

# ANNUAL REPORT

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HEART AND VOICE OF ENGINEERS

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## MISSION

