend as Observers.)

Yours sincerely

Er. David Ng
Honorary Secretary
The Institution of Engineers, Singapore"

The Institution of Engineers, Singapore
70 Bukit Tinggi Road, Singapore 289758
Tel: (65) 6469 5000 Fax: (65) 64671108
E-mail:ies@iesnet.org.sg
Website:http://www.ies.org.sg

IES 57th ANNUAL GENERAL MEETING

AGENDA

1. Meeting declared open by IES President, Mr Dalson Chung
2. Confirmation of Minutes of the 56th AGM
3. Matters arising
4. President's Annual Report for 2022 / 2023 Session
5. Honorary Treasurer's Report and Statement of Accounts for 2022
6. Election of Honorary Auditors
7. Results of Election of Deputy President for May 2023 Session
8. Results of Election of Vice-President for May 2023 to May 2025 Sessions
9. Results of Election for vacancies in the Council for May 2023 to May 2025 Sessions
10. Any other business

MINUTES OF 56TH ANNUAL GENERAL MEETING

MINUTES OF THE 56TH ANNUAL GENERAL MEETING OF THE INSTITUTION OF ENGINEERS, SINGAPORE HELD ON 28 MAY 2022 AT RAFFLES TOWN CLUB AND VIA ZOOM PLATFORM

S/N	ITEM	ACTION BY
1.	**HOUSE RULES**	
1.1	Mr Danny Lee presented the house rules and shared the decorum when asking questions or speaking at the AGM 2022 before the start of the AGM.	
2.	**MEETING DECLARED OPEN BY IES PRESIDENT, DR RICHARD KWOK**	
2.1	The IES 56th Annual General Meeting (AGM) was called to order at 1.00 pm by IES President Dr Richard Kwok. A quorum was reached by virtue of the number of Members present at the Meeting. The following EXCO Members were on the panel together with Dr Kwok: • Mr Dalson Chung (Deputy President) • Mr Danny Lee (Hon Secretary) • Er. David Ng (Hon Treasurer) • Er. Chan Ewe Jin (Vice President) • Er. A/Prof Lim Kok Hwa (Vice President) • Mr Mervyn Sirisena (Vice President) • Dr Teo Tee Hui (Vice President) • Er. S Yogeeswaran (Vice President) The Agenda for the AGM was emailed to Members on 1st May and shared on the screen. It was adopted: Proposer: Emeritus President Er. Edwin Khew Seconder: Mr Kenneth Siew	
3.	**CONFIRMATION OF MINUTES OF 55th AGM**	
	The minutes of the 55th AGM was posted at the Members' Corner page on the IES website and shared on the screen. The emcee asked that if there were amendments to the meeting minutes, Members were to click on the chat box button to type the proposed amendments in the chat box. Members were asked to state their proposal with their full name, followed by their proposed amendments so that the Secretary could record accordingly. As there were no comments, the minutes were confirmed without amendment. Proposer: Er. Teo Tiong Yong Seconder: Ms Jasmine Foo	

4.	**MATTERS ARISING**	
4.1	President went through the matters arising from 55th AGM: Action Item 10.1: The proposed amendments 1. Composition of Council: Renaming the "Past Presidents" as "Emeritus Presidents" which better suited the status of our previous Presidents; 2. Voting Rights: Adding an exception clause to allow Associate Members to vote for Associate Members into the Council; 3. Council to Consist of Corporate Members: Updating the allowance of two Associate Members in the Council for consistency; 4. Nomination of Corporate Members for Election: Adding the nomination process for the Associate Members Election into Council; 5. Scrutineers: Updating the requirement for scrutineers to include the Associate Members Election into Council. Follow-Up Action The proposed amendments to the IES Constitution were approved by the Registry of Societies and have been updated and posted on IES Website.	
4.2	Action Item No 11: One of the Members asked why the young engineers were not joining IES and how could IES reverse this situation. IES Vice President (Professional Accreditation and Membership) Er. Yogeeswaran agreed that the number of Members above 31 years of age was currently high. He would work with the Young Engineers Committee to encourage young engineers to join IES. They were fine-tuning the Membership package and would give an update at the next AGM.	Er. Yogeeswaran
5.	**PRESIDENT'S ANNUAL REPORT FOR 2021/2022 SESSION**	
5.1	President Dr Kwok noted for the past years, IES had been resilient enough in serving its members despite the global COVID-19 pandemic continued to disrupt the economy, the society and lives.	
5.2	Dr Kwok focused his report on four key areas: i. Advancing engineering locally and internationally; ii. Driving the future of engineering; iii. Elevating the profile of IES; and iv. Growing the IES family.	
5.3 5.3.1 5.3.2	Advancing engineering locally and internationally. Aiming to train and upskill engineers, the IES Academy continued to offer a multitude of quality training courses for engineering professionals from all disciplines. Apart from technical courses, the Academy mounted the sixth Advanced Engineers Leadership programme which saw 161 engineers completed their training in leadership and innovation skills. The academy also continued to ride on the digitalisation wave, offering more than 51 percent of its courses and seminars online. Having professional recognition in mind, IES continued to provide accreditation via the Chartered Engineer programme and Chartered Engineering Technologist and Technician certification scheme. There was an increase of 46.9% Chartered Engineer membership over the last 2 years while Chartered Technologist and Chartered Technician programmes had a membership of 92 and 64 respectively since its launch in early 2021.	

5.3.3	Several milestones around standardisation for the transport industry had been achieved. IES hosted the launch of the Transportation Standards Committee (TPSC) at the World Engineers Summit, or WES 2021 Conference Dinner in November 2021. The TPSC was established under the Singapore Standards Council (SSC) and Enterprise Singapore (ESG) and supported by IES, government agencies and industry players. The committee provided strategic leadership to existing Technical Committees (TCs) on Automotive and Railway Systems and an upcoming TC on Intelligent Transport Systems.	
5.3.4	Three new Technical References (TR) on Railway Systems were launched in November 2021. These TRs provided rail technicians, engineers and stakeholders with industry best practices to enhance the reliability, safety and productivity of railway solutions.	
5.3.5	On the international scene, IES held WES 2021 last November with a theme of "Engineering towards a Post-Pandemic Sustainable World". WES 2021 provided a timely platform for engineers around the world to exchange ideas, knowledge and insights for the development of innovative engineering solutions to support the world's recovery from the pandemic.	
5.3.6	Dr Kwok elaborated that another accomplishment on the international front was our participation in the World Engineering Day (WED) for Sustainable Development 24HRS LIVE Stream on 4 March 2022. It was the first round-the-clock broadcast organised by the World Federation of Engineering Organisations (WFEO). IES presented Singapore's engineering contributions in sustainable development to the world with a series of three video presentations at the event. The videos showcased different facets of Singapore's sustainable development journey including the Singapore Green Plan 2030, highlights of engineering accomplishments and collaborations between IES and Science Centre Singapore to nurture the young to lead future sustainable development.	
5.3.7	IES participated in CAFEO 39, hosted by Pertubuhan Ukur Jurutera dan Arkitek (PUJA) in Brunei Darussalam from 29 November to 3 December 2021 with the theme "Engineering & Climate Change". This was in line with the goal of helping engineers embrace the paradigm shift that would come with the new normal.	
5.3.8	In April 2022, IES signed a Memorandum of Understanding, or MoU, with the Korean Professional Engineer Association, or KPEA, focusing on internship exchange and organising of an international conference.	
5.4	<u>Driving the future of engineering.</u>	
5.4.1	In nurturing the next generation of engineers to support Singapore's future growth, IES held the National Engineers Day (NED) in November 2021 as a hybrid event. A total of 57 local and foreign student teams successfully developed innovative solutions under the theme "Radiation 360", allowing IES to achieve the goal of instilling interest in engineering amongst young talents.	
5.4.2	Dr Kwok pointed out that in February that year, IES organised the Charles Rudd Distinguished Public Lectures to help students and the public gain a better understanding of the role of engineering innovations in a digital economy. He said we were privileged to have Her Excellency Ms Iwona Piorko, Ambassador to Singapore, European Union deliver the Distinguished Speaker Address on the increased efforts by the EU to tackle climate change.	
5.4.3	Not forgetting about woman engineers, IES held a joint webinar with the Promotion of Women in Engineering, Research and Science (POWERS) of Nanyang Technological University (NTU) in March 2022. The event highlighted woman engineers and innovators who had made major differences in the fight against the pandemic over the past two years.	

5.5	<u>Elevating the profile of IES</u>	
5.5.1	President shared with the Members that IES had won quite a few prestigious awards in recent years.	
5.5.2	Locally, at the Land Transport Excellence Awards 2022 ceremony held in March that year, IES earned double recognition. As an organisation, IES was presented with the Best Collaboration Partner award, in recognition of the exceptional commitment and contributions to advance the railway and transport sector in Singapore. At the event, President Dr Kwok was presented with the Friend of Land Transport award, for contributing to the land transport system via several nation-wide initiatives.	
5.5.3	Regionally, the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) bestowed the esteemed Engineer of the Year Award 2021 on Emeritus President Er. Chong Kee Sen. The award paid tribute to Er. Chong's outstanding commitment and contributions to propel the engineering profession forward in Asia Pacific for the benefit of society.	
5.5.4	Globally, Emeritus President Er. Prof Lock Kai Sang was awarded the World Federation of Engineering Organisations (WFEO) Medal for Excellence in Engineering Education on 12 April 2022. This award recognises Er. Prof Lock's outstanding commitment and contributions in bringing engineering education to greater heights across numerous countries. The WFEO Medal of Excellence in Engineering brings great honour to IES and Singapore as WFEO represents more than 30 million engineers from 100 nations.	
5.6	<u>Growing the IES family</u>	
5.6.1	Dr Kwok was pleased to report that over the past two years, IES membership had increased by more than 15% from 5,900 to 6,800. He attributed the significant increase in membership to the resilience and swiftness in responding to the pandemic. When COVID-19 hit in 2020, IES waived 50% of the membership fees for all members, waived PDU points for registered professionals and conducted a masks distribution exercise. He reiterated that all these positive actions reflected the IES commitment in supporting its members and this in turn translated to many engineers decided to join IES amid the pandemic. He said all these achievements would not have been possible without the support of the members. Dr Kwok shared that the financial position in IES had continued to improve during COVID-19 with a Net Surplus of $174,750 in 2020 to $713,217 in 2021.	
5.7	Dr Kwok concluded by pointing the Members to the future: • In supporting engineers from all disciplines to work cohesively • In supporting the Singapore Green Plan 2030 • In continuing to reposition IES • In growing our membership • In encouraging more members to join the IES Council • In attracting students to take up engineering as a course of study • In continuing to promote professionalism, accountability, compliance, and transparency.	
5.8	Mr. Jason Oh Boon Chai asked about the possible reason for the small number of members who were less than 30 years old and how the Council would plan to attract the younger engineers.	
5.9	Mr Syafiq Shahul, Chairman of Young Engineers replied that recently that they were running 8 series of webinars and about 53% of the attendees were below 30 years of age. In total there were over 100 activities organised last year for them and recruitment was still work in progress.	Mr Syafiq Shahul

5.10	Mr Ganesan Rajkumar suggested that IES organised some continuing education over the weekend as most of the activities by IES were mainly on the weekdays or working days. Mr Mervyn Sirisena, Vice President in charge of education requested the technical committee chairmen to look into this.	Er. Chan Ewe Jin
5.11	President's Report was adopted: Proposer: Er. Joseph Goh Seconder: Er. Au Kow Liong	
6.	**HONORARY TREASURER'S REPORT AND STATEMENT OF ACCOUNTS FOR 2021**	
6.1 6.1.1	Er. David Ng presented the Financial Report. For the year 2021, IES Group generated revenue of $6.7 billion in 2021, $4.7 million in 2020. Our group net surplus before tax in 2021 was $883,000, The revenues increased by 1.78% year-on-year.	
6.2 6.2.1	Prof Zhou Yi noted that there was an improvement on the staff salary and asked the reason for such an increase. He also noticed the CPF contribution compared with the previous year had dropped, but the total salary had increased. He asked the Finance Committee to elaborate on how the salary was calculated. Er. David Ng replied that the turnover of staff accounted for the Total Staff Costs to be lower compared to 2020.	
6.3	As there were no further questions, the Treasurer's report was adopted; Proposer: Emeritus President Er. Chong Kee Sen Seconder: Dr Aaron Sham	
7.	**ELECTION OF HONORARY AUDITORS FOR 2022**	
7.1	President Dr Richard Kwok expressed his appreciation to Er, Richard Fong and Er. Loh Weng Whye for being the Honorary Auditors for 2021.	
7.2	The following Members were appointed as Honorary Auditors for the year 2022: First Honorary Auditor: Dr Chandra Segaran Proposer: Ms Jasmine Foo Seconder: Er. Joseph Goh Second Honorary Auditor: Er. Dr Ang Keng Been Proposer: Dr Boh Jaw Woei Seconder: Er. Au Kow Liong	
8.	**RESULTS OF ELECTION OF VICE PRESIDENTS FOR MAY 2022 TO MAY 2024 SESSIONS**	
	Hon Secretary Mr Danny Lee announced that Er. Chan Ewe Jin, Er. Joseph Goh Chee Chiang, Ms Jasmine Foo Xue Ning, Mr Danny Lee Meng Tuck, and S Yogeeswaran have been elected as Vice Presidents.	
9.	**RESULTS OF ELECTION FOR VACANCIES IN COUNCIL FOR MAY 2022 TO MAY 2024 SESSIONS**	
9.1	Mr Danny Lee announced the results of the Council Election for 2022/23-2023/24 Sessions: For Chemical Engineering Division, there was one vacancy and Er. Assoc Prof Lim Kok Hwa was elected.	

9.1	For Civil & Structural Engineering Division, there were two vacancies and Er Chan Ewe Jin and Er. David Ng Chew Chiat were elected. For Electrical Engineering Division, there was only one vacancy and Er. Simon Lee Teng Pong, Mr Danny Lee Meng Tuck and Dr Teo Tee Hui were elected. For Mechanical Engineering Division, there was one vacancy and Mr Kenneth Siew Tet Wah was elected. For Young Engineer Division, there was one vacancy and Mr Syafiq Shahul was elected. For the three vacancies in Any Division of Engineering, the following Members were elected: Ms Jasmine Foo Xue Ning, Dr Aaron Sham Wei Lun and Ms Wan Siew Ping For the two vacancies in Associate Representatives in Council, Mr Chua Yi Bin was elected.	
9.2	President thanked the following Council Members who would be retiring from the Council: - Mr Roger Lim, Council Member - Mr Low Koon Huat, Council Member - Er. Alfred Wong Fee Min, Council Member - Assoc Prof Zhou Yi, Council Member	
10	**ANY OTHER BUSINESS**	
10.1	Mr Balaji raised the question on the fees of $30 and $60 charged by technical committees. Vice President Er. Chan Ewe Jin said that he and the technical committees would look into it.	Er. Chan Ewe Jin
10.2	There were two questions from Prof Hong Minghui and they were replied accordingly:	
10.3	Prof Hong commented that there were many mistakes made in the AGM meeting minutes and if Members were allowed to approve the minutes.	
10.4	President replied that he too had spotted the errors, Hon Secretary reported that the mistakes were rectified and posted at the Members' corner on 27 May 2022. On the question of approving meeting minutes, as a practice, minutes were read by Council Members before posting on the website which were then approved by Members at AGMs.	
10.5	Second, as some IES members were blocked at the last AGM, he asked if an independent committee could be formed to investigate the issue.	
10.6	Hon Secretary Mr Danny Lee explained that Members at the 2021 E-AGM were asked to type in their questions into the chat box. This improved the flow of the proceeding and allowed more questions to be put forward. In fact, there were more questions asked than the previous year. It showed that this would be a more efficient practice. During the AGM, the Emcee made a few announcements for Members to type in their questions in the chat box. If questions were not answered at the AGM, a reply would be provided within 14 days.	

11.	**CLOSE OF MEETING**	
11.1	The meeting was declared closed at 1.40 pm.	
11.2	IES 28th President Dr Richard Kwok then handed the President Medal to IES 29th President Mr Dalson Chung.	
12.	**AFTER MEETING NOTE:**	
12.1	The questions and answers from the chat box during the AGM were answered (refer to Appendix) within 14 days after the AGM, via email to the Members sent by the Secretariat Tan Siew Keow.	

Recorded by: Ms Tan Siew Keow
Vetted by: Mr Danny Lee & Ms Emily Tan
Approved by: Dr Richard Kwok

PRESIDENT'S MESSAGE

In the past 12 months, The Institution of Engineers, Singapore (IES) continued to advance steadfastly towards our vision of being the heart and voice of engineers and the national body and home for engineers in Singapore.

Our work was guided by both the 'Inclusive, **Empathy, Stability' ('I.E.S.') framework** and the commitment to supporting **national imperatives**, as set out for my Presidency term. I am pleased to report that we have made good headway on both fronts.

Key Accomplishments for 'I.E.S.' Pillars

The 'I.E.S' framework has sharpened our focus to promote inclusivity for the benefit of engineering professionals; strengthen our corporate social responsibility and environmentally sustainable agenda for greater empathy; and bolster our organisational capability, governance and brand as well as engagement with young engineers. Here are the key achievements made in these areas in the past year:

Professional Accreditation and Registration

In 2022, our professional registries continued to provide certification and accreditation to engineering professionals. As of 31 December 2022, there are more professionals registered with IES in all categories as compared to 31 December 2021. The total certifications or registrations stand at 120 in the ABC Waters Professional Registry; 4,386 Resident Engineers (RE) and 7,617 Resident Technical Officers (RTO) in the IES-ACES Civil & Structural RE & RTO Registry; 607 Chartered Engineers; 124 Chartered Engineering Technicians; 92 Chartered Engineering Technologists; 1,692 in the IES-ACES Earth Control Measures Officer Registry; 246 in the IES-ACES Facade Inspector Registry; 76 in the IES-ACES Lift & Escalator Inspector Registry, 30 REs and 388 RTOs in the IES-ACES Mechanical & Electronics RE & RTO Registry; and 1,321 Singapore Certified Energy Managers (SCEM) and 254 Associate SCEMs in the SCEM Registry; and 70 valid registrations in the Qualified Electrical Contractors (QEC) Registry.

Engineering Programmes Accreditation

In 2022, the Engineering Accreditation Board (EAB) evaluated five engineering programmes in Singapore - three for full accreditation and two for provisional accreditation. The EAB was represented at the International Engineering Alliance's Annual Meeting in July 2022 and organised a workshop in October 2022 on Revised Graduate Attributes and Programme Educational Objectives, in collaboration with the Singapore Institute of Technology. All these activities play an important role in improving and developing educational programmes in engineering that promote best practices to better meet the needs of the local industry.

External Relations

IES and the Korean Professional Engineer Association (KPEA) signed a Memorandum of Understanding (MoU) in April 2022 to strengthen professional relations, promote greater exchange of technological knowledge and mobility between Singapore and Korea. It will focus on two areas of collaboration: internship exchange and international conference. In June 2022, IES and the China

Association for Science and Technology (CAST) signed a Mutual Recognition Agreement (MRA) to promote mobility and cross-border work for engineers from China and Singapore. The parties also signed an MoU to facilitate knowledge exchange and collaborations between businesses from the two countries; as well as the publication of selected papers, articles and journals. In July 2022, IES participated in the Sixth Federation of Engineering Institutions of Asia and the Pacific (FEIAP) Convention and the 30th General Assembly in Cebu, Philippines.

Promoting Engineering and Recognising Engineers

IES held the National Engineers Day (NED) 2022 from 8 to 19 November 2022, with Mr. Masagos Zulkifli, Minister for Social and Family Development, gracing the NED-Engineering Innovation Challenge Prize Presentation Ceremony as the guest-of-honour. In the year, IES also held the Eighth Young Engineers Leadership Programme, the IES-YC Wong-NTU Project Management Scholarship Gifting Ceremony in efforts to promote and groom engineering talent among the younger generations. The IES-Standards Development Organisation (IES-SDO) organised the Technical Reference (TR) launches and webinars. SDO organised three separate launches in 2022 for five TR for Railway Systems and one TR on Passive Displacement Cooling (PDC) for air-conditioning application.

Professional Training

The IES Academy has increased the number of courses offered by 3.7% to 198 courses in 2022, with 50% conducted in-person, 43% virtually and 7% as hybrid courses. The academy also conducted in-person sessions of its premier Engineer Leadership Programmes after the lifting of the pandemic restrictions. The academy reviewed and updated the syllabuses and contents of existing courses; while launching 12 new courses to meet industry needs. The IES Academy has also been appointed to conduct corporate training for government agencies and major corporations such as Amazon, Changi Airport Group, ST Engineering and JTC. The academy participated in the Singapore Environment Council's Eco Office Certification programme and successfully passed the audit to obtain the Eco Office - Elite award.

Supporting Technopreneurship

At the end of 2022, the IES-Incubator and Accelerator (IES-INCA) has supported 23 incubatees and organised 19 events to share best practices in commercialisation and equip engineers with business skills. They engaged 120 participants in three Pitch and Deep Tech community days. IES-INCA also established a partnership with the Action Community for Entrepreneurship (ACE), the national voice for Singapore startup ecosystem, through an MoU.

Standards Development

IES-SDO oversees the development, promotion and adoption of Singapore Standards and Technical References, guided by the Singapore Standards Council. On 4 March 2022, IES-SDO hosted a strategic planning session for the Technical Committee on Railway Systems, where keynote speakers from the regulatory authority and the transport industry shared their perspectives on the future of mobility. Members of the committee, along with key members of its various technical committees, discussed potential areas of standardisation. Similar strategic planning sessions have also been held for the Automotive Technical Committee and the Technical Committee on Intelligent Transport Systems. IES-SD also held the Strategic Planning Session for Building and Construction Standards Committee (BCSC) in March 2022, with keynote speakers sharing on the Singapore Green Building Masterplan and Advanced Manufacturing in the Built Environment.

Technical Committees

In 2022, the various IES Technical Committees from the four clusters organised 33 events, including talks and seminars to keep engineers abreast of the latest technologies and advancements in engineering. This has facilitated the provision of best possible solutions and innovations for societal development in areas such as infrastructure, manufacturing, transportation and sustainability.

Student Chapters

Recognising that the younger generation's participation is crucial to achieving sustainable goals, IES continued to engage them in the past year in IES activities. IES also continued to work with our Student Chapters to reach out to more engineering students so that they can become our partners in the journey towards a green future.

Voice of Engineers

Throughout 2022, IES strived to enhance the organisation's position as an engineering thought leader and voice for engineers in Singapore. This has been achieved through interviews and articles published in various media platforms that featured IES or our media spokespersons. We also conducted a Media Spokesperson Training Course to optimise media engagement efforts. IES' social media efforts have also garnered traction, with about 3,500 likes on Facebook and more than 270 followers on Instagram, gaining 600 and 70 more followers on these platforms respectively in 2022. On LinkedIn, where IES reaches out to a more professional demographic, the number of followers has grown steadily by about 900 over the past year to reach 3,700. We will continually employ these social media channels to increase reach and share updates on IES activities and partnerships.

Alignment with National Imperatives

Seeking to remain relevant and ensure IES and engineering continue to be a linchpin of our nation building in the next 50 years, IES has committed to aligning our work to Singapore's national imperatives. In the past year, we made huge strides towards this goal, specifically in supporting Singapore to become a sustainable and climate-resilient nation.

IES Green Plan 2030

Recognising that climate change is an existential threat that is growing in magnitude, IES has formulated the IES Green Plan 2030 and planned to launch it in early 2023, to establish IES as the actionable voice of Singapore's engineers in our nation's sustainability journey.

The main components of the plan will include equipping engineers with the relevant sustainability skills to better support green initiatives at the workplace; and working with more than 30 agencies to strengthen our nation's engineering capabilities and capacities to develop solutions to mitigate climate impact.

Accompanying the IES Green Plan 2030, IES has worked with SkillsFuture Singapore on the Jobs-Skills Quarterly Insights (JQSI) publication that will identify a suite of highly sought-after green skills for practising engineers.

As part of the preparatory work of the IES Green Plan 2030 following the launch, IES has already begun looking into capability development in carbon footprinting and impact assessment, establishing the IES Sustainability Awards to spur greater innovations and launching the new Chartered Engineer Singapore (Sustainability) certification to enhance professional recognition in this space. In addition, we have obtained the Eco-office certification from the Singapore Environment Council for our Bukit Tinggi building and the IESA premises.

In terms of financial performance, IES (including its subsidiaries) achieved a surplus of about $328,000 for FY2022. Members can refer to the audited financial statement in the members' corner on our website for more information.

Looking forward

As we continue to chart the way forward in 2023 with the IES Green Plan 2030 as an anchor, I am confident that we can make significant strides towards a more sustainable future with engineering solutions that are essential in addressing the challenges that we face.

PRESIDENT'S MESSAGE

IES is in the midst of planning two exciting events anchored on green themes in 2023 – NED 2023 in August themed “Shaping a Circular Economy through Engineering” and the World Engineers Summit (WES) 2023 on “Engineering for a Sustainable Future” in November. We invite all members to step forward and contribute to these events as delegates, speakers or mentors.

Other plans for the coming year include conversion of non-certifiable courses to WSQ courses, development of sustainability courses, supporting more local engineering companies to venture overseas, and launching more IES Student Chapters and overseas internship opportunities for students and young engineers.

I am grateful for the strong support from our members and partners as we strive to be the beacon for Singapore’s engineers in its transformation towards a sustainable nation. I look forward to working with all of you in the coming year to harness the prowess of engineering to create a thriving, sustainable future.

Mr Dalson Chung
President

ENGINEERING ACCREDITATION BOARD (EAB)

The Institution of Engineers Singapore is a signatory of the Washington Accord (WA) which is an international accreditation agreement by the bodies responsible for the accreditation of undergraduate professional engineering academic degrees offered in their signatory countries and regions.

The Engineering Accreditation Board Singapore (EAB) is responsible for accrediting engineering degree programmes at all local universities and academies. It comprises 20 members and is currently chaired by Dr Lim Khiang Wee.

In 2022, a total of 5 engineering programmes in Singapore were evaluated by EAB, 3 of which are for Full Accreditation and 2 for Provisional Accreditation.

International Engineering Alliance Matters

The International Engineering Alliance (IEA), of which the Washington Accord (WA) is a member, held its Annual Meeting in July 2022. The EAB was represented by Chair Dr Lim Khiang Wee and Director Dr Chau Fook Siong.

Issues discussed and agreed upon by WA Signatories pertained to the admission of a number of Signatories to provisional and full memberships and the Periodic Reviews of some Signatories.

EAB, represented by Professor Paul Sharratt and Er Lim Peng Hong, participated in WA's Verification Review of Mexico's CACEI and Periodic Review of the Hong Kong Institution of Engineers respectively.

Other EAB Activities

EAB, in collaboration with the Singapore Institute of Technology (SIT), organised a Workshop on Revised Graduate Attributes 2021 and Programme Educational Objectives in October 2022. The objectives of the workshop were (i) to provide guidance and clarification in setting appropriate Programme Educational Objectives and their evaluation, and (ii) to share the salient updates in Graduate Attributes and EAB's expectations in their implementation by the HEIs. The presenters were Er. Prof Lock Kai Sang, Adviser to EAB and Prof A. Bulent Ozguler, Governing Group Member of IEA and Chairman of the WFEO-IEA joint committee for revision of GAPCs 2021. The Workshop was attended by around 60 on-site registrants and around 180 Zoom user accounts tuned in for the live stream.

Members of the EAB Evaluation Team for the BEng (Aerospace Systems) Programme at Singapore University of Social Sciences (SUSS).

Prof Bulent Ozguler delivering his presentation at the EAB-SIT Workshop on Graduate Attributes 2021 and Programme Educational Objectives.

INTERNATIONAL OUTREACH COMMITTEE

World Engineering Day (WED) 2022

The World Engineering Day for Sustainable Development was proclaimed by UNESCO at its 40th General Conference in 2019. It is celebrated worldwide on 4 March each year since 2020. The day offers an opportunity to highlight engineers and engineering achievements in our modern world and to improve public understanding of how engineering and technology are central to modern life and sustainable development.

Through the World Federation of Engineering Organizations (WFEO), engineering organisations all over the world have come together in 2022 to put up a 24-hour livestream of broadcasts and activities to present their work, share knowledge, and look at how engineers can contribute to the future.

As part of the global community, IES participated as one of the live hubs and streamed a series of videos showcasing Singapore's efforts and achievements, our work in nurturing the next generation, and the nation's commitment to a greener and more sustainable world. In addition, Er. Tan Seng Chuan, WFEO Treasurer and IES Emeritus President was also invited to share about the importance of engineering contributions in sustainable development and emerging trends through a live interview session.

The 24-hour livestream on the World Engineering Day website drew more than 31,000 million viewership with almost 6.5% of the viewers coming from Singapore.

World Engineering Day 2022 24HRS Live viewership statistics


WED Live Interview with Er. Tan Seng Chuan

The Charles Rudd Distinguished Public Lectures (CRDPL) on 17 February 2022, was also jointly organised with WFEO and held in celebration of World Engineering Day (WED). The Lecture was attended by more than 3,000 online and physical participants both locally and internationally. Themed on Circular and Digital Economy, the lecture featured Her Excellency Ms Iwona Piorko, Ambassador, European Union in Singapore as the Keynote Speaker. Other notable speakers include Prof Cheong Koon Hean, Chairman of Centre of Liveable Cities and Lee Kuan Yew Centre for Innovative Cities, Dr Darian McBain, Chief Sustainability Officer for Monetary Authority of Singapore and Ms Sheila Remes, Vice President of The Boeing Company. Joining the Panel Discussion were Mr Jonathan Kua, Senior Vice President & Head, Group Sustainability, ST Engineering and Ms Susanna Kass, Energy Fellow, Data Centre Advisor for UNSDG-EP and BOD of InfraPrime. The panel discussion was moderated by Prof Seeram Ramakrishna, Chairman of Circular Economy Taskforce, NUS.

The Charles Rudd Distinguished Public Lectures 2022 organising committee was awarded IES Special Recognition Award for their outstanding teamwork.

IES Charles Rudd Distinguished Public Lectures Panel Discussion. Joining virtually was Ms Susanna Kass (top screens). (Bottom left to right) Mr Jonathan Kua, Prof Cheong Koon Hean, Prof Seeram Ramakrishna, Dr Darian McBain and Ms Sheila Remes.

IES Charles Rudd Distinguished Public Lectures Organising Committee 2022 receiving the Special Recognition Award (from left to right) Ms Charlotte Seah, Er. Tan Seng Chuan, Dr Boh Jaw Woei (Chairman), IES President Mr Dalson Chung, Prof Seeram Ramakrishna and Mr Mervyn Sirisena.

IES - Korean Professional Engineers Association (KPEA) Memorandum of Understanding (MoU) Signing

On 1 April 2022, an MOU was signed with the Korean Professional Engineer Association (KPEA). The five-year renewable agreement aims to deepen collaboration in four areas: internship exchange, conference organisation, joint development of industrial projects, and mutual support in engineering MICE events.

The delegation was led by KPEA President Dr Joo Seung-ho, alongside KPEA advisors and senior executives, as well as members of the Accreditation Board for Engineering Education of Korea (ABEEK). Mr Lee Sang Heon, Counsellor and Commercial Attaché, Embassy of the Republic of Korea was also invited to witness the event. The delegation was hosted by IES Deputy President Mr Dalson Chung, Emeritus President Er. Tan Seng Chuan, and members of the IES International Outreach Committee.

Signing of MoU by IES President Mr Dalson Chung (bottom left) and KPEA President Dr Joo Seong-ho (bottom right). The signing was witnessed by (from top left to right): Mr Lee Sang Heon, Counsellor and Commercial Attaché, Embassy of the Republic of Korea, Mr Nam Hur, Senior Adviser of KPEA, Er. Tan Seng Chuan, Chairman of IES International Outreach Committee, Mr Yoon Sugk-Yong, Chairman of the International Cooperation Committee of KPEA, Mr An Hyo-Rong, Director of ABEEK.

IES - China Association of Science and Technology (CAST) Memorandum of Understanding (MoU) and Mutual Recognition Agreement (MRA) Signing Ceremony

IES and the China Association for Science and Technology (CAST) signed a Mutual Recognition Agreement (MRA) on 30 June 2022 to reduce barriers to cross-border work by engineers from China and Singapore. The accreditation will be tied to the Chartered Engineer Programme of IES and the Capability Evaluation of Professional Engineers General Specification of CAST.

At the signing ceremony, a Memorandum of Understanding (MoU) was also inked to promote information exchange, encourage collaborations between businesses from both Singapore and China, engage universities and companies for student exchange programmes, and facilitate the publication of selected papers, articles and journals.

Chinese Ambassador to Singapore Sun Haiyan (left) and Minister of State for Trade and Industry Low Yen Ling witnessing the signing of the deal by IES International Outreach Committee Chairman Er. Tan Seng Chuan (seated) and Chinese Society of Engineers (CSE) Executive Deputy Director-General Zheng Kai.

Chinese Ambassador to Singapore Sun Haiyan (left) and Minister of State for Trade and Industry Low Yen Ling witnessing the signing of a memorandum of understanding by IES President Mr Dalson Chung (centre) and CAST Vice-President Zhang Yuzhuo.

Minister of State for Trade and Industry, Ms Low Yen Ling graced the ceremony as Guest-of-Honour and Her Excellency Sun Haiyan, Ambassador of the People's Republic of China to Singapore was invited to witness the ceremony.

With harmonised standards and lower barriers, engineers from Singapore and China can expect to practise in both countries and expand beyond their current borders. Both organisations also look forward to new partnerships that will spur new business possibilities and fresh projects between Singapore and China.

6th Federation of Engineering Institutions of Asia and the Pacific (FEIAP) Convention and 30th General Assembly

The 6th Federation of Engineering Institutions of Asia and the Pacific (FEIAP) Convention and 30th General Assembly was held on 27–29 July 2022 in Cebu, Philippines. IES was represented by Er. Chong Kee Sen, Dr Boh Jaw Woei and Prof Lock Kai Sang. Dr Lock Kai Sang participated virtually and presented a Plenary Keynote Address on Engineering Education: Meeting the Requirements for International Recognition.

Dr Boh Jaw Woei and Er. Chong Kee Sen attended the conference physically and both presented a Technical Keynote on Recalibration Engineering Education: Critical Rethink and Reset in Making Future-Ready Engineer and a Plenary Keynote address on The Singapore Green Plan – Its Value Proposition, respectively.

Er. Chong Kee Sen was also conferred the FEIAP Engineer of the Year Award 2021 during the FEIAP banquet Dinner & Awards Night.

IES-INCUBATOR AND ACCELERATOR (IES-INCA)

In 2022, IES-INCA (IES Incubator and Accelerator) continued to grow in our outreach and support of IES members and engineers in their new technology-venture scaling journey.

Established in 2019 with support from Enterprise Singapore, the objective of IES-INCA is to build successful Deep Tech Engineering Technology ventures anchored by technically competent engineers, to create competitive products, services, and solutions to address today's complex problems. IES-INCA works alongside the Technopreneurship Development Committee (TDC) both of which are active initiatives in IES and is supported by the IES' College of Fellows.

At the end of 2022, INCA has cumulatively supported 23 incubatees and has organised a mix of 19 events and activities to share best practices in technopreneurship, technology commercialisation as well as increase our portfolio of business skills training to equip our engineers. We highlight some of the key milestones for the year in this report. More information is available on our social media pages on Facebook, YouTube, and LinkedIn.

Event: INCA Pitch and Deep Tech Community Days

Date: 30 March, 7 June, 17 October 2022

Three Pitch and Deep Tech community days were organised and engaged no less than 120 participants in our events. Our INCA incubatees engaged with mentors, investors and corporate partners, opening up new collaboration opportunities and investment discussions. To be invited, IES members can participate in future Pitch Days by joining the IES-INCA and ISCA Investor Network.

INCA Incubatee Ocean Pixel pitching to investors at Holiday Inn Orchard City Centre on 30 March 2022

INCA Incubatee Antbuildz pitching to investors at Holiday Inn Atrium on 7 June 2022

INCA Incubatee Factorem pitching to investors at IES on 17 October 2022

Event: INCA MOU Signing with ACE

Date: 19 October 2022

Left Photo: (L-R) – Matthias Yeo (Ex-MP, Invited Guest), Representing ACE – James Tan (Chairman), Florence Neo (CEO), Representing INCA – Chow Kok Wah (Executive Director), Er. Chong Kee Sen (Chairman), Teo Ser Luck (Board Member), Andy Wee (General Manager)

Right Photo: Attendees of the INCA-ACE MoU signing ceremony

INCA signed a MoU as part of the establishment of a new partnership with the Action Community for Entrepreneurship (ACE), the National Voice for Singapore Startup Ecosystem. This MoU marks a closer collaboration between INCA and ACE for cross-marketing of events and courses. With our deep engineering and technology expertise, INCA will help ACE to better support the entrepreneurial promotion of activities in deep tech.

In addition, INCA will work with ACE to form a deep tech venture sub-committee comprising industry representatives from IES, IES-INCA, ACE, and the ecosystem. This partnership will also facilitate conversations and feedback to policymakers and ecosystem stakeholders to enable substantial growth in the sector.

Courses: INCA establishes new courses to help Engineers and Founders gain new competencies in business and professional skills.

To complement the technical knowledge and capabilities of our engineers, INCA organised new runs of our business skills training courses and also created new ones to address the holistic professional needs of our members and incubatees. In addition, with these courses, we were also able to outreach to the community at large to increase awareness of IES, INCA, as well as further the growth of our technopreneurship pillar.

Incubatees and Engineers attending our INCA business courses

Year in Summary:

Despite the transitions faced in 2022 as we shifted from COVID-19 restrictions to the gradual easing of measures, 2022 was a year of growth where IES-INCA made significant progress in building up the Deep Tech and Engineering Technopreneurship community and greatly increased our market presence. We actively grew our investor database to over 150 contacts, increasing the possibility of matching between our incubatees and the investment market. We also rolled out a record number of courses to help our incubatees, engineers, and engineering leaders gain new skills and be more effective in the execution of their engineering business.

By end 2022, INCA has supported a total of 23 incubatees who have greatly benefitted from the guidance of our INCA team and mentors, built stronger confidence in the execution, and achieved growth in their technology ventures. The new and valuable connections made between our incubatees, mentors, investors, partners and IES members continue to validate the importance of INCA's role as a platform in driving the growth of engineering, technology and technopreneurship in Singapore.

For more information about IES-INCA, visit our website: ies-inca.com

IES Technopreneur Development Committee (TDC)

In 2022, TDC started to engage our Technical Committee with the goal to co-op committee members to participate in technopreneurship promotion activities as a horizontal platform that cuts across all industries and sectors of engineering. For a start, TDC met with the Young Engineers Committee (YEC) to gather information about their aspirations and also explore how we can further collaborate to support younger engineers who are interested in Technopreneurship.

(L-R) – Jimmy Leong (Asst Manager, INCA), representing Young Engineers Committee (YEC) – James Bautista (Member), Syafiq Shahul (Chairman), Leu Kai Jun (Member)

IES ACADEMY

EDUCATION GROUP
Vice-President: Mr Mervyn Sirisena

INTRODUCTION

As the Covid-19 situation improved in 2022 and social distancing restrictions were eased, IES Academy (IESA)'s activities were able to resume on a larger scale, enabling it to recover steadily from the slowdowns from the year before. Some online classes were reverted to physical classes and bigger classes were conducted due to easing of seating restrictions. Organisations that previously restricted site visits by our course participants also gradually allowed visits for training purposes.

COURSES

With the easing of Covid-related restrictions, the number of courses increased 3.7% year-on-year to 198 in 2022, up from 191 the year before. In terms of student-hours, the output grew 18.3% to 64,640, up from 54,630 in 2021. The increase can be attributed to more training courses and higher enrolment as the demand for training ramped up in line with the improving economy. Companies also sponsored more employees to attend training courses for their professional development.

The table below shows the type of courses conducted and the quantity of training activities in 2022 as compared to 2021.

Main Target Participants & Types of Courses	Continuing Professional Development	2022 No. of courses	2021 No. of courses
Professional Engineers	PDU	21	17
Singapore Certified Energy Managers	PDU	18	26
Resident Engineers / Resident Technical Officers	STU	113	102
WSH Officers	SDU	19	20
Preparatory Courses	CET Hours	14	17
Exam Administration / Others	Nil	13	9
Total		**198**	**191**
Total Student-Hours		**64,640 student-hours**	**54,630 student-hours**

Table 1. Number of Courses Conducted by IES Academy

Of the 198 courses conducted in 2022, 50% were conducted in-person, whereas 43% were virtual classes. The remaining 7% were organised as online-cum-classroom hybrid and asynchronous courses. There was an increase of physical classroom and hybrid courses and a reduction of online-classroom courses in 2022 as compared to a year before. The various types and number of courses conducted by IES Academy are shown in Table 2.

Mode of Course	2022 No. of Courses	2021 No. of Courses
Physical Classroom Courses	99	90
Online Courses	86	96
Online-classroom Hybrid Courses	12	3
Online Interactive / Asynchronous Courses	1	2
Total	**198**	**191**

Table 2. Number of Courses conducted in Various Modes in 2022 and 2021

The lifting of pandemic restrictions in 2022 also enabled IESA to conduct physical sessions of its premier Engineer Leadership Programmes, comprising the Young Engineers Leadership Programme (YELP) (8th run); the Advanced Engineers Leadership Programme (AELP) (7th run) and the Global Engineers Leadership Programme (GELP).

The second run of GELP was conducted in November 2022 after a hiatus of two years. Nineteen senior level engineer-leaders attended the GELP which comprises classes conducted by the National University of Singapore and talks curated by IES Academy with leaders from various disciplines. IESA was also honoured that Deputy Prime Minister Heng Swee Keat took time off his busy schedule to speak to the GELP class.

Presentation of Graduation Certificate by IES President, Mr Dalson Chung (extreme right) to a Participant of Global Engineers Leadership Programme 2022. It was witnessed by Ms Catherine Cho from NTUC (extreme left) and Assoc Prof Chai Kah Hin from NUS (second from left). NTUC and NUS are partners of IES Academy in Global Engineers Leadership Programme.

Sharing by IES Vice President (Professional Development), Mr Mervyn Sirisena during Global Engineers Leadership Programme Graduation 2022

A Class of Young Engineers Leadership Programme 2022

UPDATING & DEVELOPMENT OF COURSES

In order to maintain industry-relevance and market responsiveness, IES Academy collaborated closely with its partners and trainers to review and update the syllabi and content of its existing courses during the year. Besides updating existing courses, 12 new courses were developed and launched in 2022 to meet industry needs and customer requests. These are shown in the Table 3 below. Re-runs of these classes are expected in 2023.

No	Course Title	Target Participants
1	Perform Design for Safety Professionals Duties	Professional Engineers, WSH Officers
2	Supervision of Construction in Singapore	Professional Engineers, Resident Engineers / Resident Technical Officers
3	Excavation Construction Works and Worksite Safety & Health Practices	Professional Engineers, Resident Engineers / Resident Technical Officers
4	Impact onto Existing Bridge Within the Influence Zone of Construction Works and Special Ground Conditions and Chemical Risk Assessment and Management at Worksite	Professional Engineers, Resident Engineers / Resident Technical Officers
5	Prestress Design for Building Structures	Professional Engineers, Resident Engineers / Resident Technical Officers
6	Material & Workmanship for Post-Tensioning Works and Legal duties Underscoring the Construction Industry	Professional Engineers, Resident Engineers / Resident Technical Officers
7	Preparation Course for PPE Examination Part 2 - Mechanical Engineering - Pressure Vessels and Steam	Professional Engineers, Resident Engineers
8	Understanding Energy Storage Systems	Resident Engineers / Resident Technical Officers
9	Intelligent Transport Systems at Work	Chartered Engineers for Railway and Transport sector
10	Examine, Inspect, Test (EIT) for Lift & Escalator	Lift & Escalator Inspectors, Resident Engineers / Resident Technical Officers
11	Standards Development Training	Professional Engineers, Standards Partners, Secretariats, Committee Chairs, Working Group Convenors and Key Stakeholders
12	Retaining & Developing Talents in the Engineering Industry- Featuring Effective Strategies	Engineering Business Owners, Engineering Managers, Engineers interested in retaining and developing talents in their organisations

Table 3. New Courses in 2022

IESA will continue to identify gaps of skill sets in the market and develop the new courses to fill these gaps. The existing partnership with government agencies, industries, and institutions of higher learning (IHLs) will be enhanced and new areas of collaboration will be explored.

CORPORATE TRAINING

With its excellent track record and reputation, IES Academy has been appointed to conduct corporate training for government agencies and industries including major corporations such as Amazon, Changi Airport Group, ST Engineering and JTC in 2022 for the upskilling of their employees. The Academy shall continue to seek opportunities to offer customised courses to corporations in areas where it can add value.

A Corporate Class on Lift and Escalator Inspector conducted for Changi Airport Group Engineering

A Corporate Class on Lift Systems and Operation Conducted for ST Engineering

ECO OFFICE - ELITE CERTIFICATION AWARD

As part of IES' green efforts and initiatives to reduce its carbon footprint, IES Academy participated in Singapore Environment Council (SEC)'s Eco Office Certification programme in 2022.

Certificate of IES Academy's "ECO Office – Elite" awarded by Singapore Environment Council

The Eco Office Certification programme is an integral component of GreenDNA, a certification system that encourages organisations to take on low carbon lifestyles, develop a green mindset, as well as practise responsible consumption. This programme aims to provide guidelines to offices to adopt effective environmentally-friendly practices by improving eco-consciousness among staff that may lead organisations to reducing waste by using less paper, electricity, and water.

With strong support from IES Management and the collective efforts of the staff, IES Academy successfully passed the audit conducted by SEC and was awarded Eco Office – Elite, the top tier of certification, valid till 2024. This recognises offices that have accomplished excellent environmental performance, and have done well in transmitting green messages amongst their employees. Eco friendliness is an area that IES Academy will continue to strive and meet its commitments.

FUTURE PLANS

IESA is aware of the impact of rising cost on training due to higher inflation in Singapore. Our focus is to keep course fees affordable for IES members and the engineering community. To this end, the Academy is making plans to gradually convert courses, where feasible, to meet the SkillsFuture Singapore (SSG) Framework. These courses will then qualify for higher SSG funding and lower the course fees for participants.

Supporting the sustainability aspirations enshrined in the IES Green Plan 2030 will also be IESA's priority. The Academy will develop sustainability-related courses that will equip engineers with knowledge in the field of sustainability.

Some focus areas being explored involve applications of clean energy, such as solar photovoltaic technology; carbon accounting; electric vehicles; digitalisation; green manufacturing; and other sustainability solutions for various engineering fields.

As there is a wide spectrum of domains to be looked into, there are on-going discussions with government agencies, institutions of higher learning and industry representatives for potential collaboration to jointly develop and organise sustainability courses in 2023 to meet the future needs of the engineering community.

PUBLICATIONS AND CORPORATE COMMUNICATIONS

Corporate Communications Committee

Throughout 2022, the Corporate Communications Committee continued to direct efforts in maintaining IES' position as an engineering thought leader and the voice of engineers in Singapore.

This was accomplished through responses to media queries, opinion pieces, and feature interviews on platforms ranging from print, to online, and broadcast media. IES' efforts in building relations in the media over the years have borne fruit through the fact that we are sought out for expert commentary whenever incidents of an engineering nature take place in Singapore.

Our initiatives and partnerships inked with local and overseas stakeholders, such as SkillsFuture Singapore, and the China Association for Science and Technology (CAST), were also covered in the media.

THE STRAITS TIMES

New deal makes it easier for accredited Chinese engineers to work on S'pore projects

SINGAPORE - To increase competency and plug the shortfall of engineers in sectors such as the built environment, manufacturing and robotics, a new agreement makes it easier for accredited Chinese engineers to work on Singapore projects.

Mr Tan Seng Chuan, Institution of Engineers, Singapore (IES) international outreach committee chairman, said: "Due to industry transformation and the wave of green economy, there is an increasing demand for engineers with new skill sets and competency."

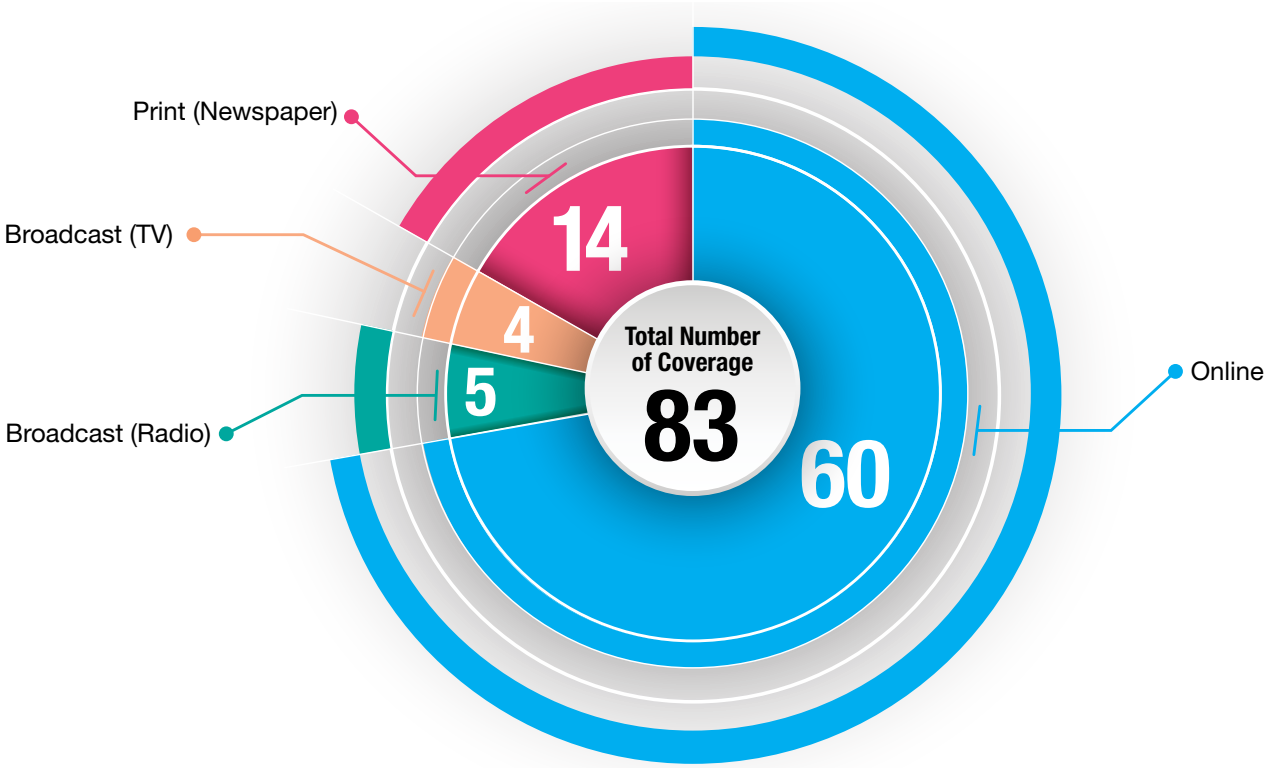
"I think we need more talented engineers by attracting Chinese engineers to come over to help widen our talent pool," he added.

IES and the China Association for Science and Technology (Cast) on Thursday (June 30) signed a mutual recognition agreement to reduce barriers to cross-border work by engineers from China and Singapore.

Our initiatives and partnerships with overseas counterparts help to benefit both Singapore and our partners, and were reported in the media.

The statistics below show the amount of media coverage in 2022:

Number of pieces of coverage



Period January – December 2022

The amount of media coverage fell due to the slower pace of major activities in 2022 as compared to 2021, which saw the launch of the Chartered Engineering Technician and Technologist pathway, Singapore Railway Standards, and World Engineers Summit, among others. The scheduling of the 56th Annual Dinner from 2022 to 2023 also had an impact on coverage. Despite this, the IES Corporate Communications Committee maintains its strong working partnership with our PR consultants, The Right Spin, and will continue putting its best efforts towards showcasing IES and its efforts in a positive light.

Furthermore, IES-organised events, such as the Engineering Innovation Challenge (a major part of the annual National Engineers Day), garnered media attention.

Despite headwinds in the amount and value of media coverage, IES managed to secure some publicity for its events, and regularly contributed quality expert commentary on engineering incidents in Singapore. Sources: Construction+ (above), CNA.

Media Training

To improve the image of our engineer-spokespersons in media appearances, the Committee conducted a Media Spokesperson Training Course in August 2022 through Singapore Media Academy. During the two full-day sessions at IES, our spokespersons were introduced to the art of creating effective and memorable messages, and picked up tips from media industry veterans on how to better present themselves while on camera.

As part of the course, practical camera sessions took place to expose participants to potential media scenarios, such as video-recorded speeches, a mock press conference, as well as a feature interview session with renowned CNA journalist and TV host Steven Chia, who pushed participants to their limits with deep questions to demonstrate the potential pitfalls to take note of in similar situations.

Supporting IES Strategic Initiatives

The IES Green Plan 2030 is an initiative by IES to provide national-level institutional support to advance Singapore's sustainable development imperative. The plan lays out concrete engineering-centric action plans from 2023 to 2030 to support the Singapore Green Plan 2030.

Work began on the Plan in earnest from August 2022 onwards, with IES President Dalson Chung meeting representatives from 30 government agencies, IHLs, and professional bodies to discuss areas of collaboration. Two dialogue sessions were also held to canvass for suggestions and feedback from members.

The Corporate Communications Committee supported and documented these meetings, and drafted the text of the Green Plan, which will be launched by Ms Grace Fu, Minister for Sustainability and the Environment, at the IES 56th Annual Dinner in January 2023.

Publications Committee

In 2022, the Publications Committee continued its efforts to provide quality content to members through the magazine, as well as maintain outreach efforts through various activities and social media.

Seminars

The further loosening of Covid-related safe distancing measures in 2022 enabled the Publications Committee to take the lead within IES to organise two in-person seminars, where participants got to interact with each other face to face again, after doing so in a limited capacity for the past two years.

The 'Seminar on Building Façade Inspection 2022 and Launch of TR 78-2:2021' took place on 28 April, while the 'Seminar on Causes and Prevention of Electrical Fires 2022' took place on 27 October.

These webinars reached about 170 participants in total, and allowed them to understand how the latest regulations and engineering technologies can help in their line of work, from façade inspection to electrical fire prevention. The Committee continues to seek new topics and work with industry partners on bringing in further seminars on a variety of subjects in 2023.

The two webinars organised by the Publications Committee in 2022 helped participants understand the new engineering regulations and technologies in the area of façade inspection, and provided knowledge on how to prevent electrical fires.

IES Special Publications

History Book

The IES Council has approved the formation of an Editorial Committee to look into producing a book on the history of IES. The IES Publications Committee is supporting this effort by providing insights on previous publications, and on operational matters. The History Book Editorial Committee has begun discussions and preliminary information sourcing work through our archives and other information sources. More updates will be provided in due course.

IES Logo Design Competition

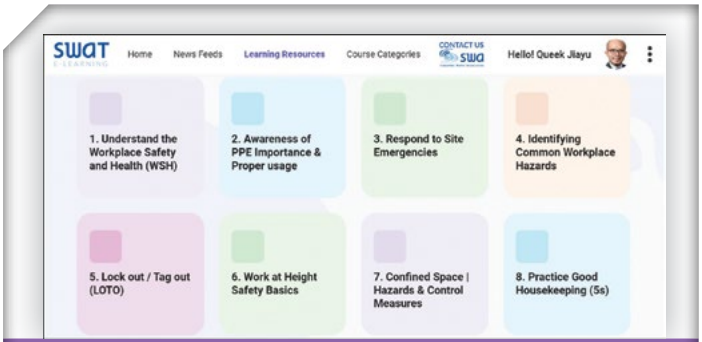
As a follow up to the Repositioning Project undertaken over FY2020 and FY2021, the IES Council assigned the Publications Committee to oversee efforts of launching a competition to submit design proposals for IES logo based on IES new vision and mission. Since the launch of the existing logo in 1971, engineering has evolved by leaps and bounds with the addition of many new disciplines.

The Committee studied how the logos of various corporate organisations changed over the years, and conducted surveys with IES members before presenting to the Council for their decision. As a majority of those surveyed were in favour of changing the logo, the project was supported, and the Committee is now in the process of engaging the IHLs and others to brief them about the competition.

The competition, judging and deliberation will take place in from Q1 to Q3 of 2023. The new logo is slated to be unveiled by the end of 2023.

Development of Learning Management System (LMS)

IES Academy signed an MOU with Singapore Water Association in April 2022 to collaborate on e-learning platform development. The Publications Committee provided support for the creation of a prototype LMS that would allow members to access courses and selected IES content online. More updates will be provided in due course when the LMS has been sufficiently developed by IES Academy.



Preview of the Learning Management System's content section.

Social Media

IES has some 3,500 likes on Facebook and more than 270 followers on Instagram, gaining about 600 and 70 more followers respectively over FY2022. On LinkedIn, where IES reaches out to a more professional demographic, the number of followers has grown at a steady state of about 900 over the past year to reach 3,700.

To increase reach, the Committee will continue to share updates on various IES activities – including those from the Young Engineers Committee and Student Chapters – and tag and share content from various IES partners and stakeholders (e.g. companies, government agencies, IHLs, and fellow engineering institutions).

This is especially so with the launch of the IES Green Plan 2030, which will elaborate IES work even closer with all stakeholders, current and new, to achieve the national sustainability agenda.

These social media platforms complement existing contact channels for members and the public to reach IES.

PROFESSIONAL CONFERENCE ORGANISER (PCO)

The events and conference-organising arm of IES, Professional Conference Organiser (PCO), aims to fulfil specific goals and achievements set by various stakeholders that have engaged IES for the following services to make their events successful:

- Event management (physical and virtual)
- Conference and social event venues sourcing
- Logistics and financial management
- Registration management
- Abstract management
- Sponsorship and exhibition management
- Accommodation and travel services
- Resource build-up (stage, physical and/or virtual booths, banners), third-party vendors and conference collateral

The following were the list of events organised by PCO in 2022:

National Engineers Day (NED)

Since the launch of NED in 2010, IES has partnered tertiary institutions, government agencies, engineering organisations and industry experts to roll out an enriching programme yearly. During the COVID-19 pandemic, NED took on a hybrid format to enable IES to continue enthusing the next generation about engineering, while ensuring the safety of participants.

In celebrating the 13th NED anniversary, IES organised an exciting discovery journey under the theme "Realising Opportunities for a more Equitable and Sustainable World" to spotlight the pivotal role of engineering in addressing the needs of under-served communities in the areas of food, security, education, health and more. The COVID-19 pandemic significantly impacted the lives of many students and NED 2022 was timely to encourage them to contribute to society and face future disruptions with resilience.

Guided tour – A*Star ISCE2 Research Institute

Workshop - Computational Thinking for a More Equitable World

Mr B K Oberoi (Kogi)'s talk suitable for secondary school students and above

Similar to previous years, a series of fun and enriching activities were conducted by various engineering organisations and government agencies, such as LTA, HDB, NEA, PUB, MPA, BCA, JTC Corporation, National Parks Board, Surbana Jurong, Huawei, SWE Singapore, and the Singapore University of Technology and Design.

Presentations were presented in a hybrid manner to demonstrate the ingenuity of engineers and the myriad possibilities of an engineering career. Some programmes, talks, and workshops were also made available to primary schools to allow their students to participate. Furthermore, overseas speakers such Ms Susanna Kass from Stanford University, Dr Alberto Ravagni from Swiss-based company InfraPrime, and Mr Mark Monroe from Microsoft shared their insight and expertise to the Singapore audience. Responses to these talks were overwhelming and well-received.

NED 2022 was held from 8 November to 19 November 2022. Mr Masagos Zulkifli, Minister for Social and Family Development, graced the NED-EIC Prize Presentation Ceremony at PSB Academy on 19 November 2022 as the Guest-of-Honour.

The EIC provided opportunities, innovations and creativities for students from secondary schools, junior colleges, ITE, polytechnics and universities to work with engineering professionals and business mentors to design and invent products to solve the problem posed to them in line with the EIC theme. Schools sent teams of students to take part in a series of high-intensity events and camps as a run-up to the Challenge. The participants were evaluated on their end product prototypes, the strength of their teamwork and strategy, and their determination.

It was hoped that through NED, the younger generation could think out of the box and develop solutions to address current and future challenges.

EIC participants presenting virtually to the panel of judges

A token of appreciation being presented to EIC judges

Judges listening intently to EIC participants' presentation

Other events in 2022

Apart from the above events, PCO also provided professional services and logistics management for the following events:

(a) Opening of the 8th Young Engineers Leadership Programme and **IES-YC Wong-NTU Project Management Scholarship Gifting Ceremony** on 27 June 2022.

(b) The Institution of Structural Engineers (IStructE)

- Chartered Membership Examination Preparatory Course in January and February 2022
- Half Day Workshop on Facade Design and Inspection held on 25 March 2022
- Sustainable and Low-carbon Construction Materials held on 13 May 2022
- IES-IStructE Site Visit to BCA Campus Instruction to Students held on 25 June 2022
- 1 Day Webinar on Earthquake Resistant Design of Reinforced Concrete Buildings based on Eurocode 8 held on 22 July 2022
- IStructE Structural Awards cum Members Night 2022 on 11 November 2022
- Sustainable Engineering Solutions for a Resilient Future held on 9 December 2022

(c) IES-SDO Technical Reference Launches and Webinars

- Launch of NEW Technical References in railway – Terminology for asset management of rail network assets (TR 86 : 2021), Specification of key performance indicators for asset management in the Singapore railway industrial (TR 95 : 2021) and Asset condition assessment approach in the Singapore railway industrial – Permanent Way (TR 96 : 2021) on 3 June 2022
- Launch of NEW Technical References in railway – Safety performance and benchmarking system in a rapid transit system (TR 89 : 2021), Safety management in a rapid transit system (TR 97 : 2021) on 4 July 2022
- Launch of NEW Technical Reference Code of Practice for Passive Displacement Cooling (PDC) System for Air-Conditioning Application (TR 102 : 2022) on 26 July 2022

TECHNICAL COMMITTEES

INFRASTRUCTURE CLUSTER

To keep up with this fast-paced engineering environment, the Technical Committee in IES has been organising Talks and/or Seminars to keep up with the latest technologies and learning opportunities for our Engineers.

Since 2010, the Technical Committees organised webinars, and physical seminars in 2022.

Led by Er. Teo Tiong Yong (Chairman) and Er. Joseph Goh (Deputy Chairman), the 4 Technical Committees have organised more than 30 webinars and physical seminars.

The four Technical Committees under the Infrastructure Cluster are:

Civil & Structural Engineering Technical Committee
Chairman: Er. David Ng
Deputy Chairman: Dr Aaron Sham

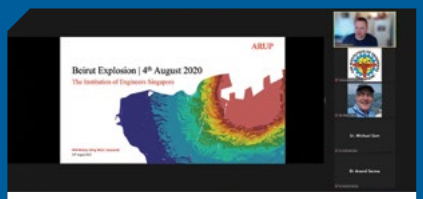
Mechanical & Electrical Engineering Technical Committee
Chairman: Er. Simon Lee
Deputy Chairman: the late Er. Au Kow Liong /
Er. Joseph Goh

Health & Safety Engineering Technical Committee
Chairman: Mr Anthony Tan
Deputy Chairman: Mr Jonathan Tan /
Mr Eston Poh

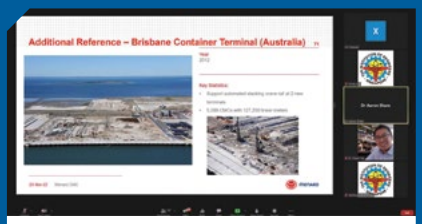
Asset Management Technical Committee
Chairman: Mr Leow Meng Fai
Deputy Chairman: Mr Cho Sungin

Some of the highlights taken during the webinars/seminars

Attended by 135 participants on 2009 Cologne Metro Collapse: Root Cause & Lesson Learnt held on 19 February 2022 via webinar

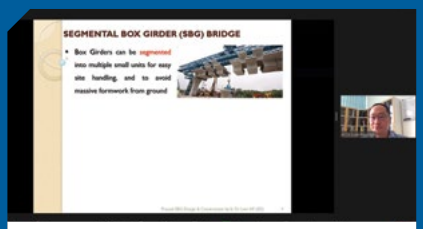


Attended by 135 participants on Implementation of Singapore's Infrastructure Protection Act (IPA) - A Designer's Perspective held on 30 August 2022 via webinar

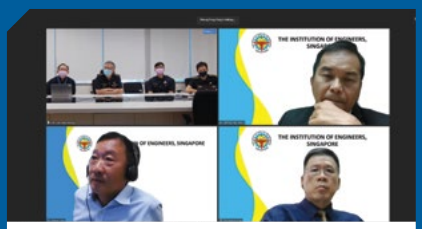


Attended by 150 participants on Ground Improvement with Controlled Modulus Column (CMC) held on 23 March 2022 via webinar

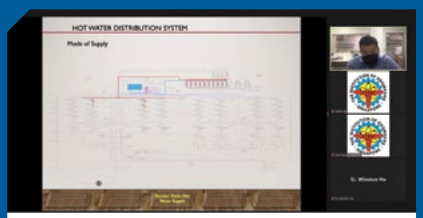
Attended by 210 participants Deep Excavation and Tunneling Works: Updates and Case Studies held on 18 October 2022 at One Farrer Hotel & Spa



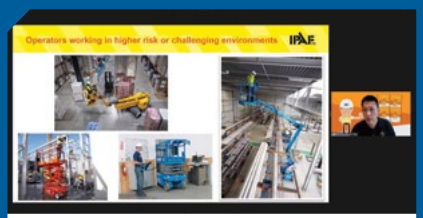
Attended by 180 participants on "Advances in Precast Concrete Structure" held on 4 August 2022 via webinar



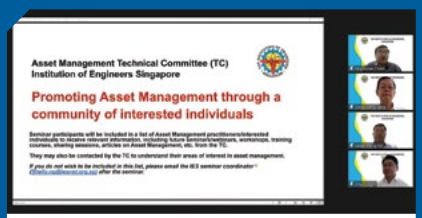
Attended by 200 participants on "Key Amendments to Fire Code 2018" held on 8 July 2022 via webinar



Attended by 150 participants on "Technical Seminar on Energy Saving Heat Pump Hot Water System" held on 15 March 2022 via webinar



Attended by 80 participants on "Technical Seminar on Mobile Elevating Work Platform (MEWP): How Technology-Enabled Are We" held on 24 March 2022 via webinar



Attended by 60 participants on "Technical Seminar on SS ISO 5500 Series of Asset Management Standards" held on 24 November 2022 via webinar

MANUFACTURING CLUSTER

To keep up with this fast pace engineering environment, the Technical Committee in IES has been organising Talks and/or Seminars to keep up with the latest technologies and learning opportunities for our Engineers.

The Technical Committees have been organising Talks and Seminars via Webinars since 2022.

Led by Mr Dennis Tan (Chairman) and Ms Wan Siew Ping (Deputy Chairman), the 5 Technical Committees have organised 6 webinars in 2022.

The five Technical Committees under the Manufacturing Cluster are:

Electronics & Computer Engineering Technical Committee
Chairman: Prof. Er Meng Joo
Deputy Chairman: Mr CK Vishwakarma

Chemical & Process Engineering Technical Committee
Chairman: Mr Soh Tiam Chwee
Deputy Chairman: Ms Ng Mee Lin

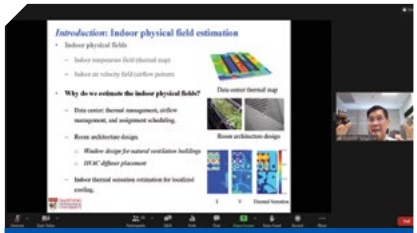
Biomedical Engineering Technical Committee
Chairman: Prof James Goh

Mechanical Engineering Technical Committee
Chairman: Er. Alfred Wong
Deputy Chairman: Mr Chong Wah Heng

Intelligent Manufacturing Technical Committee
Chairman: Ms Wan Siew Ping

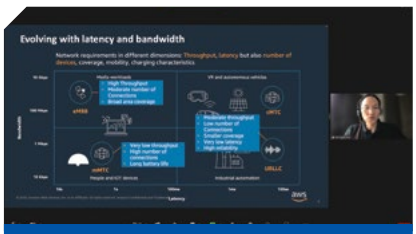
Some of the highlights taken during the webinars/seminars

Digitalization in Manufacturing Operations - The Why, What, How and Who held on 6 April 2022 attended by 25 participants

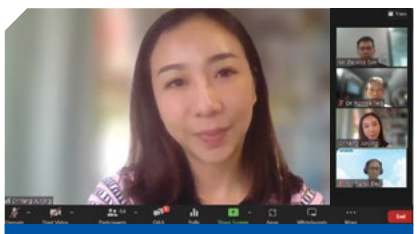


Sensor-CFD Fusion for Physical Fields Reconstruction held on 13 April 2022 attended by 13 participants

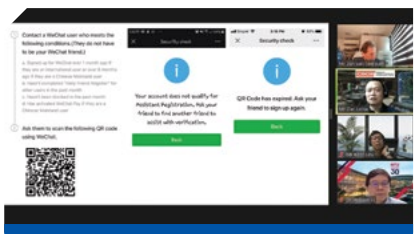
Functional Safety for Complex Machinery in Advanced Manufacturing held on 15 June 2022 attended by 15 participants



Augmenting Solution With 5G & AIoT Technology held on 29 June 2022 attended by 20 participants



Towards a Smarter, Greener and Healthier Built Environment held on 15 July 2022 attended by 51 participants



Digitisation and Cybersecurity held on 19 October 2022 attended by 20 participants

SUSTAINABILITY CLUSTER

To keep up with this fast-paced engineering environment, the Technical Committee in IES has been organising Talks and/or Seminars to keep up with the latest technologies and learning opportunities for our Engineers.

The Technical Committees have been organising Talks and Seminars via Webinars since 2022.

Led by Dr Victor Sim (Chairman), the 4 Technical Committees have organised 4 webinars.

The four Technical Committees under the Sustainability Cluster are:

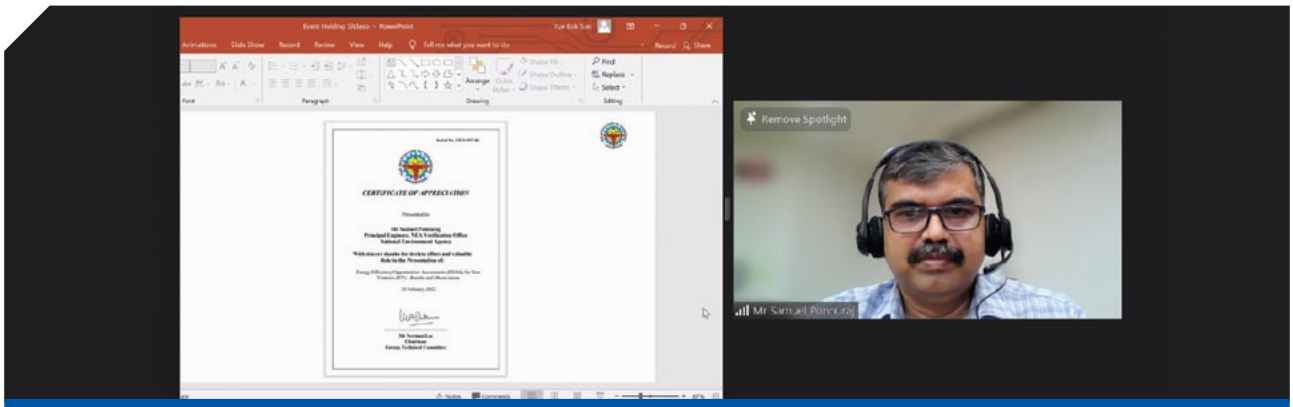
Climate Change Technical Committee
Chairman: Prof Seeram Ramakrishna

Environment & Water Engineering Technical Committee
Chairman: Ms Jasmine Foo
Deputy Chairman: Dr Ang Keng Been

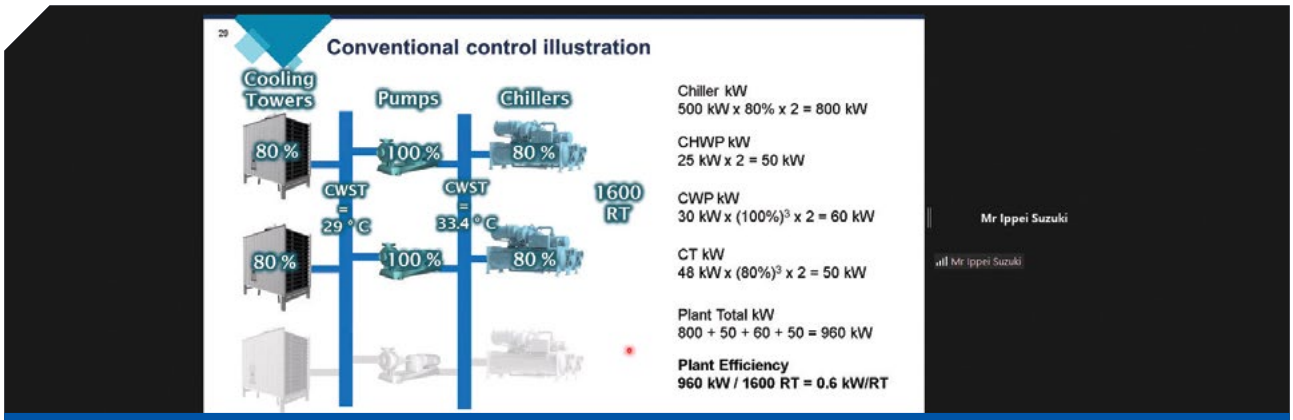
Energy Technical Committee
Chairman: Mr Norman Lee

Infocomm Technology Technical Committee
Chairman: Mr Chang Sau Sheong

Some of the highlights taken during the webinars/seminars



Conduct of Energy Efficiency Opportunities Assessment (EEOA) for New Ventures held on 18 February 2022 attended by 104 participants



Smart Building Energy-savings Seminar held on 4 August 2022 attended by 89 participants

TRANSPORTATION CLUSTER

To keep up with the fast-paced development in engineering, the Technical Committees in IES has been organising talks and seminars to keep up with the latest technologies and learning opportunities for our Engineers.

The Technical Committees have been organising talks and seminars via webinars since May 2020.

Led by Mr Lew Yii Der (Chairman) and Er. Sing Mong Kee (Deputy Chairman) with Dr Richard Kwok as advisor, the 4 Technical Committees have organised two webinars and one hybrid event.

The four Technical Committees under the Transportation Cluster are:

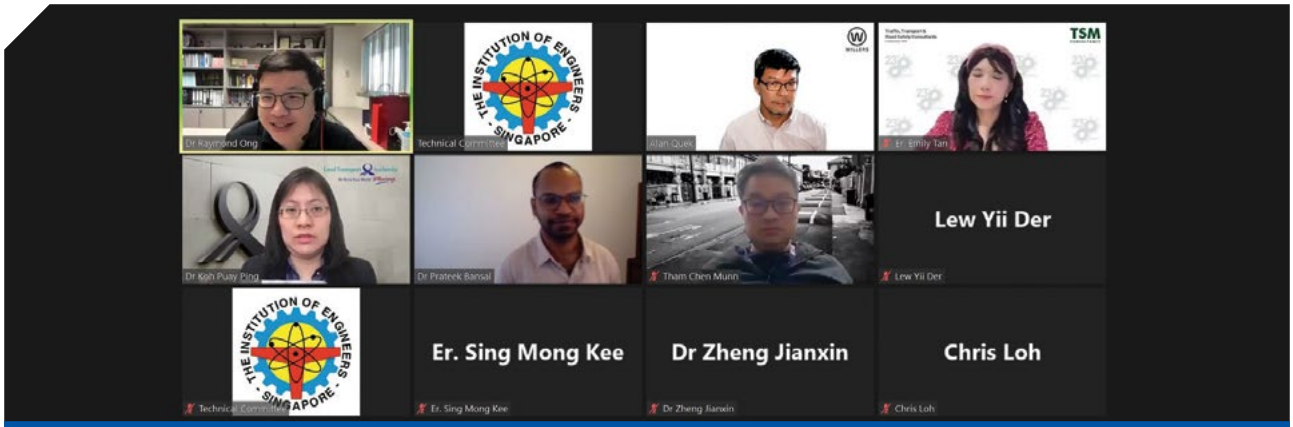
Railway & Transportation Engineering Technical Committee
Chairman: Mr Lew Yii Der
Deputy Chairman: Er. Sing Mong Kee

Aerospace & Aviation Engineering Technical Committee
Chairman: Mr Danny Lee
Deputy Chairman: Mr David So

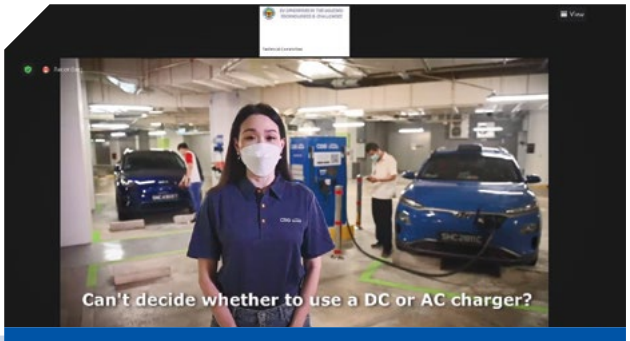
Systems Engineering Technical Committee
Chairman: Mr Tan Yang How
Deputy Chairman: Mr Low Khoon Huat

Port & Marine Engineering Technical Committee
Chairman: Er. Dr Ho Kwong Meng
Deputy Chairman: Prof Soh Chee Kiong

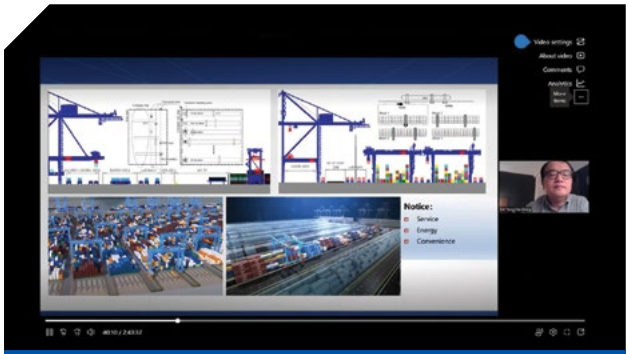
Some of the highlights taken during the webinars/seminars



Future of Traffic Management and Road Safety webinar held on 29 April 2022, attended by 81 participants



"EV Singapore in the Making: Technologies and Challenges" hybrid event held on 19 Aug ust 2022, attended by 37 participants (physical) and 35 participants (virtual)



Port and Marine Engineering Projects webinar held on 26 Oct 2022, attended by 28 participants

PROFESSIONAL REGISTRIES

Active, Beautiful, Clean Waters Professional (ABC WP) Registry

Monitoring Committee
Chairman: Er. Tan Seng Chuan (IES)
Co-Chairman: Mr Tan Nguan Sen (PUB)

Programme Committee
Chairman: Er. Sim Mui Leng (IES)
Co-Chairman: Mrs Ong Geok Suat (PUB)

Some of the highlights taken during the webinars/seminars

	Total Valid	Total Certified
2022 (as of 31 December 2022)	64	120
2021 (as of 31 December 2021)	51	108
2020 (as of 31 December 2020)	64	106

Comment:

As of 31 December 2022, the registry has a total of 120 certified ABC WPs, increasing by 12 over the previous year. This is a significant increase compared to that from 2020 to 2021, and can be attributed to the recovery of ABC Waters-related activities post-pandemic. The number of valid ABC WPs has also risen up to 64.

There was no ABC WP Networking Night held in 2022 as the projected dates clashed with National Engineers Day and preparation for the IES 56th Annual Dinner. However, there will be 2 major events planned for 2023 – the ABC WP Seminar and the Networking Night, slated to take place in Q4 2023.

Singapore Certified Energy Manager (SCEM) Registry

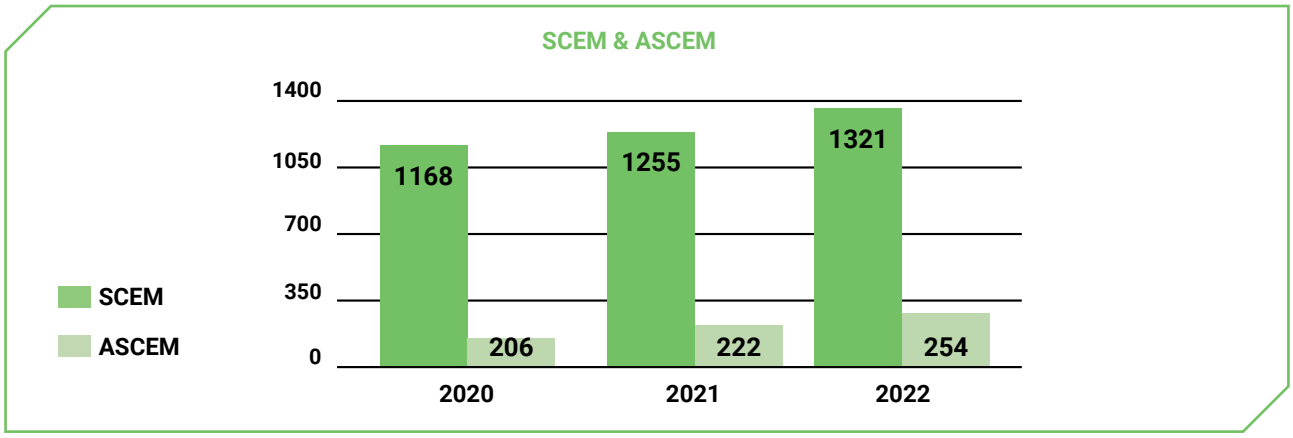
The Singapore Certified Energy Manager (SCEM) registry is managed by the EEO (Energy Efficiency Opportunities) Assessor – SCEM Monitoring Committee.

EEO Assessor – SCEM Monitoring Committee Structure

Chairman
Mr Norman Lee

Members
Dr Sharmilal Jayamaha
Er. Goh Chee Tiong
Mr Tan Guan Qun

Total Certified SCEMs

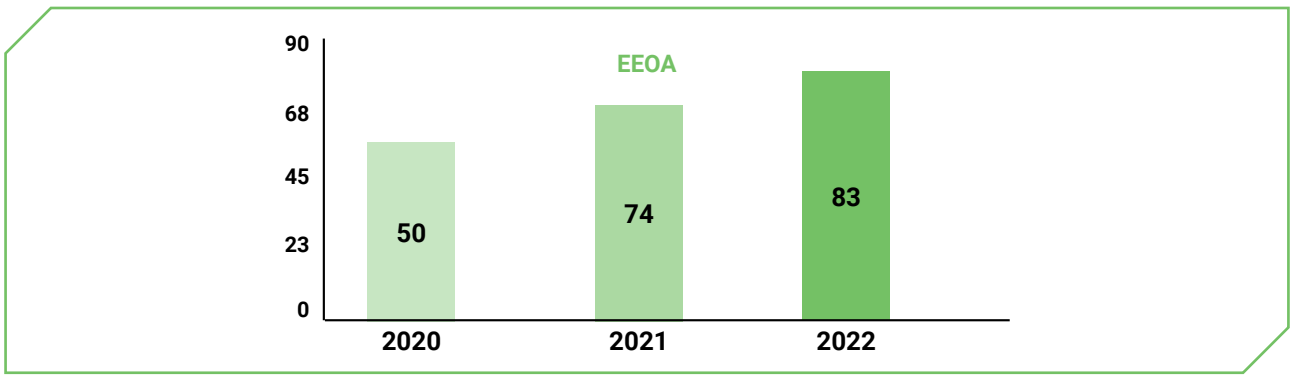


Comments:

As of 31 December 2022, the SCEM Registry has registered 1,321 SCEMs and 254 ASCEMs (Associate SCEM). There was a 5.2% increase in the number of certified SCEMs and 14.4% increase in the number of certified ASCEM respectively, compared to 2021.

In terms of programmes and events awarded with SCEM-PDU for 2022, there were 106.

Total Certified EEOA



As at 31 December 2022, the EEOA (EEO Assessor) Registry has registered 83 EEOAs. This is a 12 percent increase over the same period in FY 2021.

EEOA applicants are given the opportunity to be assessed during their interviews for Chartered Engineer certification under the Energy sector, which enhances the image and value of EEOA accreditation.

IES-ACES Civil & Structural Resident Engineers (RE) and Resident Technical Officers (RTO) Registry

The IES-ACES-BCA C&S RE/RTO Joint Accreditation Committee (JAC) is co-chaired by: Er. Chan Ewe Jin (IES), Er. Chuck Kho (ACES), Er. Kwa Chin Soon (BCA)

Total Registered	RE	RTO
2022 (as of 31 December 2022)	4386	7617
2021 (as of 31 December 2021)	4233	7485
2020 (as of 31 December 2020)	4003	7380

Total Valid	RE	RTO
2022 (as of 31 December 2022)	2128	4128
2021 (as of 31 December 2021)	2038	4259
2020 (as of 31 December 2020)	1669	4064

There is a steady growth in the total number of registered, as well as valid (practising) REs and RTOs. This is a clear indicator that construction industry activities are picking up, which in turn requires more RE/RTOs to supervise site works.

IES/ACES M&E Resident Engineers (RE) And Resident Technical Officers (RTO) Registry

M&E Joint Accreditation Committee Structure

Co-Chairs
Er. Joseph Goh (IES)
Er. Teo Yann (ACES)

Members
Er. S Yogeeswaran (IES)
Er. Ricky Chan (IES)
Er. Wan Fook Sing (ACES)
Er. Choong Choon Guan (ACES)
Er. Siew Seng Yeow (BCA)

Total Valid	RE	RTO
2022 (as of 31 December 2022)	30	388
2021 (as of 31 December 2021)	34	376
2020 (as of 31 December 2020)	30	366

Applied for M&E RE/RTO Registration
Total number of RE: 22
Total number of RTO: 74

Approved for M&E RE/RTO Registration
Total number of RE: 1
Total number of RTO: 22

M&E RE/RTO Interviews
Total number of interviews conducted: 20

In FY 2022, there was a slight increase in the number of valid RTO compared to the previous year. The total number of interviews conducted increased from 14 to 20. To improve passing rates of RE and RTOs, the Registry is working on a preparatory course for the submission and interview process. The relevant subject matter experts are being recruited and the lecture materials drawn up – the prep course is slated for roll out in FY 2023.

IES/ACES Earth Control Measures Officer (ECMO) Registry

ECMO Registration Sub Panel

Chairman: Mr Teo Ee Huat (IES)
Co-Chairman: Er. Lim Peng Hong (ACES)
Registrar: Er. Teo Yen Pai (IES)

	Total Certified	Total Valid
2022 (as of 31 December 2022)	1692	1513
2021 (as of 31 December 2021)	1576	1083
2020 (as of 31 December 2020)	1354	1181

Since 2020, the ECMO Registry has seen an increase of 39.7% in the number of registered ECMOs. The lower number of valid ECMO, in relation to the total number of certified ECMO, is due to the fact that the renewal cycle is two years instead of one, and the number varies accordingly.

On 7 October 2022, the ECM Night 2022 – Celebrating Clear Waterways event was held at HDB Hub's Convention Centre. The event report is detailed under the QECP section.

IES/ACES Facade Inspector (FI) Registry

Joint Accreditation Committee (JAC) Structure:

Co-Chairs
Er. Chan Ewe Jin (IES)
Er. Sivakumaran Murugesu (ACES)
Er. Lee Chee Weye (BCA)

Members
Dr Ang Choon Keat (IES)
Er. Koh Boon Liang (ACES)
Er. Tay Ah Ching (BCA)
Mr Thomas Ho (SIA)
Er. Choy Kong Yan (BCA)

Total Registry	Valid FI
2022 (as of 31 December 2022)	246
2021 (as of 31 December 2021)	156
2020 (as of 31 December 2020)	37

The Façade Inspector (FI) Registry was launched in 2020 with 37 inaugural registrants. Since then, the number of registered FIs has increased by more than six times, as the BCA Periodic Façade Inspection regime comes into force. The pre-requisite for FIs includes attending a mandatory Certificate in Façade Inspection course, run by IES Academy or BCA Academy.

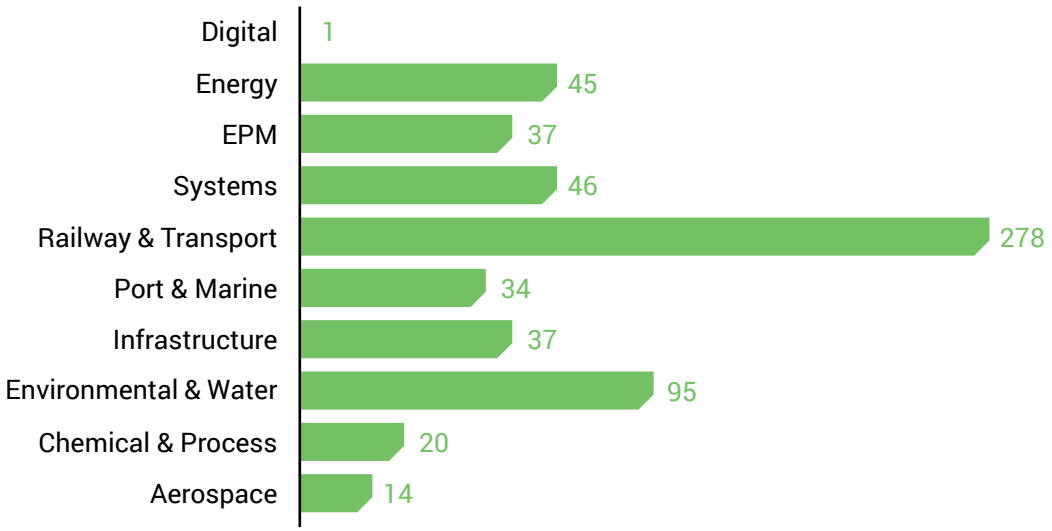
The Joint Accreditation Committee is currently working towards creating greater awareness of the Façade Inspection Industry; with a higher demand for FIs, it is expected that the registration rates will increase further in the years to come.

Chartered Engineer Board (CEB)

Chairman: Er. Tan Seng Chuan
Deputy Chairman: Mr Sim Wee Meng

Sector	Sector Chair
Railway & Transportation	Dr Richard Kwok
Infrastructure	Er. Chan Ewe Jin
Chemical & Process	Er. Edwin Khew
Energy	Mr Norman Lee
Aerospace	Mr Khoo Beng Keat
Port & Marine	Er. Chong Kee Sen
Environmental & Water	Mr Dalson Chung
Systems	Mr Tan Yang How
Engineering Project Management	Er. Vince Goh
Digital	Mr Chang Sau Sheong

Sector	2022	2021	2020	2019
Aerospace	14	12	11	10
Chemical & Process	20	19	19	17
Environmental & Water	95	86	67	49
Infrastructure	37	32	15	9
Port & Marine	34	34	32	31
Railway & Transport	278	271	241	214
Systems	46	45	42	38
EPM	37	32	17	12
Energy	45	38	26	10
Digital	1	1	-	-
Total	**607**	**570**	**470**	**390**



In September 2022, the IES Council approved the merger of the Chartered Engineer Board and the Chartered Engineering Technologist and Technician Accreditation Board. The new chartership scheme will offer better opportunities for career development and progression as it supports certification from both the academic and non-academic pathways, in line with the SkillsFuture Framework and fostering a culture of lifelong learning.

Moving into 2023, new Chartered Engineering board members will be identified and a separate Advisory Panel will be set up. IES will also be looking at revamping the application process for new applicants and renewals, the fee structure, as well as the introduction of Senior Chartered Engineers under a new chartership scheme.

Chartered Engineering Technologist and Technician Accreditation Board (CETTAB)

Chairman: Er. Tan Seng Chuan
Deputy Chairman: Mr Danny Lee & Mr Yee Boon Cheow

Sector	AQAC Chair	Year of Launch
Land Transport	Dr. Zhou Yi	2021
Built Environment	Er. Teo Tiong Yong	2021
Renewable Energy (Solar)	Er. Jeff Ong	2021
Water & Environment	Ms Jasmine Foo	2021
Precision Engineering	Ms Wan Siew Ping	TBC
Aerospace	Mr Mervyn Sirisena	TBC

Accredited CETTAB Assessment Centre

Assessment Centre	Sector	Date
Singapore Bus Academy (SGBA)	Land Transport (Automotive)	21 January 2021 – 20 January 2026
Singapore Rail Academy (SGRA)	Land Transport (Rail)	15 December 2021 – 14 December 2026

Table Below: Valid Number of CETn and CETg as of 31 Dec 2022

Sector	Land Transport (Rail)	Land Transport (Automotive)	Environment & Water	Built Environment	Manufacturing	Renewable Energy (Solar)	Aerospace	Total
Certified (CETn)	68	56	0	0	0	0	0	124
Certified (CETg)	63	24	1	4	0	0	0	92

IES/ACES QUALIFIED ELECTRICAL CONTRACTORS (QEC) REGISTRY

QEC Monitoring Committee Structure

Chairman
Er. Simon Lee (IES)

Co-Chairman
Er. Soh Kai Yea (ACES)

Members
Er. Timmy Mok (IES)
Er. Lum Chong Chuen (ACES)
Er. Melvin Lee (IES)
Er. Thomas Cheang Mun Keong (ACES)
Mr Ivan Liew (IES)
Mr Kenett Low (ACES)
Dr Jiang Fan
Mr Eddie Lee

Total Valid	No. of Companies
2022 (as of 31 December 2022)	73
2021 (as of 31 December 2021)	83
2020 (as of 31 December 2020)	75

Comments:

Due to the pandemic, the annual QEC Talk and Networking Night and PV course was halted. The QEC Registry plans to resume the bi-annual QEC Talk and Networking Night and the PV course in the third quarter of 2023.

ACES/IES Qualified Erosion Control Professional Registry

QECP Registration Panel

Chairman: Er. Teo Ee Huat (IES)
Co-Chairman: Er. Leong Sow Hon (ACES)
Registrar: Er. Teo Yen Pai (IES)

Members:
Er. Dr Chew Soon Hoe (IES)
Er. Chan Ewe Jin (IES)
Er. Sim Mui Leng (ACES)
Ms Sherlyn Lee (PUB)
Mr Rajandran Veerappan (PUB)
Mr Lee Cai Jie (PUB)
Mr Koh Jit Ming (HDB)

	Total Certified	Total Valid
2022 (As of 31 December 2022)	360	197
2021 (as of 31 December 2021)	342	195
2020 (as of 31 December 2020)	325	206

18 new QECPs were registered in 2022. From renewal perspective, about 70% has renewed as at 31 December 2022. This is the usual trend as some QECPs do not renew until they need to do ECM Plan Submission.

QECP review has been reinstated in 2022 as PUB has introduced a new ECM Design Scoring Framework, effective 1 July 2022. With this new framework, ECM submissions were selected for review and QECPs whose submission did not meet requirements were accorded with demerit points.

ECM Night 2022 – Celebrating Clear Waterway

Organised by IES and supported by PUB, ECM Night 2022 was held physically at HDB Auditorium on 7 October 2022 and was attended by more than 260 attendees, comprising mainly ECMOs and QECPs. The guest-of-honour for the event was Mr Yeo Keng Soon, Director, Catchment & Waterways, PUB.

A total of 13 Exemplary ECMO Awards were presented to top ECMOs to recognise their outstanding performance working with Qualified Erosion Control Professionals (QECP) and leading the implementation, operation and maintenance of Earth Control Measures at construction sites, to prevent silty discharge into the waterways.

Kaylim Construction & Trading Pte Ltd and Flexi sponsored this event.

Our guest of honour, Mr Yeo Keng Soon with his speech.

Our Guest Speaker – Dr Chew Soon Hoe

Our Award Winners with ECM Registry Committee Registrar, Er. Teo Yen Pai

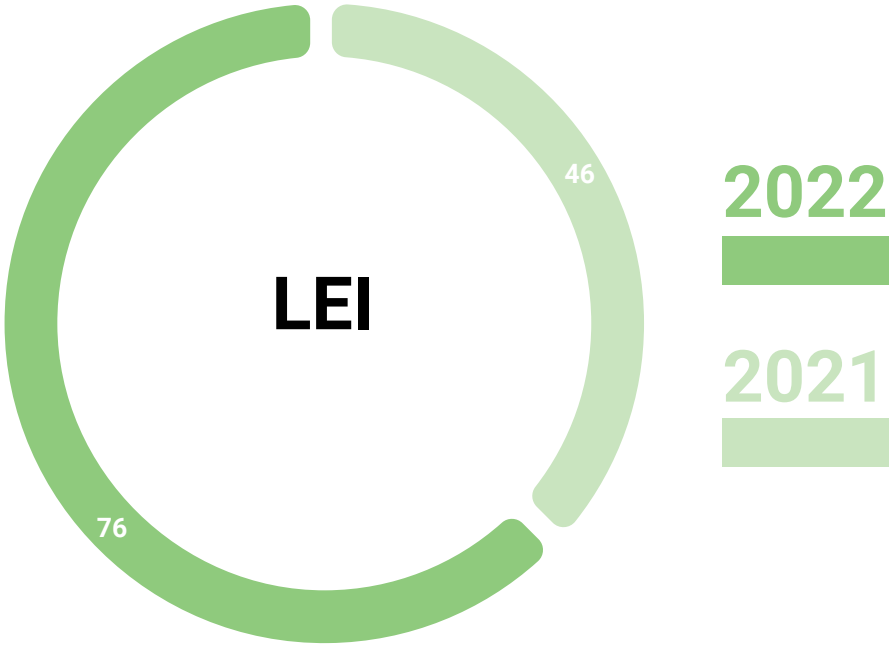
IES/ACES Lift & Escalator Inspector Registry

Joint Accreditation Committee (JAC) Structure

Co-Chairs
Er. S Yogeeswaran (IES)
Er. Teo Yann (ACES)
Er. Hashim Mansoor (BCA)

Members
Er. Lim Kwee Guan (IES)
Er. Chong Choon Guan (ACES)
Mr Nick Yeo (BCA)

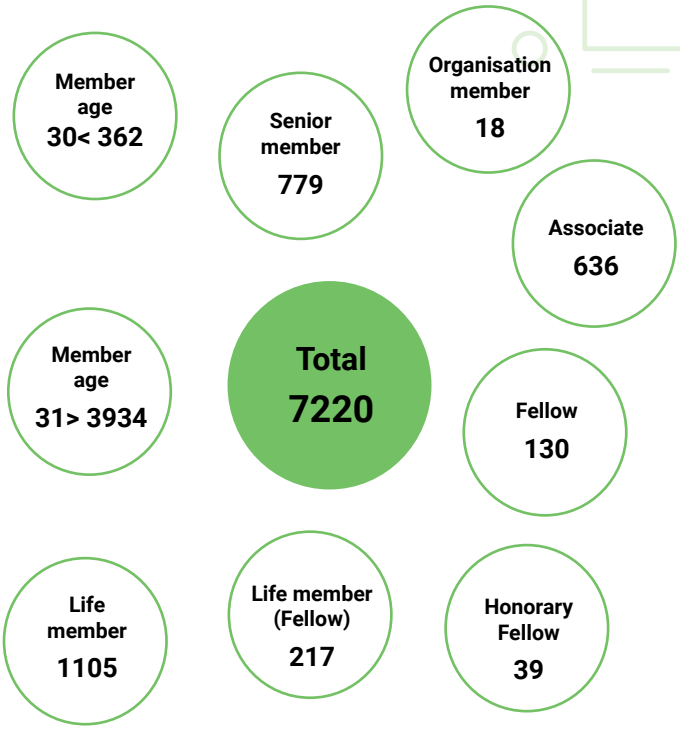
Total Registry	LEI
2022 (as of 31 December 2022)	76
2021 (as of 31 December 2021)	46



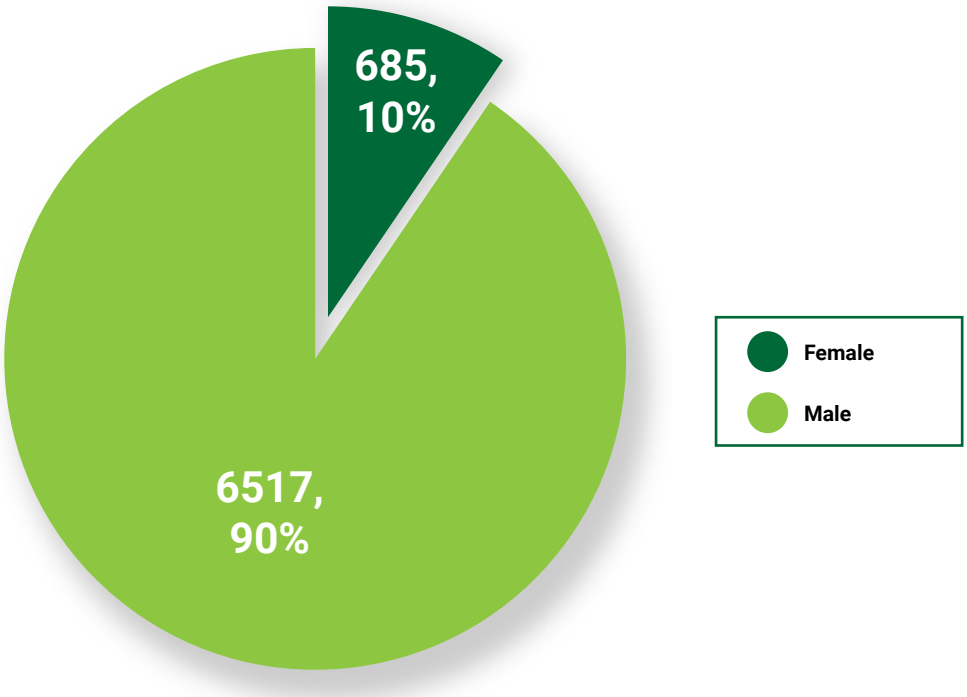
The Lift and Escalator Inspector (LEI) Registry launched in 2020 with 7 accredited LEIs. Since then, this number has grown by more than 10 times. The pre-requisite for successful LEI registration includes an Interview Examination after the mandatory LEI course held in IES Academy or BCA Academy. Due to these stringent requirements, the passing rate remains low and only the truly competent applicants qualify to become LEIs.

Total No. of Members (2022): 7,220

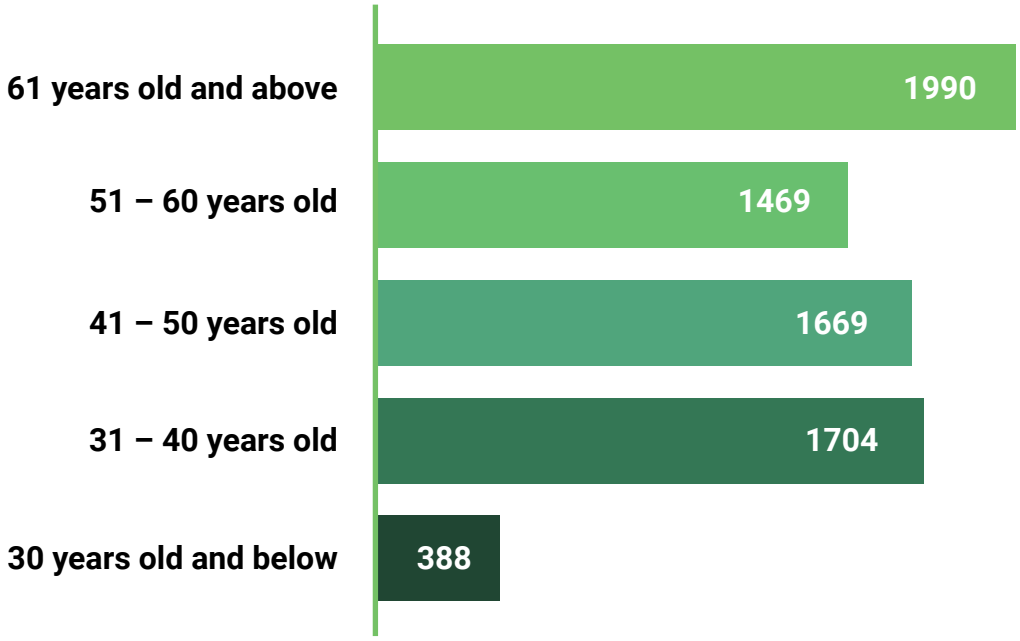
Membership Type	Quantity
Associate	636
Fellow	130
Honorary Fellow	39
Life Member	1105
Life Member (Fellow)	217
Member above 31	3934
Member below 30	362
Organisation Member	18
Senior Member	779
Grand Total	**7220**



Demographics: Gender



Membership by age group



Membership trend over the past three years

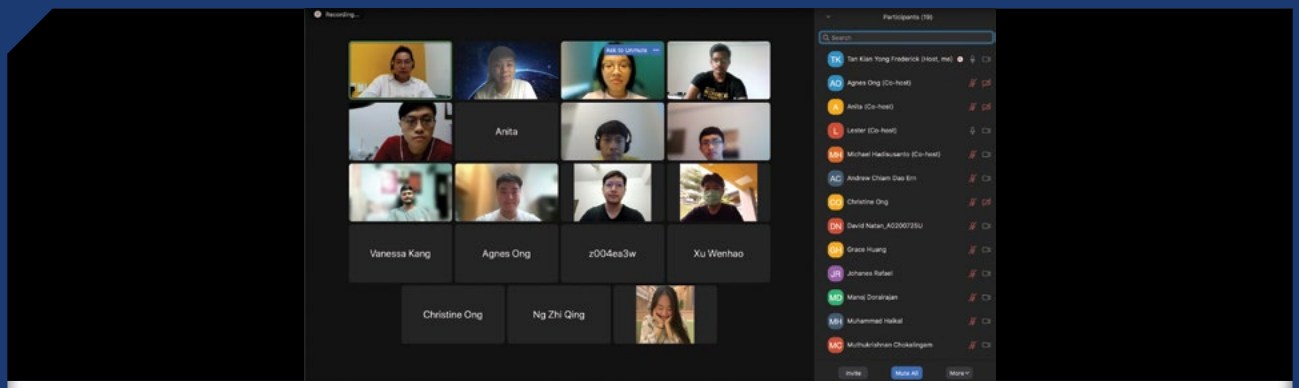
STUDENT CHAPTER

IES-NUS Student Chapter

Event: Siemens Mobility Talk
Date: 17 January 2022

Siemens Mobility hosted a talk facilitated by members of IES to showcase the technology that the company is currently working on and to expose students to potential career paths in a thriving industry.

In the session, Mr Lester Lim, a mechanical engineer from Siemens Mobility, an IES chartered engineer and NUS alumni, started off by introducing his journey as an engineer and talking about the importance of engineering in today's society. After that, he gave an overview about Siemens Mobility and their diverse portfolio in Singapore ranging from train systems to road technologies.



Group photo of the presenters and participants at the end of the talk.

Event: Fireside Chat: Becoming a Graduate Engineering Student
Date: 19 January 2022

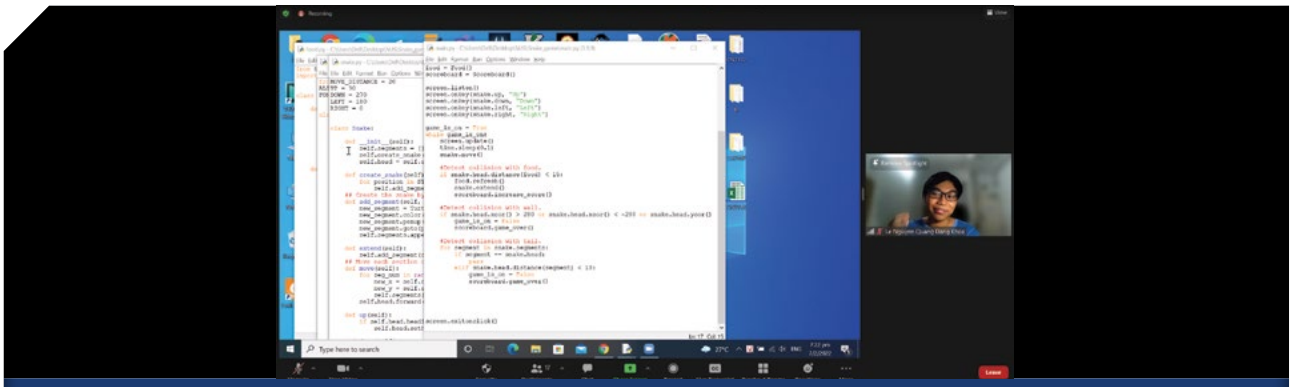
This event was organised to provide NUS undergraduate students with the necessary exposure and information required to continue their studies at a postgraduate level. It was accomplished through the sharing of experiences and advice by postgraduate students Pan Jieming, Vivekh Prabakaran and Ezra Alvianto. The participants were highly motivated from the engaging sharing session by their seniors.

Q&A session for participants to clarify any doubts with the speakers

Event: Python Game Workshop
Date: 7 February 2022

This workshop aims to engage students' interest in learning Python through a short two-hour game programming workshop.

Participants were expected to have some basic knowledge of programming as coding the game required Object Oriented Programming, as well as the turtle module. The trainer explained each concept clearly and in detail, and constantly checked in with participants on their progress.



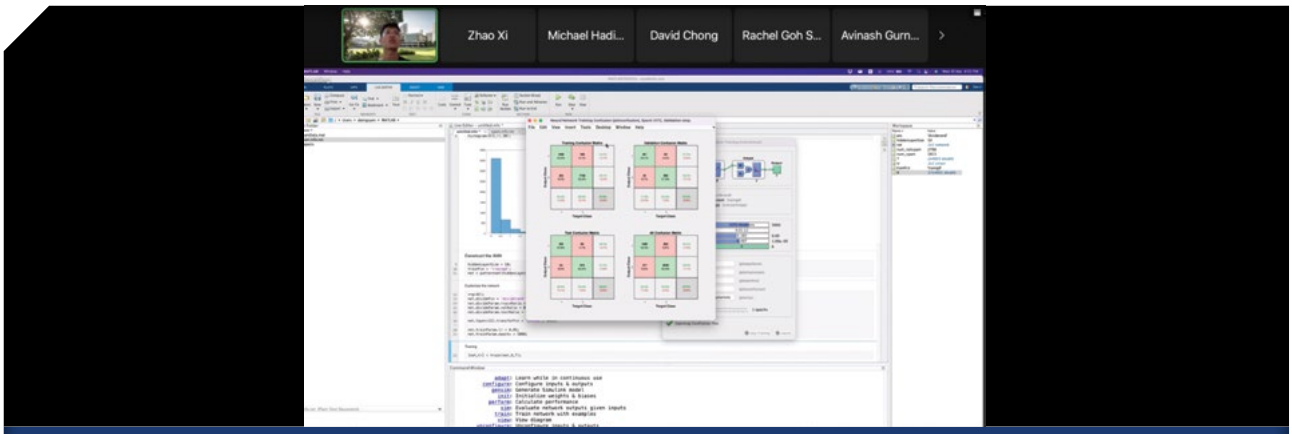
Mr Khoa introducing the overall components of the snake game.

Event: Neural Network Workshop
Date: 30 March 2022

This workshop aimed to provide an introductory course on neural network programming in MATLAB for students.

The IES-NUS Student Chapter hosted a Neural Network (Matlab) Workshop on 30 March 2022. The workshop was held online due to COVID-19. Mr Nguyen Thanh Dat, a PhD student in the NUS Graduate School for Integrative Science and Engineering, was the workshop's speaker.

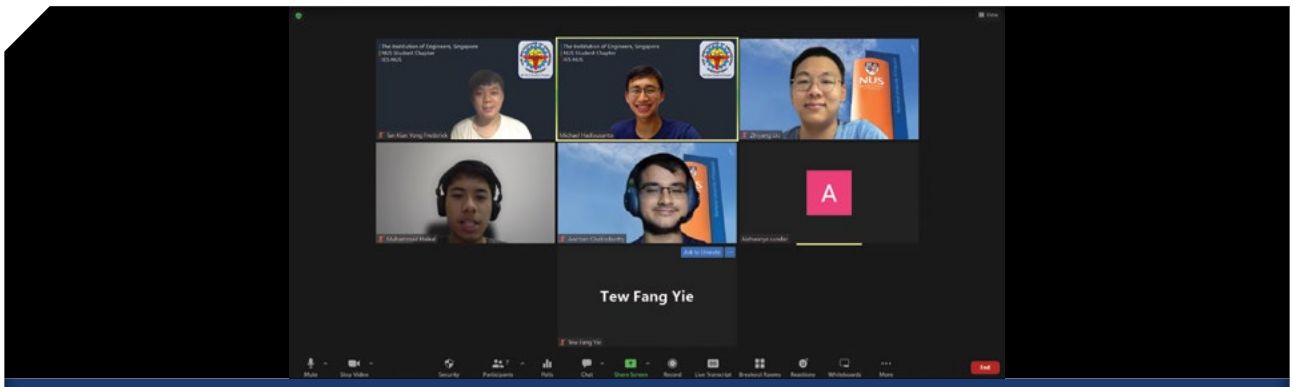
Many of the participants were also interested in deeper and more complicated algorithms of neural networks, and were able to learn the basics of neural networks during the workshop. At the end of the workshop, Mr Dat encouraged participants to undertake independent learning about this area.



Mr Dat demonstrates a neural network through a spam data example.

Event: Annual General Meeting
Date: 26 May 2022

IES-NUS held its Annual General Meeting to conclude the ending term for the current committee members and for everyone to get together for the last time. During this last official meeting, committee members shared their experiences and were presented with E-certificates as a token of appreciation. The 35th EXCO members were also elected to run the club for the next academic year. Due to the fact that many of the committee members were travelling overseas at the end of the semester, the usual AGM was conducted online.



Group photo of AGM

Event: NUS Student Life Fair
Date: 26 May 2022

The Student Life Fair is an annual event hosted by the NUS Student Union to provide opportunities for newly-matriculated and existing NUS students to explore the many vibrant extra-curricular activities in the university. This was the Student Chapter's first physical event after two years of virtual fairs due to COVID-19 restrictions.

IES-NUS participated in the fair event to increase its membership and to recruit new committee members. Approximately 60 flyers and 30 IES mugs were given out, and 21 new members signed up by the end of the event.

Giving out IES mugs on 12/08/22

Event: NUS KRAFD Fair
Date: 13 March 2022

Kent Ridge Alumni Family Day (KRAFD) is an annual event for alumni, students, staff and their family. It is also the university's largest homecoming, with almost 5,000 participants, both online and in person. As such, it provides opportunities for student groups to outreach to the extended NUS community and tap into NUS alumni connections. IES-NUS hosted a Kahoot quiz during this event to reach out to participants and recruit new committee members.

Hosting Kahoot for booth visitors

IES-SIT Student Chapter

Event: Virtual Engagement Day
Date: 18 February 2022

The IES-SIT Virtual Engagement Day was held virtually on Zoom to introduce the student chapter's leadership team to the student community and to promote inclusivity within the club. Participants engaged in ice breaking activities such as "Name-relay" and "Gartic Phone" to step out of their comfort zone and learn more about each other. The hour-long event concluded with a Kahoot quiz at the end. The event provided a platform for members to network and interact with like-minded peers, and showcased the motivations and the upcoming activities of IES-SIT for 2022.

Kahoot Quiz at the end of the Event


Participants engaged in game event

DigIN Series

DigIN Series is a 2-part series of informative industry sharing sessions that discuss the transformation of the engineering sector brought about by the 4th Industrial Revolution. This series was initiated to introduce Industry 4.0 concepts and expose SIT engineering students to the perspectives of industry practitioners.

DigIN Series 1: Metamorphosis - Transitioning and Adapting
Date: 17 June 2022

The first session, titled Metamorphosis - Transitioning and Adapting, introduced participants to Industry 4.0 in the engineering sector. Industry professionals who are at different points of their careers were invited to speak: Mr Tony Suah and Ms Tan An Qi from Siemens, as well as Mr Han Myo Thaw from Fong's Engineering and Manufacturing.

They provided technical insights into the digital evolution of manufacturing and production processes over the years. Following the technical sharing, a panel discussion was held for students to discuss their doubts and concerns with the panelists.

The event was very well-received and provided participants with technical insights and knowledge to stay current and manage their expectations prior to embarking on their careers.


Group Photo

Mr Han Myo Thaw's (Fong's Engineering and Manufacturing) Sharing

Mr Tony Suah's (Siemens) Sharing

Panel Discussion

IES-SIT 2022, SIT Staff & Industry Professionals

DigIN Series 1: Eco-Activism: Sustainability in Manufacturing
Date: 25 October 2022

The second installation of the DigIN Series, this time revolving around Eco-Activism, focused on raising awareness of sustainable solutions in light of Earth's declining climate health. The distinguished guests, Mr Jim Chessell, Mr Carlos Venegas, Mr Mark Bartlett, Mr Reuben Reeves and Ms Nuala McGlynn from the Lighthouse Club, shared their professional knowledge and the importance of sustainability elements in their jobs with SIT engineering students from diverse STEM backgrounds.

This event stood out from previously-organised events as it was conducted in a conversational fireside chat manner with active learning elements, compared to the usual passive industry talks. This made the session more interactive and enjoyable.

Following the fireside chats, participants were split into focus group discussions with the invited speakers to deep dive into sustainability topics and network with them. On top of that, students got their burning questions about career progression answered.

The event was well-received and raised the awareness of sustainable design initiatives among the students.

Lighthouse Club Sharing

Focus Group Discussions

Group Photo

IES-SIT 2022 & Industry Professionals

IES-RP Student Chapter

Event: IES-RP CCA Fiesta
Date: 26 April 2022

On 26 April 2022, the IES-RP Student Chapter and SEG Club collaborated to set up a physical booth for the school's first physical CCA Fiesta. For the past 2 years, the CCA Fiesta was held online due to COVID-19 restrictions.

Members of the Executive Committee were deployed on the ground to encourage more Year 1 students to join the Club, and their efforts netted approximately 20 new sign-ups.

The Exco also created a poster and printed out flyers to distribute to new students for greater outreach.

Physical booth

Flyer/Poster

Event: IES-RP Welcome Tea
Date: 24 May 2022

On 24 May 2022, the IES-RP Student Chapter organised the annual Welcome Tea to formally induct new members, introduce the new committee, and share information on upcoming events for the year to encourage participation and excitement amongst the community.

Benefits of joining IES

Introduction of IES-RP Advisors and Exco Committee

Event: IES-RP Project Carekids
Date: 5 and 6 September 2022

This project was a collaboration with CCSS and IES-RP. The main agenda of this project was to give student volunteers a chance to engage in community service through interaction with underprivileged students.

Students acing the electronic kits

The event took place over two days at two different primary schools, and involved making use of electronic kits to build circuits so that beneficiaries could learn more about circuits and electricity. Volunteers went through a training session two days prior, and received some of the circuit boards to brainstorm for ideas on how to interest the beneficiaries on the topic.

On the first day, IES-RP visited Jie Min Primary School to conduct the workshop, and did the same at Eunos Primary School the next day. On both days, the IES-RP Student Chapter Exco members took the lead in guiding the primary school students on what they could do with the electronic kits and circuit boards. The students were then given time and space to customise the kit as they liked. They were rewarded with sweets whenever they could answer the pop quizzes posed by the volunteers.

Photo taking session to wrap up the event

IES-SP Student Chapter

Event: IES-YEC Webinar 7, Pathway to Chartered Engineer on Transport System
Date: 17 January 2022

IES-SP Student Chapter Committee carried out publicity efforts promoting the IES-YEC Webinar 7 held by Dr Bicky Bhangu, President - South East Asia, Pacific and South Korea at Rolls-Royce, who is based in Singapore. A total of 93 participants attended the talk about the Future of Engineering – Industrial Revolution 4.0, and shared their thoughts and reflections after the webinar. The participants expressed fresh and insightful views and shared that the newfound knowledge allows them to be able to relate to what they learnt in school with the potential industries they would be joining.

Screenshot of session

> "Through this session, I have learned about how the Industrial Revolution 4.0 will impact our future, as well as the plans that Rolls-Royce is planning to do in the future, such as achieving net-zero by in 2050. I also realised how important data analytics is in order to make progress in developing new technologies."

Student reflection sharing their insights

Event: IES-YEC Webinar 8, Realising the Full Potential of Your Engineering Knowledge & Creating Supply Chains for the Future
Date: 28 March 2022

IES-SP Student Chapter Committee carried out publicity efforts for the IES-YEC Webinar 8. Held on 28 March, Mr B.K. Oberoi and Mr Kogi gave a talk not only on supply chains but also an inspirational segment on engineering. A total of 29 students were in attendance and they shared the new insights they gained. Many were also motivated and inspired by the compelling sharing.

> "I have learned that you definitely have to love what you are doing. John Smith had this thinking of the 3 As – Attitude, Application and Academics. Although he agrees Academics is what everyone wants and needs, however, Attitude is more important for him as he would love to see the drive and passion from his workers. I also learned from Mr Kogi, that there are 2 things that he says to look out for and never underestimate, which are bad people in the industry, and people who think they know what they are doing."

Student reflection sharing their insights

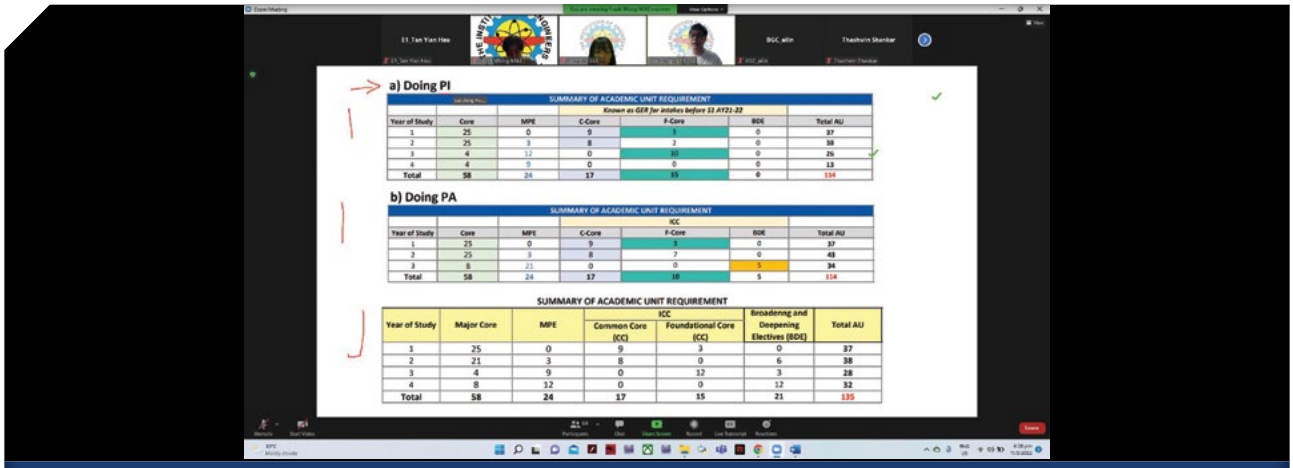
Event: IES-YEC Webinar 9, 'Entrepreneurship in Engineering' Zoom Webinar
Date: 25 April 2022, 7.00pm to 8.30pm

On 25 April 2022, 31 of Singapore Polytechnic's engineering students attended the Zoom Webinar organised by IES. This was the 9th webinar in the Young Engineers Career Series in collaboration with IES-INCA. The webinar featured Assoc Prof Foo Kim Peng, Director of IES-INCA and Chairman of the IES Technopreneurship Development Committee. The students who attended were able to learn more about a systematic, unbiased way to evaluate market needs and explore the key factors of success through both the presentation and the Q&A session.

IES Webinar Pamphlet

Event: IES NTU x SP Student Sharing Session
Date: 11 May 2022

IES-SP Student Chapter Committee invited IES-NTU Student Chapter to SP to give a sharing on the different types of engineering degree programmes offered by NTU. Student speakers from the six different schools of the College of Engineering shared their experiences and various pathways at NTU. The online sharing closed with a Q&A session. Aimed at promoting local engineering degrees to our students, the session allowed them to understand the engineering education scene better. The IES-SP Publicity Committee promoted this event through Instagram, attracting a total of 106 participants.



Sharing of pathways in NTU

Event: IES-YEC Webinar 10, Women in Engineering - Leaders and the Future
Date: 17 October 2022

The IES-SP Student Chapter Committee publicised the IES-YEC Webinar 10 to inform and encourage students to attend the webinar, which explores how women engineers play an integral role in IES and how IES supports all engineers in their sustainability journey. A total of 44 students attended the webinar and shared their thoughts and reflections at the end. The participants stated that they gained more insights into how females are getting more interested in engineering, bringing about a fair and inclusive environment in engineering. They also understood the efforts undertaken by IES to encourage more sustainability efforts in Singapore.

> "I realise that there are many and plenty of opportunities in Singapore for me, for women. We all have the power to achieve our goals no matter how big or small it is. I honestly feel inspired after this talk and will study hard to improve my grades. Thank you!"

> "I am grateful that Singapore is doing their best to fight climate change and improve sustainability via different ways like the Singapore Green Plan 2030. For example, ways to combat rising sea levels to reduce carbon footprint in Singapore."

Student reflections

Event: Promotion of National Engineers Day 2022 Activities
Date: 7 November to 19 November 2022

IES-SP Student Chapter Committee publicised the NED talks to inform and encourage students to attend NED 2022, which featured the theme "Realising Opportunities for a more Equitable and Sustainable World". The event includes activities such as talks, one of which was by Mr Mark Monroe, Principal Infrastructure Engineer from Microsoft, workshop on machine learning, and guided tours to places such as A*Star and Meteorological Station Singapore. Some students of Singapore Polytechnic went on the guided tours and this was what one of the participants had to say: "The tours at A*Star Research Centre and Meteorological Station Singapore were extremely informative and an eye-opener for me. What I saw was reflective of how engineering helped advance technology to what it is today and that this technology has helped improve many aspects of our lives. I hope one day too I will be an engineer that can create solutions and innovations that positively impact society."

Visit to A*STAR

Visit to A*STAR

Visit to A*STAR

Visit to Meteorological Station Singapore

A total of 277 form responses were collected, whereby participants expressed their newfound views on sustainability and how they were inspired to act against climate change. Students were also impressed with the efforts and initiatives in the local engineering scene.

> "Climate change is a serious matter as it recently affected Asia countries that are close to Singapore. It also threatens the environmental pollution of land, air and sea."

> "The talks have inspired me to look more closely to the UN Sustainable Development Goals. As an engineering student I would like to help build a world that would help benefit the future environment for future generations."

Student reflections

Event: Nanyang Technological University Lab Visit
Date: 27 December 2022

IES-SP Student Chapter Committee reached out to IES-NTU to collaborate on a lab visit. This lab visit consisted of visits to the Singapore Centre for 3D Printing (SC3DP) Lab, the Robotics Research Lab and the Innovation Lab. The visit aimed to showcase how local universities are empowering and supporting students in the field of engineering. Our students also had the chance to listen to a sharing by Assoc Prof Holden Li about school curriculum and experience.

Pictures from the visit

Publicity Poster

A promotional poster was broadcasted via email and put up on our Instagram account. Another form was given to students to pen down their key takeaways from the visit.

All in all, we had 60 attendees, many of whom shared their key takeaways. The students shared about the lasting impression the SC3DP lab had on them and the F1 car project that some of the NTU students were working on.

> "The SC3DP lab was very interesting. I was fascinated that they were able to 3D print a room. The innovation lab was also very fascinating. All the cars in the lab were built almost from scratch.
>
> I thought that the SC3D lab was interesting and left a deep impression, as the objects that were printed out were surprisingly robust in build to me (E.g.: The toilet's outer structure's sturdiness). With my newly-acquired insights, i would be more inquisitive to explore my options when working on new projects."

Student reflections

IES-PSB Academy Student Chapter

Event: Online Campus Club Fair
Date: 21 February 2022 to 7 March 2022

Bi-annually, PSB Academy (PSBA) holds a showcase of all 12 student clubs, chapters, and campus communities to encourage new and current students to join in their activities. During this edition of the Campus Club Fair, the IES-PSBA Student Chapter was invited to be interviewed about their focus, which was published online. Microsoft Sway was used to connect interested students to the student chapter and answer questions.

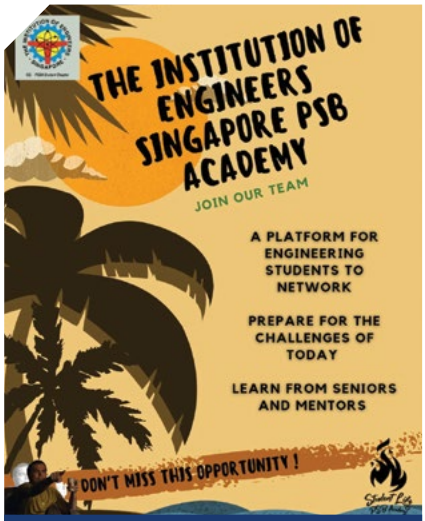
Event: TEDx PSB Academy
Date: 28 May 2022

As part of a collaboration between the Google Developer Student Club, Leadership Development Club, Institution of Engineering and Technology-PSBA Chapter and IES-PSBA Student Chapter, a TEDx Talk was held on 28 May 2022. Experts and thought leaders in the fields of business, technology and science were invited, and they spoke about a variety of topics, ranging from artificial intelligence to personal branding and scientific leadership.

Event: Campus Club Fair
Date: 15 July 2022

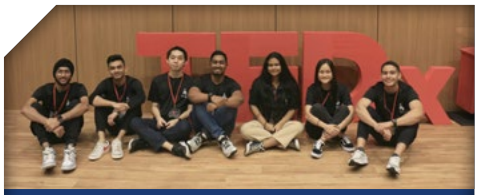
The second campus club fair was organised in July 2022 and took place physically on campus. Many club booths were set up, each manned by club members to eagerly share their spirit and recruit new members. The booths were colourfully decorated with posters and information about the clubs, and some even offered free samples and small gifts.

The theme of the fair was “Iconic Movies / TV Shows”, and each booth used booth games to attract new members. The club fair was supplemented with an online component where students could engage with club members for additional information.



Poster used for recruitment during the Campus Club Fair

Mr Derrick Chang, CEO of PSBA, delivering the Opening Speech


Group Photo of the Organising Committee

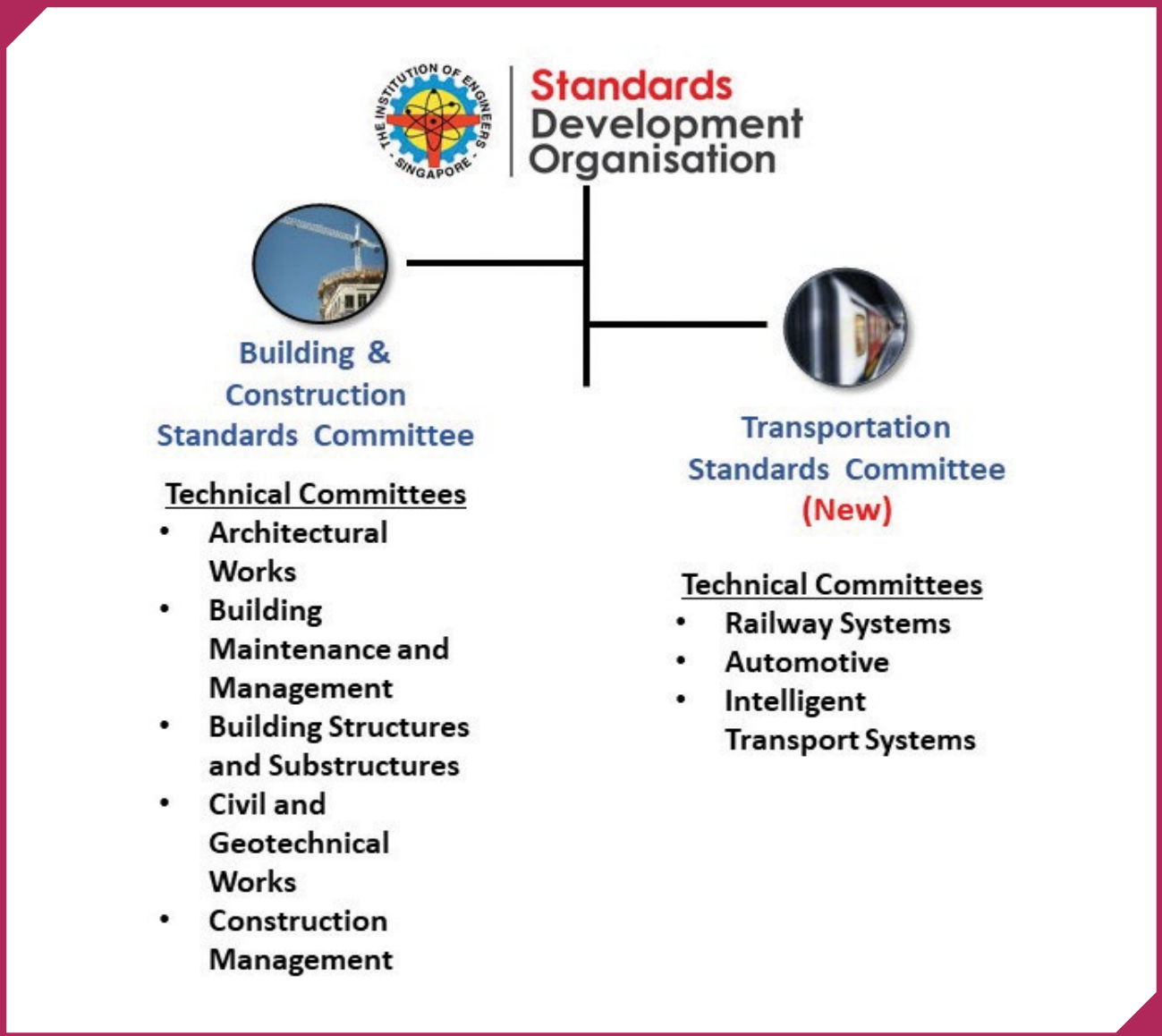
IES-PSBA Members in the Booth and Sharing about the Student Chapter Organising Committee

STANDARDS DEVELOPMENT ORGANISATION (SDO)

The Institution of Engineers, Singapore (IES) was first appointed in 2015 and re-appointed in 2018 by Enterprise Singapore (ESG), the national standards body as the Standards Development Organisation (SDO) for the Building and Construction Standards Committee (BCSC).

In 2021, IES was again reappointed to support BCSC and the newly set up Technical Committee on Railway Systems.

Guided by the industry-led Singapore Standards Council, IES-SDO administers and supports the development, promotion and adoption of Singapore Standards and Technical References.



Building and Construction Standards Committee

The BCSC supports the quality, safety and productivity initiatives in the Singapore building and construction industry.

Under the purview of the BCSC, five Technical Committees and various Working Groups are formed to look into reviewing and developing current Singapore Standards; and promoting the adoption of new Singapore Standards and Technical References. The Technical Committees are:

- Technical Committee on Architectural Works
- Technical Committee on Building Maintenance & Management
- Technical Committee on Building Structures & Substructures
- Technical Committee on Civil & Geotechnical Works
- Technical Committee on Construction Management

The technical committees and working groups comprise close to 400 representatives from ministries and government agencies, industry associations and professional bodies, educational institutions and industry practitioners with vast experience in the industry. They bring valuable insights to the Singapore Standards, some of which have brought immeasurable benefits to the building and construction industry in Singapore and helped transform the industry's practices in the areas of design, construction and maintenance.

These committees spearhead the development of standards related to the building and construction industry. They also actively monitor and participate in the development and review of international standards that are of importance to Singapore.

Under the BCSC, IES-SDO manages over 220 building and construction standards that help support national initiatives (e.g. building & constructions ITM and healthcare ITM), ensure the safety and structural integrity of the buildings in Singapore, address environmental sustainability and safety issues.

Examples of impactful standards developed/reviewed under BCSC include:

- SS 591 : 2021 Code of practice for long term measurement of central chilled water system energy efficiency
- SS 679 : 2021 Code of practice for workplace safety and health management system for construction worksites
- TR 102 : 2022 - Passive displacement cooling (PDC) system for air-conditioning application
- SS 333 : 2022 Specification for fire dampers
- SS 213 : 2022 Specification for unplasticised PVC pipes and fittings for soil, waste and vent applications
- SS 272 : 2022 Specification for unplasticised PVC pipes and fittings below ground for drainlines and sewers
- SS 694 : 2022 Measurement of cleaning performance for commercial, housing estates and retail F&B premises
- Eurocode 1 Actions on structures, Eurocode 2 Design of concrete structures, Eurocode 3 Design of steel structures, Eurocode 4 Design of composite steel and concrete structures, Eurocode 5 Design of timber structures, Eurocode 7 Geotechnical Design and Eurocode 8 Design of structures for earthquake resistance are adopted by BCA as the structural design standards

In view of the growing significance and importance of Building Information Modelling (BIM) for the building and construction industry, BCSC took over the participating membership of ISO/TC 59/SC 13 (Organisation and digitisation of information about buildings and civil engineering works, including BIM) from the Information Technology Standards Committee. BCSC will be adopting ISO 16739-1:2018 Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries – Data schema as a Singapore Standard.

Transportation Standards Committee

Due to the growing demand for new standards to support Singapore's Land Transport Masterplan, a new Transportation Standards Committee (SC) was formed, with the support of Enterprise Singapore and the Singapore Standards Council. The role of a SC is to provide strategic leadership to its Technical Committees (TC), to develop and promote standards in the various industries. The TCs on Automotive and Railway Systems are grouped under this new SC, to foster greater harmonisation.

A new TC on Intelligent Transport Systems has also been set up under this SC to explore potential areas of standardisation as the sector continues to evolve with emerging mobility concepts and new technologies.

The Transportation Standards Committee (TPSC) was launched on 11 November 2021 at Resorts World Ballroom by Transport Minister S. Iswaran, together with three new railway Technical References on safety performance and benchmarking, maintenance of vehicle gauges, and assisted service kiosks in stations.

On 4 March 2022, keynote speakers from the regulatory authority and the transport industry shared perspectives and trends on the future of mobility at the Transportation Standards Committee strategic planning session, hosted by IES-SDO. Members of the SC, as well as key members of its various TCs, discussed future potential areas of standardisation in the coming years.

Strategic Planning Session for Transportation Standards Committee

IES AWARDS COMMITTEE

The following 2 projects won the **ASEAN Outstanding Engineering Achievement Awards 2022**

- **Use of Plastic Waste to Construct Durable Asphalt Pavement**
  By Samwoh Innovation Centre
- **Tuas Port Phase 1 (TPP1): Reclamation, Wharf Construction & Dredging Project**
  By Maritime & Port Authority of Singapore (MPA) and Surbana Jurong Consultants Pte Ltd (SJC)

Young Engineers of ASEAN Federation of Engineers Award 2022

AFEO introduced the Young Engineers of AFEO. IES Young Engineer Committee Chairman Mr Syafiq Shahul received the award.

COMMUNITY SERVICE COMMITTEE

The members of the Community Service Committee brought Christmas cheers to the children of Cerebral Palsy Alliance Singapore by donating Christmas gifts to them at the CPAS Christmas Night Drive.

FINANCIAL STATEMENTS

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

(Incorporated in Singapore. Registration Number: S66SS0041B)

CONSOLIDATED FINANCIAL STATEMENTS

For the financial year ended 31 December 2022

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARIES
(Incorporated in Singapore)

CONSOLIDATED FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

Contents

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

STATEMENT BY COUNCIL
For the financial year ended 31 December 2022

On behalf of the Council of The Institution of Engineers, Singapore (the "Institution"), we hereby state that in our opinion:

(a) the accompanying consolidated financial statements of The Institution of Engineers, Singapore and its subsidiary (the "Group") and the statement of financial position, statement of comprehensive income and statement of funds of the Institution are properly drawn up in accordance with the Societies Act, Chapter 311 and Singapore Financial Reporting Standards in Singapore, so as to present fairly, in all material respects, the financial position of the Group and the Institution as at 31 December 2022 and of the financial performance, change in funds of the Group and the Institution and cash flows of the Group for the financial year ended on that date; and

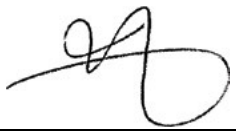
(b) at the date of this statement, there are reasonable grounds to believe that the Institution will be able to pay its debts as and when they fall due.

These financial statements are approved and authorised for issue on the date of this statement.

On behalf of the Council,

DR. ANG KENG BEEN
HON. AUDITOR

DR. CHANDRAN SEGARAN
HON. AUDITOR



ER. LEE TENG PONG, SIMON
HON. TREASURER

18 May 2023

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARIES

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of The Institution of Engineers Singapore (the "Institution") and its subsidiaries (the "Group") which comprise the statements of financial position of the Group and the Institution as at 31 December 2022, the statements of comprehensive income, statements of changes in funds of the Group and the Institution and statement of cash flows of the Group for the financial year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements of the Group and the financial statements of the Institution are properly drawn up in accordance with the Societies Act 1966 (the "Act") and Financial Reporting Standards in Singapore ("FRSs") so as to present fairly, in all material respects, the financial position of the Group and the Institution as at 31 December 2022 and the financial performance, changes in funds of the Group and the Institution and cash flows of the Group for the financial year ended on that date.

Basis for Opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Group and the Institution in accordance with the Accounting and Corporate Regulatory Authority ("ACRA") Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

The Council is responsible for the other information. The other information comprises the Statement by Council set out on page 1 but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Council for the Financial Statements

The Council is responsible for the preparation and fair presentation of these financial statements in accordance with the Societies Act and FRSs, and for such internal control as the Council determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Council is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Council either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Council is responsible for overseeing the Group's financial reporting process.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY (continued)

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Council.

- Conclude on the appropriateness of the Council's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

In our opinion, the accounting and other records required by the Societies Regulations enacted under the Societies Act to be kept by the Institution have been properly kept in accordance with those regulations.

Lee & Hew Public Accounting Corporation
Public Accountants and Chartered Accountants
Singapore, 18 MAY 2023

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

STATEMENTS OF COMPREHENSIVE INCOME

For the financial year ended 31 December 2022

	Notes	Group		Institution	
		2022	2021	**2022**	2021
		$	$	**$**	$
Revenue	4				
- Income from members' subscriptions		**933,998**	882,190	**824,445**	736,903
- Income from accreditation		**-**	420,000	**-**	420,000
- Income from conferences, seminars and events		**360,186**	1,021,110	**200,003**	335,779
- Income from conferences, seminars and events from IES Academy		**3,171,721**	2,930,445	**-**	-
- Income from advertising and publication		**165,962**	160,755	**-**	-
- Share of profit from IES/ACES Joint Professional Membership Registry		**88,593**	121,287	**-**	-
- Others		**7,486**	9,231	**7,486**	9,231
		4,727,946	5,545,018	**1,031,934**	1,501,913
Other income	5	**1,124,270**	1,162,159	**1,212,991**	1,154,228
		5,852,216	6,707,177	**2,244,925**	2,656,141
Expenses					
- Expenditure for accreditation		**(96,740)**	(73,174)	**(96,740)**	(117,574)
- Expenditure for conferences, seminars and events		**(174,090)**	(560,624)	**(90,647)**	(193,317)
- Expenditure for conferences, seminars and events from IES Academy		**(935,251)**	(812,198)	**-**	-
- Expenditure for publication		**(91,675)**	(92,384)	**-**	-
- Finance costs	6	**(13,886)**	(6,160)	**-**	-
- Other operating expenses		**(1,507,160)**	(1,627,168)	**(816,096)**	(886,897)
- Staff costs	7	**(2,592,241)**	(2,652,315)	**(1,169,957)**	(1,175,813)
		(5,411,043)	(5,824,023)	**(2,173,440)**	(2,373,601)
Surplus before income tax	8	**441,173**	883,154	**71,485**	282,540
Income tax expense	9	**(113,233)**	(169,937)	**(10,389)**	(31,964)
Surplus for the financial year, representing total comprehensive income		**327,940**	713,217	**61,096**	250,576

The accounting policies and explanatory notes form an integral part of the financials.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

STATEMENTS OF FINANCIAL POSITION

As at 31 December 2022

	Notes	Group		Institution	
		2022	2021	**2022**	2021
		$	$	**$**	$
ASSETS					
Current assets					
Cash and cash equivalents	10	**11,046,248**	10,232,586	**6,091,906**	5,765,256
Trade and other receivables	11	**1,611,303**	1,222,706	**1,236,125**	1,189,451
		12,657,551	11,455,292	**7,328,031**	6,954,707
Non-current assets					
Property, plant and equipment	12	**6,080,726**	6,425,885	**6,057,733**	6,369,656
Right-of-use assets	13	**211,170**	321,345	**-**	-
Investments in associate	14	**-**	-	**-**	-
Investment in subsidiaries	15	**-**	-	**4**	4
		6,291,896	6,747,230	**6,057,737**	6,369,660
Total assets		**18,949,447**	18,202,522	**13,385,768**	13,324,367
LIABILITIES					
Current liabilities					
Trade and other payables	16	**2,141,383**	1,751,179	**1,863,831**	1,800,233
Contract liabilities	4(b)	**693,819**	434,535	**395,985**	214,931
Income tax payable		**261,983**	190,389	**8,801**	55,965
Lease obligation	13	**110,556**	104,914	**-**	-
		3,207,741	2,481,017	**2,268,617**	2,071,129
Non-current liabilities					
Lease obligation	13	**106,559**	217,115	**-**	-
Deferred tax liabilities	17	**70,546**	70,546	**56,200**	56,200
		177,105	287,661	**56,200**	56,200
Total liabilities		**3,384,846**	2,768,678	**2,324,817**	2,127,329
NET ASSETS		**15,564,601**	15,433,844	**11,060,951**	11,197,038
Represented by					
Accumulated fund		**7,082,025**	6,754,085	**2,578,375**	2,517,279
Asset capitalisation reserve	18	**5,311,942**	5,533,677	**5,311,942**	5,533,677
Capital reserve	19	**1,453,041**	1,453,041	**1,453,041**	1,453,041
Sinking fund	20	**693,041**	693,041	**693,041**	693,041
Scholarship fund	21	**1,024,552**	1,000,000	**1,024,552**	1,000,000
		15,564,601	15,433,844	**11,060,951**	11,197,038

The accounting policies and explanatory notes form an integral part of the financials.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

STATEMENTS OF CHANGES IN FUNDS

For the financial year ended 31 December 2022

	Accumulated Fund $	Asset Capitalisation Reserve (Note 18) $	Capital Reserve (Note 19) $	Sinking Fund (Note 20) $	Scholarship fund (Note 21) $	Total $
Group						
2022						
At 1 January 2022	**6,754,085**	**5,533,677**	**1,453,041**	**693,041**	**1,000,000**	**15,433,844**
Movement during the financial year	-	(221,735)	-	-	24,552	(197,183)
Net surplus for the year	327,940	-	-	-	-	327,940
At 31 December 2022	**7,082,025**	**5,311,942**	**1,453,041**	**693,041**	**1,024,552**	**15,564,601**
2021						
At 1 January 2021	**6,040,868**	**5,759,412**	**1,453,041**	**693,041**	**1,000,000**	**14,946,362**
Movement during the financial year	-	(225,735)	-	-	-	(225,735)
Net surplus for the year	713,217	-	-	-	-	713,217
At 31 December 2021	**6,754,085**	**5,533,677**	**1,453,041**	**693,041**	**1,000,000**	**15,433,844**

	Accumulated Fund $	Asset Capitalisation Reserve (Note 18) $	Capital Reserve (Note 19) $	Sinking Fund (Note 20) $	Scholarship fund (Note 21) $	Total $
Institution						
2022						
At 1 January 2022	**2,517,279**	**5,533,677**	**1,453,041**	**693,041**	**1,000,000**	**11,197,038**
Movement during the financial year	-	(221,735)	-	-	24,552	(197,183)
Net surplus for the year	61,096	-	-	-	-	61,096
At 31 December 2022	**2,578,375**	**5,311,942**	**1,453,041**	**693,041**	**1,024,552**	**11,060,951**
2021						
At 1 January 2021	**2,266,703**	**5,759,412**	**1,453,041**	**693,041**	**1,000,000**	**11,172,197**
Movement during the financial year	-	(225,735)	-	-	-	(225,735)
Net surplus for the year	250,576	-	-	-	-	250,576
At 31 December 2021	**2,517,279**	**5,533,677**	**1,453,041**	**693,041**	**1,000,000**	**11,197,038**

The accounting policies and explanatory notes form an integral part of the financials.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

STATEMENTS OF CASH FLOWS

For the financial year ended 31 December 2022

	Notes	Group	
		2022	2021
		$	$
Cash flows from operating activities			
Surplus before tax		**441,173**	883,154
Adjustments for:			
- Interest expense	6	**13,886**	6,160
- Depreciation of property, plant and equipment	12	**356,769**	359,683
- Depreciation of right-of-use assets	13	**110,175**	103,746
- Allowance for expected credit losses	7	**78,431**	440,419
- Asset capitalisation reserve	18	**(221,735)**	(225,735)
Operating cash flow before working capital changes		**778,699**	1,567,427
Changes in operating assets and liabilities: -			
- Contract liabilities		**259,284**	(240,892)
- Trade and other receivables		**(467,028)**	(519,060)
- Trade and other payables		**290,204**	339,380
Cash generated from operations		**961,159**	1,146,855
Income tax paid		**(41,639)**	(84,834)
Net cash generated from operating activities		**919,520**	1,062,021
Cash flows from investing activities			
Addition in property, plant and equipment	12	**(11,610)**	(9,962)
Placement on fixed deposit		**(18,372)**	(11,151)
Net cash used in investing activities		**(29,982)**	(21,113)
Cash flows from financing activities			
Repayment of lease obligation	13	**(104,914)**	(112,518)
Interest paid	13	**(13,886)**	(6,160)
Receipt of scholarship fund		**24,552**	-
Net cash (used in)/generated from investing activities		**(94,248)**	(118,678)
Net increase in cash and cash equivalents		**795,290**	922,230
Cash and cash equivalents at beginning of the financial year		**7,109,107**	6,186,877
Cash and cash equivalents at end of the financial year	10	**7,904,397**	7,109,107

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

STATEMENTS OF CASH FLOWS
For the financial year ended 31 December 2022

Reconciliation of liabilities arising from financing activities

	Notes	Group	
		2022	2021
		$	$
Lease obligations			
At beginning of financial year		**322,029**	104,021
Additions during the year		**-**	330,526
Principal and interest repayments		**(118,800)**	(118,678)
Non-cash changes			
- Interest expenses		**13,886**	6,160
At end of financial year	13	**217,115**	322,029

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

These notes form an integral part of and should be read in conjunction with the accompanying financial statements.

1. General information

The Institution is established in the Republic of Singapore with its registered office and principal place of business located at 70 Bukit Tinggi Road, Singapore 289758.

As the national society of engineers in Singapore, the principal activities of the Institution are to promote and advance the science, art and the profession of engineering, to facilitate the exchange of information and ideas related to engineering. The Institution also engages in the provision of training and professional development courses for the engineering professions.

The principal activities of its subsidiaries are disclosed in Note 15 to the financial statements.

2. Summary of significant accounting policies

2.1 Basis of preparation

The financial statements are prepared in accordance with Singapore Financial Reporting Standards ("FRS") under the historical cost convention, except as disclosed in the accounting policies below.

The preparation of these financial statements in conformity with FRS requires management to exercise its judgement in the process of applying the Group's accounting policies. It also requires the use of certain critical accounting estimates and assumptions. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 3.

Interpretations and amendments to published standards effective on 1 January 2022

On 1 January 2022, the Group adopted the new or amended FRS and Interpretations to FRS ("INT FRS") that are mandatory for application from that date. Changes to the Group's accounting policies have been made as required, in accordance with the transitional provisions in the respective FRS and INT FRS.

The adoption of these new or amended FRS and INT FRS did not result in substantial changes to the Institution's accounting policies and had no material effect on the amounts reported for the current reporting period.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies

(a) Revenue recognition

Revenue from the provision of services are recognised over time when the Group and the Institution satisfies its performance obligations by transferring control over the promised service to the customer in the accounting period in which the services are provided. A performance obligation may be satisfied at a point in time or over time. The amount of revenue recognised is the amount allocated to the satisfied performance obligation.

Income from membership subscriptions, registry listings and accreditation

Revenue from membership subscriptions, registry listing and accreditation are recognised over the period of the membership, registry listing and accreditation. Members or customers/partners are invoiced once every year and these invoices are payable in advance before the start of the membership, registry listing or accreditation. A contract liability is recognised for payments received in excess of the value of performance obligations fulfilled.

Income from conferences, seminars and events

Revenue from conferences, seminar and events are recognised at the point in which the events are held. The respective counterparties are invoiced after the closing of the events and no credit terms are granted. A contract liability is recognised for payments received in excess of the value of performance obligations fulfilled.

Income from IES/ACES Joint Professional Membership Registry

Income from IES/ACES Joint Professional Membership Registry are recognised at the point in which the Group is entitled to receive the payments, it is probable that that the economic benefits associated with the amounts will flow to the Group, and the amount of the payments can be reliably measured.

Income from advertising and publications

Income from advertising and publications are recognised at the point in which the services has been fulfilled. The respective counterparties are invoiced prior to the performance of the service and no credit terms are granted. A contract asset is recognised for the cumulative revenue recognised but not yet invoiced where applicable. A contract liability is recognised for payments received in excess of the value of services performed where applicable.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(b) Group accounting

(i) Subsidiaries

Consolidation

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are consolidated from the date on which control is transferred to or obtained by the Group. They are deconsolidated from the date on that control ceases.

In preparing the consolidated financial statements, transactions, balances and unrealised gains on transactions between group entities are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment indicator of the asset transferred. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

In the Institution's separate financial statements, investment in subsidiaries are accounted for at cost less any allowance for impairment in value.

(ii) Associates

Associates are entities over which the Group has significant influence, but not control, generally accompanied by a shareholding giving rise to voting rights of 20% and above but not exceeding 50%.

Investments in associates are accounted for in the financial statements using the equity method of accounting less impairment losses, if any.

Equity method of accounting

In applying the equity method of accounting, the Group's share of its associate's post-acquisition surpluses or deficits are recognised in surplus or deficit and its share of post-acquisition other comprehensive income is recognised in other comprehensive income. These post-acquisition movements and distributions received from the associate are adjusted against the carrying amount of the investments. When the Group's share of losses in an associate equals to or exceeds its interest in the associate, the Group does not recognise further losses, unless it has legal or constructive obligations to make, or has made, payments on behalf of the associate.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(b) Group accounting (continued)

(ii) Associates (continued)

Equity method of accounting (continued)

If the associate subsequently reports surpluses, the Group resumes recognising its share of those surpluses only after its share of the surpluses equals the share of deficits not recognised. Unrealised gains on transactions between the Group and its associate are eliminated to the extent of the Group's interest in the associate. Unrealised losses are also eliminated unless the transactions provide evidence of impairment of the assets transferred. The accounting policies of associate are changed where necessary to ensure consistency with the accounting policies adopted by the Group.

In the Institution's separate financial statements, investment in associates are accounted for at cost less any allowance for impairment in value.

(c) Property, plant and equipment

Property, plant and equipment are recognised at cost less accumulated depreciation and accumulated impairment losses.

Subsequent expenditure relating to property, plant and equipment that has already been recognised is added to the carrying amount of the asset only when it is probable that future economic benefits associated with the item will flow to the Group and the Institution and the cost of the item can be measured reliably.

All other repair and maintenance expenses are recognised in surplus or deficit when incurred.

Depreciation on other items of property, plant and equipment is calculated using the straight-line method to allocate their depreciable amounts over their estimated useful lives as follows:

	Useful lives
Leasehold land and property	30 – 50 years
Car park	50 years
Computers and computerised equipment	1 – 5 years
Office equipment	10 years
Office furniture	3 – 10 years
Building renovation	50 years

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(c) Property, plant and equipment (continued)

The residual values, estimated useful lives and depreciation method of property, plant and equipment are reviewed, and adjusted as appropriate, at each statement of financial position date. The effects of any revision are recognised in surplus or deficit when the changes arise.

(d) Intangible assets

An intangible asset is an identifiable non-monetary asset without physical substance. Intangible assets are initially recognised at cost and subsequently at cost less accumulated amortisation and accumulated impairment losses.

All research and development costs are recognised as an expense unless they form part of the cost of another asset that meets the recognition criteria.

Amortisation is provided to write down the intangible asset on a straight-line basis.

If there is an indication that there has been a significant change in amortisation rate, useful life or residual value of an intangible asset, the amortisation is revised prospectively to reflect the new expectations.

(e) Investments in subsidiaries and associate

In the Institution's separate financial statements, investment in subsidiaries are accounted for at cost less accumulated impairment losses.

On disposal of such investments, the difference between disposal proceeds and the carrying amounts of the investments are recognised in surplus or deficit.

(f) Impairment of non-financial assets

Intangible assets
Property, plant and equipment
Investment in subsidiaries
Investment in associate

Intangible assets with definite useful life, property, plant and equipment, investment in subsidiaries and investment in associate are reviewed for impairment whenever there is any indication that these assets may be impaired.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(f) Impairment of non-financial assets (continued)

For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less cost to sell and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash inflows that are largely independent of those from other assets. If this is the case, the recoverable amount is determined for the CGU to which the asset belongs.

If the recoverable amount of the asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount.

The difference between the carrying amount and recoverable amount is recognised as an impairment loss in surplus or deficit.

An impairment loss for an asset is reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. The carrying amount of this asset is increased to its revised recoverable amount, provided that this amount does not exceed the carrying amount that would have been determined (net of accumulated depreciation) had no impairment loss been recognised for the asset in prior years. A reversal of impairment loss for an asset is recognised in surplus or deficit.

(g) Financial assets

The accounting for financial assets (loans and receivables, cash and cash equivalents and trade and other receivables), are as follows:

(i) Classification and measurement

The Group and the Institution measures its cash and cash equivalents and trade and other receivables at amortised cost.

The classification depends on the Group and the Institution's business model for managing the financial assets as well as the contractual terms of the cash flows of the financial asset.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

The Group and the Institution reclassifies debt instruments when and only when its business model for managing those assets changes.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(g) Financial assets (continued)

(i) Classification and measurement (continued)

At initial recognition

At initial recognition, the Group and the Institution measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset.

Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

At subsequent measurement

Debt instruments mainly comprise of cash and cash equivalents, trade and other receivables.

There are three subsequent measurement categories, depending on the Group and the Institution's business model for managing the asset and the cash flow characteristics of the asset:

- Amortised cost: Debt instruments that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. A gain or loss on a debt instrument that is subsequently measured at amortised cost and is not part of a hedging relationship is recognised in profit or loss when the asset is derecognised or impaired. Interest income from these financial assets is included in interest income using the effective interest rate method.

- FVOCI: Debt instruments that are held for collection of contractual cash flows and for sale, and where the assets' cash flows represent solely payments of principal and interest, are classified as FVOCI. Movements in fair values are recognised in Other Comprehensive Income (OCI) and accumulated in fair value reserve, except for the recognition of impairment gains or losses, interest income and foreign exchange gains and losses, which are recognised in profit and loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and presented in "other gains and losses". Interest income from these financial assets is recognised using the effective interest rate method and presented in "interest income".

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(g) Financial assets (continued)

(i) Classification and measurement (continued)

At subsequent measurement (continued)

- FVPL: Debt instruments that are held for trading as well as those that do not meet the criteria for classification as amortised cost or FVOCI are classified as FVPL. Movement in fair values and interest income is recognised in profit or loss in the period in which it arises and presented in "other gains and losses".

(ii) Impairment

The Group and the Institution assesses on a forward looking basis the expected credit losses associated with its debt financial assets carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables and contract assets, the Group and the Institution applies the simplified approach permitted by the FRS109, which requires expected lifetime losses to be recognised from initial recognition of the receivables.

(iii) Recognition and derecognition

Regular way purchases and sales of financial assets are recognised on trade date – the date on which the Group and the Institution commits to purchase or sell the asset.

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group and the Institution has transferred substantially all risks and rewards of ownership.

On disposal of a debt instrument, the difference between the carrying amount and the sale proceeds is recognised in profit or loss. Any amount previously recognised in other comprehensive income relating to that asset is reclassified to profit or loss.

Trade and other receivables, such as those that are factored with recourse to the Group and the Institution are not derecognised until the recourse period has expired and the risks and rewards of the receivables have been fully transferred. The corresponding cash received from the financial institutions is recorded as borrowings.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(h) Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the statement of financial position when there is a legally enforceable right to offset and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

(i) Fair value estimation of financial assets and liabilities

The carrying amounts of current financial assets and current financial liabilities approximate their fair values due to the short-term nature of these balances. The carrying amount of loan and borrowings approximates its fair value as they are negotiated or contracted at interest rates close to market interest rates for similar arrangements with financial institutions.

(j) Trade and other payables

Trade and other payables represent liabilities for goods and services provided to the Group prior to the end of financial period which are unpaid. They are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). Otherwise, they are presented as non-current liabilities.

Trade and other payables are initially recognised at fair value, and subsequently carried at amortised cost using the effective interest method.

(k) Leases

When the Group is the lessee:

At the inception of the contract, the Group assesses if the contract contains a lease. A contract contains a lease if the contract convey the right to control the use of an identified asset for a period of time in exchange for consideration. Reassessment is only required when the terms and conditions of the contract are changed.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(k) Leases (continued)

When the Group is the lessee: (continued)

- Right-of-use assets

  The Group recognised a right-of-use asset and lease obligation at the date which the underlying asset is available for use. Right-of-use assets are measured at cost which comprises the initial measurement of lease obligation adjusted for any lease payments made at or before the commencement date and lease incentive received. Any initial direct costs that would not have been incurred if the lease had not been obtained are added to the carrying amount of the right-of-use assets.

  These right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of useful life of the right-of-use asset or the end of the lease term.

- Lease obligation

  The initial measurement of lease obligation is measured at the present value of the lease payments discounted using the implicit rate in the lease, if the rate can be readily determined. If that rate cannot be readily determined, the Group shall use its incremental borrowing rate.

  Lease payments include the following:

  - Fixed payment (including in-substance fixed payments), less any lease incentives receivables;
  - Variable lease payment that are based on an index or rate, initially measured using the index or rate as at the commencement date;
  - Amount expected to be payable under residual value guarantees
  - The exercise price of a purchase option if is reasonably certain to exercise the option; and
  - Payment of penalties for terminating the lease, if the lease term reflects the Institution exercising that option.

  For contract that contain both lease and non-lease components, the Institution allocates the consideration to each lease component on the basis of the relative stand-alone price of the lease and non-lease component. The Institution has elected not to separate lease and non-lease component for property leases and account these as one single lease component.

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NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(k) Leases (continued)

When the Group is the lessee: (continued)

- Lease obligation (continued)

  Lease obligation is measured at amortised cost using the effective interest method. Lease obligation shall be remeasured when:

  - There is a change in future lease payments arising from changes in an index or rate;
  - There is a changes in the Group's assessment of whether it will exercise an extension option; or
  - There are modification in the scope or the consideration of the lease that was not part of the original term.

  Lease obligation is remeasured with a corresponding adjustment to the right-of-use assets, or is recorded in surplus or deficit if the carrying amount of the right-of-use asset has been reduced to zero.

- Short term and low value leases

  The Group has elected to not recognised right-of-use assets and lease obligation for short-term leases that have lease terms of 12 months or less and leases of low value leases, except for sublease arrangements. Lease payments relating to these leases are expensed to surplus or deficit on a straight-line basis over the lease term.

- Variable lease payments

  Variable lease payments that are not based on an index or a rate are not included as part of the measurement and initial recognition of the lease obligation. The Institution shall recognise those lease payments in surplus or deficit in the periods that triggered those lease payments.

(l) Income taxes

Current income tax is recognised at the amount expected to be paid to or recovered from the tax authorities.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(l) Income taxes (continued)

Current income taxes are recognised in surplus or deficit except to the extent that the tax relates to items recognised outside surplus or deficit, either in other comprehensive income or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax is provided using the liability method on temporary differences at the end of the reporting period between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognised for all temporary differences, except:

- Where the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting surplus nor taxable surplus or deficit; and

- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable surplus will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised except:

- Where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting surplus nor taxable surplus or deficit; and

- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are recognised only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable surplus will be available against which the temporary differences can be utilised.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(l) Income taxes (continued)

Current and deferred income tax is measured using the tax rates and tax laws that have been enacted or substantively enacted by the statement of financial position date and are recognised as income or expenses in surplus or deficit, except to the extent that the tax arises from a transaction which is recognised directly in equity.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable surplus will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are reassessed at the end of each reporting period and are recognised to the extent that it has become probable that future taxable surplus will allow the deferred tax asset to be recovered.

(m) Employee compensation

Defined contribution plans

Defined contribution plans are post-employment benefit plans under which the Group and the Institution pays fixed contributions into separate entities such as the Central Provident Fund on a mandatory, contractual or voluntary basis. The Group and the Institution's contribution to defined contribution plans are recognised as employee compensation expense when the contributions are due.

Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognised for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

Employment leave entitlement

Employee entitlements to annual leave are recognised when they accrue to employees. A provision is made for the estimated liability for leave as a result of services rendered by employees up to the financial year end.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

2. Basis of preparation and summary of significant accounting policies (continued)

2.2 Summary of significant accounting policies (continued)

(n) Cash and cash equivalents

For the purpose of presentation in the statement of cash flows, cash and cash equivalents include cash on hand and deposits with financial institutions which are subject to an insignificant risk of change in value.

(o) Currency translation

The financial statements are presented in Singapore Dollar ("$" or "SGD"), which is the functional currency of the Institution.

Transactions in a currency other than Singapore Dollar ("foreign currency") are translated into Singapore Dollar using the exchange rates at the dates of the transactions. Currency translation differences resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at the closing rates at the statement of financial position date are recognised in surplus or deficit. Non-monetary items measured at fair values in foreign currencies are translated using the exchange rates at the date when the fair values are determined.

Foreign exchange gains and losses that relate to borrowings are presented within 'finance cost'. All other foreign exchange gains and losses impacting surplus or deficit are presented within 'other income' or 'other expense' as applicable.

(q) Sinking fund

The sinking fund represents a sum set aside to meet the cost of major repairs and maintenance.

(r) Government grants

Grants from the government are recognised as a receivable at fair value when there is reasonable assurance that the grant will be received and the Group will comply with all the attached conditions.

Government grants receivable are recognised as income over the periods necessary to match them with the related costs which they are intended to compensate, on a systematic basis.

Government grants relating to assets are deducted against the carrying amount of the assets.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

3. Critical accounting estimates, assumptions and judgements

Estimates, assumptions and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Expected credit losses (ECL) on trade and other receivables

ECLs are unbiased probability-weighted estimates of credit losses which are determined by evaluating a range of possible outcomes and taking into account past events, current conditions and assessment of future economic conditions.

The Group and the Institution has used relevant historical information and loss experience to determine the probability of default of the instruments and incorporated forward looking information, including significant changes in external market indicators which involved significant estimates and judgements.

In determining the ECL of trade receivables, the Group and the Institution has used one year of historical losses data to determine the loss rate and applied adjustments against the historical loss rate to reflect the current and forward looking information.

As the calculation of loss allowance on trade receivables is subject to assumptions and forecasts, any changes to these estimations will affect the amounts of loss allowance recognised and the carrying amounts of trade and other receivables.

Details of ECL measurement and carrying value of trade receivables at reporting date are disclosed in Note 11 and Note 23(c).

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

4. Revenue from contracts with customers

(a) Disaggregation of revenue from contracts with customers

The Group and the Institution derives revenue from the provision of services over time in the following service:

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Timing of transfer of services				
At a point in time	**3,793,948**	4,662,828	**207,489**	765,010
Over time	**933,998**	882,190	**824,445**	736,903
	4,727,946	5,545,018	**1,031,934**	1,501,913

(b) Contract liabilities

	31 December	
	2022	2021
	$	$
Group		
Contract liabilities		
Membership/registry fees received in advance	**266,288**	214,312
Income received in advance	**277,531**	220,223
Deferred income	**150,000**	-
Total contract liabilities	**693,819**	434,535

	31 December	
	2022	2021
	$	$
Institution		
Contract liabilities		
Membership/registry fees received in advance	**245,985**	214,931
Deferred income	**150,000**	-
	395,985	214,931

(i) Revenue recognised in relation to contract liabilities

Contract liabilities relate to the Group and the Institution obligation to provide continued membership services, accreditation, and registry listing for which the Group and the Institution has received advances from members for the membership fee, accreditation and/or registry listing or for courses and events to be held.

Revenue recognised by the Group and the Institution in current period that was included in the contract liability balance at the beginning of the period are $434,535 (2021: $514,100) and $214,931 (2021: $139,409) respectively.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

4. Revenue from contracts with customers (continued)

(b) Contract liabilities (continued)

(i) Revenue recognised in relation to contract liabilities (continued)

Contract liabilities are recognised as revenue over the period of membership subscription, accreditation and/or listing on the respective registry or at a point in time when the courses and events are held.

(ii) Unsatisfied performance obligations

The aggregate amount of the transaction price of the Group and the Institution allocated to contracts that are partially or fully unsatisfied as at 31 December 2022 is $693,819 (2021: $434,535) and $395,985 (2021: $214,931) respectively.

Management expects that 100% of the transaction price allocated to the unsatisfied performance obligations as of 31 December 2022 may be recognised as revenue during the next reporting period. The amount disclosed above does not include variable consideration which is subject to significant risk of reversal.

(c) Assets recognised from costs to fulfil contracts

The Group and the Institution does not have any assets recognised from costs to fulfil contracts as at 31 December 2022 and 31 December 2021.

5. Other income

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Administrative charges received from subsidiaries	**-**	-	**405,317**	402,179
Administrative charges received from IES/ACES Joint Registry Professional Membership	**288,000**	288,000	**-**	-
Administrative charges Received	**7,100**	20,500	**2,400**	4,800
Government grants	**193,889**	210,182	**177,553**	137,208
Interest income	**514**	11,151	**-**	8,335
Rental income	**382,160**	390,455	**382,160**	373,155
SDO corporate support fee	**235,740**	181,682	**235,740**	181,682
Others	**16,867**	60,189	**9,821**	46,869
	1,124,270	1,162,159	**1,212,991**	1,154,228

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

6. Finance cost

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Interest expense on lease obligation	**13,886**	6,160	**-**	-

7. Staff costs

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Staff salaries and bonuses	**2,273,728**	2,277,930	**1,034,338**	1,002,681
Central provident fund Contribution	**291,703**	349,724	**110,380**	156,594
Other short-term benefits	**26,810**	24,661	**25,239**	16,538
	2,592,241	2,652,315	**1,169,957**	1,175,813

8. Surplus before tax

The following expenses have been included in arriving at surplus for the year:

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Committee expenditure	**91,674**	66,852	**91,674**	66,852
Depreciation of property, plant and equipment	**356,769**	359,683	**317,173**	317,092
Depreciation of right-of-use Assets	**110,175**	103,746	**-**	-
Impairment losses on financial assets	**78,431**	440,419	**7,056**	198,188
Legal and professional Fees	**8,900**	13,113	**1,700**	5,575
Short term lease	**3,480**	3,190	**-**	-

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

9. Income taxes

Income tax expense

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Tax expense attributable to surplus is made up of:				
- Current income tax	**127,823**	190,092	**11,542**	55,965
- Over provision of income tax in prior year	**(14,590)**	(24,001)	**(1,153)**	(24,001)
	113,233	166,091	**10,389**	31,964
Deferred tax income	**-**	3,846	**-**	-
	113,233	169,937	**10,389**	31,964

A reconciliation between tax expense and the product of accounting profit multiplied by the applicable corporate tax rate for the financial years ended 31 December 2022 and 2021 were as follows:

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Surplus before tax	**441,173**	883,154	**71,485**	282,540
Tax calculated at tax rate of 17% (2021: 17%)	**74,999**	150,136	**12,152**	48,032
Effects of:				
- Singapore statutory stepped income exemption	**(31,626)**	(42,817)	**(10,376)**	(17,425)
- expenses not deductible for tax purposes	**20,095**	94,853	**15,147**	48,683
- income not subject to tax	**(8,847)**	(34,222)	**(8,847)**	(23,325)
- Deferred tax asset not recognised during the year	**71,855**	22,142	**-**	-
- Over provision of income tax in prior year	**(14,590)**	(24,001)	**(1,153)**	(24,001)
- others	**1,347**	-	**3,466**	-
Tax expense	**113,233**	166,091	**10,389**	31,964

The Group and Institution have unrecognised tax losses of $211,673 (2021: $212,692) and $NIL (2021: $NIL) at the statement of financial position date which can be carried forward and used to offset against future taxable income subject to meeting certain statutory requirements by the Institution and the respective subsidiaries with unrecognised tax losses. These tax losses have no expiry date.

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

9. Income taxes (continued)

Deferred income tax assets had not been recognised for these tax losses carried forward as it is not probable that the respective companies with deferred tax losses will have sufficient future taxable profits to realise the related tax benefits.

10. Cash and cash equivalents

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Cash at bank and on hand	**7,904,397**	7,109,107	**3,464,606**	3,155,814
Fixed deposit	**3,141,851**	3,123,479	**2,627,300**	2,609,442
	11,046,248	10,232,586	**6,091,906**	5,765,256
Cash at bank pledged	**(3,141,851)**	(3,123,479)	**(2,627,300)**	(2,609,442)
Cash and cash equivalents as shown in the statement of cash flows	**7,904,397**	7,109,107	**3,464,606**	3,155,814

Cash and bank balances comprise cash held by the Group and the Institution and bank deposits which earn interest at floating rates based on daily bank deposit rates.

Fixed deposits bear interests from 0.05% to 2.95% (2021: 0.05% to 1.60%) per annum with an original maturity from three months to one year (2021: three months to one year).

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

11. Trade and other receivables

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Trade receivables:				
- Third parties	**1,298,632**	943,348	**342,699**	192,167
- Subsidiaries	**-**	-	**119,323**	255,648
	1,298,632	943,348	**462,022**	447,815
Less: Allowance for impairment	**(230,613)**	(152,252)	**(75,517)**	(68,462)
Trade receivables – net	**1,068,019**	791,096	**386,505**	379,353
Other receivables:				
- Loan to associate	**445,485**	445,415	**170,000**	170,000
- Loan to subsidiaries	**-**	-	**367,759**	589,758
- Deposits and prepayment	**65,793**	90,155	**4,390**	7,702
- Grant receivable	**-**	123,069	**-**	-
- Amount due from SDO	**459,311**	170,125	**459,311**	170,125
- Other receivables	**43,130**	73,211	**43,110**	67,463
	1,013,719	901,975	**1,044,570**	1,005,048
Less: Allowance for impairment	**(470,435)**	(470,365)	**(194,950)**	(194,950)
Other receivables – net	**543,284**	431,610	**849,620**	810,098
	1,611,303	1,222,706	**1,236,125**	1,189,451

Trade and other receivables are non-interest bearing and generally on terms ranging from cash terms to 30 days' terms (2021: cash term to 30 days' term). They are recognised at their original invoice amounts which represent their fair values on initial recognition.

Loan to associate and subsidiaries and trade receivables due from subsidiaries are unsecured, interest free and repayable on demand.

Expected credit losses

The movement in allowance for expected credit losses of trade receivables computed based on lifetime ECL was as follows:

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Movement in allowance accounts:				
As at 1 January	**152,252**	153,300	**68,462**	65,223
Charge/(Reversal) for the financial Year	**78,361**	(1,048)	**7,056**	3,238
At 31 December	**230,613**	152,252	**75,517**	68,462

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

11. Trade and other receivables (continued)

Expected credit losses (continued)

The movement in allowance for other receivables are as follows:

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Movement in allowance accounts:				
As at 1 January	**470,365**	28,898	**194,950**	-
Charge for the financial year	**70**	441,467	**-**	194,950
At 31 December	**470,435**	470,365	**194,950**	194,950

12. Property, plant and equipment

	Leasehold land and property $	Car park $	Computers and computerised equipment $	Office equipment $	Office furniture $	Building renovation $	Total $
Group							
2022							
Cost							
At 1 January 2022	8,376,455	41,800	314,321	130,083	674,297	1,426,487	10,963,443
Additions	-	-	5,250	6,360	-	-	11,610
At 31 December 2022	8,376,455	41,800	319,571	136,443	674,297	1,426,487	10,975,053
Accumulated depreciation							
At 1 January 2022	2,956,208	14,796	244,450	110,544	544,185	667,375	4,537,558
Depreciation charge	242,891	840	45,827	5,836	32,226	29,149	356,769
At 31 December 2022	3,199,087	15,648	290,278	116,380	576,410	696,524	4,894,327
Net book value at 31 December 2022	**5,177,368**	**26,152**	**29,293**	**20,063**	**97,887**	**729,963**	**6,080,726**
Group							
2021							
Cost							
At 1 January 2021	8,376,455	41,800	304,359	130,083	674,297	1,426,487	10,953,481
Additions	-	-	9,962	-	-	-	9,962
At 31 December 2021	8,376,455	41,800	314,321	130,083	674,297	1,426,487	10,963,443
Accumulated depreciation							
At 1 January 2021	2,713,312	13,960	194,417	106,097	511,864	638,225	4,177,875
Depreciation charge	242,896	836	50,033	4,447	32,321	29,150	359,683
At 31 December 2021	2,956,208	14,796	244,450	110,544	544,185	667,375	4,537,558
Net book value at 31 December 2021	**5,420,247**	**27,004**	**69,871**	**19,539**	**130,112**	**759,112**	**6,425,885**

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NOTES TO FINANCIAL STATEMENTS
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12. Property, plant and equipment (continued)

	Leasehold land and property $	Car park $	Computers and Computerised equipment $	Office equipment $	Office furniture $	Building renovation $	Total $
Institution							
2022							
Cost							
At 1 January 2022	8,376,455	41,800	119,512	130,082	451,535	1,426,487	10,545,871
Additions	-	-	5,250	-	-	-	5,250
At 31 December 2022	8,376,455	41,800	124,762	130,082	451,535	1,426,487	10,551,121
Accumulated depreciation							
At 1 January 2022	2,956,208	14,796	105,871	110,544	321,421	667,375	4,176,215
Depreciation charge	242,891	840	7,963	4,103	32,226	29,150	317,173
At 31 December 2022	3,199,087	15,648	113,834	114,647	353,647	696,525	4,493,388
Net book value at 31 December 2022	**5,177,368**	**26,152**	**10,928**	**15,435**	**97,888**	**729,962**	**6,057,733**
Institution							
2021							
Cost							
At 1 January 2021	8,376,455	41,800	114,494	130,082	451,535	1,426,487	10,540,853
Additions	-	-	5,018	-	-	-	5,018
At 31 December 2021	8,376,455	41,800	119,512	130,082	451,535	1,426,487	10,545,871
Accumulated depreciation							
At 1 January 2021	2,713,312	13,960	98,428	106,097	289,101	638,225	3,859,123
Depreciation charge	242,896	836	7,443	4,447	32,320	29,150	317,092
At 31 December 2021	2,956,208	14,796	105,871	110,544	321,421	667,375	4,176,215
Net book value at 31 December 2021	5,420,247	27,004	13,641	19,538	130,114	759,112	6,369,656

THE INSTITUTION OF ENGINEERS, SINGAPORE AND ITS SUBSIDIARY

NOTES TO THE FINANCIAL STATEMENTS
For the financial year ended 31 December 2022

13. Right-of-use assets and lease obligation

This note provides information for leases where the Group is a lessee.

(a) Amounts recognised in the statement of financial position

	Group	
	2022	2021
	$	$
Right-of-use assets		
Office premises		
Cost		
At 1 January	**330,526**	298,117
Additions	**-**	330,526
Disposal	**-**	(298,117)
At 31 December	**330,526**	330,526
Accumulated depreciation		
At 1 January	**9,181**	203,552
Depreciation charge	**110,175**	103,746
Disposal	**-**	(298,117)
At 31 December	**119,356**	9,181
Net book value at 31 December	**211,170**	321,345
Lease obligation		
Current	**110,556**	104,914
Non-current	**106,559**	217,115
	217,115	322,029

Addition to the right-of-use assets during the 2022 financial year were $Nil (2021: $330,526).

(b) Amount recognised in the statement of surplus or deficit

	Group	
	2022	2021
	$	$
Depreciation charge of right of use assets		
Office premises	**110,175**	103,746
Interest expenses (included in finance cost)	**13,886**	6,160

The total cash outflow for leases in 2022 was $118,800 (2021: $118,678).

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14. Investment in associate

	Group	
	2022	2021
	$	$
Unquoted equity shares, at cost	**-**	-

The associate is iNPQS Pte Ltd, a company incorporated in Republic of Singapore. The Group's equity holding is 33.33% (2021: 33.33%).

In 2022, the Institution's cumulative share of unrecognised losses at the end of the reporting period was S$20,000 of which S$20,000 was the share of the current year's unrecognised losses. The Institution has no further obligation in respect of further losses.

15. Investments in subsidiaries

	Institution	
	2022	2021
	$	$
Unquoted shares, at cost	**4**	4

The Group had the following subsidiaries as at 31 December 2022 and 31 December 2021:

Name	Principal activities	Country of incorporation	Effective interest held by the Group	
			2022 %	2021 %
Subsidiaries held by the Institution				
Engineers Singapore Pte. Ltd. [1]	Administering the IES/ACES Joint Professional Membership Registry and organizing and conducting training and professional development courses for the engineering professions	Singapore	**100**	100
Institution of Engineers (Singapore) Fund Ltd. [1]	Providing activities of other membership organisations	Singapore	**100**	100
Subsidiaries held by Engineers Singapore Pte. Ltd.				
IES-INCA Pte. Ltd. [1]	Management consultancy services	Singapore	**100**	100
IES Academy Pte. Ltd. [1]	Management consultancy services	Singapore	**100**	100

[1] *Audited by Lee & Hew Public Accounting Corporation, Singapore.*

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16. Trade and other payables

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Trade payables:				
- Third parties	**293,363**	246,657	**178,335**	166,163
- GST payable	**77,746**	59,376	**14,452**	14,228
Total trade payables	**371,109**	306,033	**192,787**	180,391
Other payables:				
- Amount due to subsidiaries – non-Trade	**-**	-	**716,430**	835,117
- Amount due to associate – non-Trade	**3,347**	3,277	**3,347**	3,347
- IES/ACES Joint Professional Membership Registry	**321,088**	243,535	**16**	16
- Deferred grant	**14,426**	142,186	**14,426**	142,186
- Accruals for IES Bursary Fund	**60,000**	60,000	**-**	-
Deposit received	**84,000**	84,000	**84,000**	84,000
Sundry creditors	**516,869**	184,497	**393,308**	45,000
Provision for bonus	**290,652**	274,247	**290,652**	274,247
Accrued operating expenses	**479,892**	453,404	**168,865**	235,929
Total other payables	**1,770,274**	1,445,146	**1,671,044**	1,619,842
	2,141,383	1,751,179	**1,863,831**	1,800,233

The average credit period granted by trade payables ranged from 30 to 60 days (2021: 30 to 60 days). No interest is charged on the outstanding balances.

The amount due to subsidiaries, associate and IES/ACES Joint Professional Membership Registry are unsecured, interest free and repayable on demand.

17. Deferred tax liabilities

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current income tax assets against current income tax liability and when the deferred income taxes relate to the same fiscal authority.

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Beginning of financial year	**70,546**	66,700	**56,200**	56,200
Movement during the year	**-**	3,846	**-**	-
End of financial year	**70,546**	70,546	**56,200**	56,200

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17. Deferred tax liabilities (continued)

Deferred tax liabilities for the Group and the Institution relate to the temporary differences between the tax written down value of property, plant and equipment and its carrying amount.

18. Asset capitalisation reserve

This reserve represents property, plant and equipment purchased using the building fund (Note 19). The costs of such assets once acquired are transferred from the building fund to the asset capitalisation reserve. This reserve is then reduced annually by crediting the amortisation to match the corresponding depreciation expense of the asset acquired.

	Group and Institution	
	2022	2021
	$	$
Beginning of financial year	**5,533,677**	5,759,412
Depreciation of property, plant and equipment	**(221,735)**	(225,735)
End of financial year	**5,311,942**	5,533,677

19. Capital reserve (Previously known as Accumulated Building Fund)

This represents net proceeds arising from the disposal of leasehold property at International Plaza in prior year. The leasehold property was previously purchased using the building fund.

20. Sinking fund

	Group and Institution	
	2022	2021
	$	$
Beginning and end of financial year	**693,041**	693,041

21. Scholarship fund

Scholarship fund refers to a fund designated for scholarship purposes.

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22. Commitments

Operating lease commitments – where the Group and Institution is a lessor

At the financial year end, the Group and Institution has commitments for future minimum lease receivables under non-cancellable operating leases contracted for at the statement of financial position date are as follows:

	Group and Institution	
	2022	2021
	$	$
Within one year	**336,000**	336,000
Between one to five years	**224,000**	560,000
Balance as at 31 December	**560,000**	896,000

23. Financial risk management

Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk and price risk), credit risk and liquidity risk.

The Council reviews and agrees policies and procedures for the management of these risks, which are executed by the management team. It is, and has been throughout the current and previous financial year, the Group's and the Institution's policy that no trading in derivatives for speculative purposes shall be undertaken.

The following sections provide details regarding the Group's exposure to the above-mentioned financial risks and objectives, policies and processes for the management of these risks.

(a) Market risk

There has been no change to the Group's exposure to these financial risks or the manner in which it manages and measure the risks.

(i) Currency risk

The Group and the Institution foreign currency risk results mainly from cash flows and transaction denominated in foreign currencies. The Group and the Institution are not exposed to significant currency risks as its business and transactions are conducted in SGD which is the functional currency of the Group and the Institution.

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23. Financial risk management (continued)

(a) Market risk (continued)

(ii) *Price risk*

Market price risk is the risk that the fair value or future cash flows of the Group's and the Institution's financial instruments will fluctuate because of changes in market prices (other than interest or exchange rates). The Group and the Institution do not hold equity securities and do not have any exposure to equity securities price risk.

(iii) *Interest rate risk*

The Group and the Institution are exposed to interest rate risk through the impact of rate changes on interest bearing fixed deposits. The Group and the Institution has no significant exposure to interest rate risk.

(b) Liquidity risk

In the management of liquidity risk, the Group and the Institution monitor and maintain a level of cash and bank balances deemed adequate by the Management to finance the Group and the Institution operations and mitigate the effects of fluctuations in cash flows.

The Group and the Institution's current financial assets and liabilities equal their carrying amounts and the impact of discounting is not significant.

The table below analyses the Group and the Institution's non-current financial liabilities into relevant maturity groupings based on the remaining period from the statement of financial position date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

Group	Carrying amount $	Contractual cash flow $	Within 1 year $	Within 2 to 5 years $
As at 31 December 2022				
Financial liabilities				
Lease liabilities	**217,115**	**227,700**	**118,800**	**108,900**
As at 31 December 2021				
Financial liabilities				
Lease liabilities	322,029	346,500	118,800	227,700

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23. Financial risk management (continued)

(c) Credit risk

Credit risk refers to the risk that the counterparty will default on its contractual obligations resulting in a loss to The Group and the Institution. The Group and the Institution's exposure to credit risk arises primarily from its cash and cash equivalents which the Group and the Institution minimises its credit risk by dealing exclusively with high credit rating counterparties.

The Group and the Institution has adopted a policy of only dealing with creditworthy counterparties. The Group and the Institution performs ongoing credit evaluation of its counterparties' financial condition.

The Group and the Institution considers the probability of default upon initial recognition of asset and whether there has been a significant increase in credit risk on an ongoing basis throughout each reporting period.

To minimise credit risk, the Group and the Institution has developed and maintained the Group and the Institution's credit risk gradings to categorise exposures according to their degree of risk of default. The credit rating information is supplied by publicly available financial information and the Group and the Institution's own records to rate its major debtors. The Group and the Institution considers available reasonable and supportive forward-looking information which may include the following indicators:

- Internal credit rating
- External credit rating
- Actual or expected significant adverse changes in business, financial or economic conditions that are expected to cause a significant change to the debtor's ability to meet its obligations
- Actual or expected significant changes in the operating results of the debtor
- Significant increases in credit risk on other financial instruments of the same debtor
- Significant changes in the expected performance and behaviour of the debtor, including changes in the payment status of debtors in the group and changes in the operating results of the debtor.

Regardless of the analysis above, a significant increase in credit risk is presumed if a debtor is more than 30 days past due in making contractual payment.

The Group and the Institution determined that its financial assets are credit-impaired when:

- There is significant difficulty of the debtor
- A breach of contract, such as a default or past due event
- It is becoming probable that the debtor will enter bankruptcy or other financial reorganisation
- There is a disappearance of an active market for that financial asset because of financial difficulty

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23. Financial risk management (continued)

(c) Credit risk (continued)

The Group and the Institution categorises a receivable for potential write-off when a debtor fails to make contractual payments more than 120 days past due. Financial assets are written off when there is evidence indicating that the debtor is in severe financial difficulty and the debtor has no realistic prospect of recovery.

The Group and the Institution's current credit risk grading framework comprises the following categories:

Category	Definition of category	Basis for recognising expected credit loss (ECL)
I	Counterparty has a low risk of default and does not have any past-due amounts or both prospective and past information indicates that the counterparty has a low risk of default.	12-month ECL
II	Amount is >30 days past due or there has been a significant increase in credit risk since initial recognition.	Lifetime ECL – not credit-impaired
III	Amount is >60 days past due or there is evidence indicating the asset is credit-impaired (in default).	Lifetime ECL – credit-impaired
IV	There is evidence indicating that the debtor is in severe financial difficulty and the debtor has no realistic prospect of recovery.	Amount is written off

The table below details the credit quality of the Group and the Institution's financial assets, as well as maximum exposure to credit risk by credit risk rating categories:

Group	Category	12-month or lifetime ECL	Gross carrying amount $	Loss allowance $	Net carrying amount $
31 December 2022					
Trade receivables	I, Note A	Lifetime ECL (simplified)	1,298,632	(230,613)	1,068,019
Loan to associate	III	Lifetime ECL	445,485	(445,485)	-
Others	I, Note B	12-month ECL	568,234	(24,950)	543,284
				(701,048)	
31 December 2021					
Trade receivables	I, Note A	Lifetime ECL (simplified)	943,348	(152,252)	791,096
Loan to associate	III	Lifetime ECL	445,415	(445,415)	-
Others	I, Note B	12-month ECL	456,560	(24,950)	431,610
				(622,617)	

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23. Financial risk management (continued)

(c) Credit risk (continued)

Institution	Category	12-month or lifetime ECL	Gross carrying amount $	Loss allowance $	Net carrying amount $
31 December 2022					
Trade receivables	I, Note A	Lifetime ECL (simplified)	462,022	(75,517)	386,505
Loan to associate	I, Note B	12-months ECL	170,000	(170,000)	-
Others	I, Note B	12-month ECL	874,570	(24,950)	849,620
				(270,467)	
31 December 2021					
Trade receivables	I, Note A	Lifetime ECL (simplified)	447,815	(68,462)	379,353
Loan to associate	I, Note B	12-months ECL	170,000	(170,000)	-
Others	I, Note B	12-month ECL	835,048	(24,950)	810,098
				(263,412)	

Trade receivables (Note A)

For trade receivables, the Group and the Institution has applied the simplified approach in FRS 109 to measure the loss allowance at lifetime ECL. The Group and the Institution determines the ECL by using a provision matrix, estimated based on historical credit loss experience based on the past due status of the debtors, adjusted as appropriate to reflect current conditions and estimates of future economic conditions. Accordingly, the credit risk profile of trade receivables is presented based on their past due status in terms of the provision matrix as follows:

Group	Trade receivables				
	Days past due				
	≤30 days $	31-60 days $	61-90 days $	>90 days $	Total $
31 December 2022					
ECL rate	2%	8%	14%	39%	
Estimated total gross carrying amount at default	565,783	110,836	118,860	503,153	1,298,632
ECL	(9,921)	(8,749)	(16,614)	(195,329)	(230,613)
					1,068,019
31 December 2021					
ECL rate	0.1%	0.1%	0.8%	47.5%	
Estimated total gross carrying amount at default	171,724	490,879	83,510	197,235	943,348
ECL	(80)	(452)	(667)	(151,053)	(152,252)
					791,096

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23. Financial risk management (continued)

(c) Credit risk (continued)

Institution	Trade receivables				
	Days past due				
	≤30 days	31-60 days	61-90 days	>90 days	Total
	$	$	$	$	$
31 December 2022					
ECL rate	2%	11%	41%	36%	
Estimated total gross carrying amount at default	239,331	34,008	16,043	172,640	462,022
ECL	(3,750)	(3,750)	(6,597)	(61,420)	(75,517)
					386,505
31 December 2021					
ECL rate	0.1%	0.3%	4.3%	44.6%	
Estimated total gross carrying amount at default	141,261	153,786	321	152,447	447,815
ECL	(8)	(388)	(14)	(68,052)	(68,462)
					379,353

Other receivables (Note B)

The Group and the Institution assessed the latest performance and financial position of the counterparties, adjusted for the future outlook of the industry in which the counterparties operate in, and concluded that there has been no significant increase in the credit risk since the initial recognition of the financial assets. Accordingly, the Group and the Institution measured the impairment loss allowance using 12-month ECL.

Excessive risk concentration

Concentration risk arises when a number of counterparties are engaged in similar business activities, or activities in the same geographical region, or have economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic, political or other conditions. Concentration risk also indicates the relative sensitivity of the Group and the Institution's performance to developments affecting a particular industry.

Exposure to credit risk

The Group and the Institution have no significant concentration of credit risk. The Group and the Institution has credit policies and procedures in place to minimise and mitigate its credit risk exposure.

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23. Financial risk management (continued)

(d) Fund management

The Group's objectives when managing its funds are to safeguard its ability to maintain adequate working capital to continue as going concern to promote its objective to lead, develop and support engineering professionals in Singapore and uphold the public interest. These objectives remain unchanged from the previous financial year.

(e) Fair value measurements

The carrying value less impairment provision of current trade receivables and payables approximate their fair values. The fair value of financial liabilities is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Group and the Institution for similar financial instruments.

(f) Financial instruments by category

The aggregate carrying amounts of financial assets and financial liabilities at amortised cost are as follows:

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
At amortised cost				
Financial assets	**12,657,551**	11,455,292	**7,328,031**	6,954,707
Financial liabilities	**2,280,752**	2,175,159	**1,849,379**	1,786,005

(g) Offsetting financial assets and financial liabilities

There are no financial assets and financial liabilities that are offset on the statement of financial position other than related party balances where such balances pertain to the same counterparty and where there is intention to settle net by both parties.

24. Related party transactions

In addition to the information disclosed elsewhere in the financial statements, the following transactions took place between the Group and the Institution and related parties at terms agreed between the parties:

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24. Related party transactions (continued)

	Group		Institution	
	2022	2021	**2022**	2021
	$	$	**$**	$
Administrative service fee expense paid by subsidiaries to the Institution	**-**	-	**398,917**	402,179
Administrative service fee income from IES/ACES Joint Professional Membership Registry	**288,000**	288,000		-
Share of profit from IES/ACES Joint Professional Membership Registry	**88,592**	121,287		-
Allocation of government grant by the Institution to subsidiaries	**-**	-	**-**	161,783
Recharge of payroll costs by the Institution to subsidiaries	**-**	-	**1,422,064**	1,468,379

Key management personnel are Council members, those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly and indirectly.

Council members of the Institution did not receive any remuneration from the Institution during the financial year.

Balances with related parties at the statement of financial position date are unsecured, interest free, receivable/ payable on demand and are disclosed in Notes 11 and 16 respectively.

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25. New or revised accounting standards and interpretations

The Group and the Institution has not early adopted any mandatory standards, amendments and interpretations to existing standards that have been published but are only effective for the Group and the Institution's accounting periods beginning on or after 1 January 2023. However, management anticipates that the adoption of these standards, amendments and interpretations is not expected to have a material impact on the financial statements of the Group and the Institution in the period of their initial adoption.

26. Authorisation of financial statements

These financial statements were authorised for issue by the Council of The Institution of Engineers, Singapore on the date of the Statement by Council.

The Institution of Engineers, Singapore
70 Bukit Tinggi Road, Singapore 289758
Tel : 6469 5000 | Fax : 6467 1108
Website : https://www.ies.org.sg

facebook.com/engineerssg
@engineerssg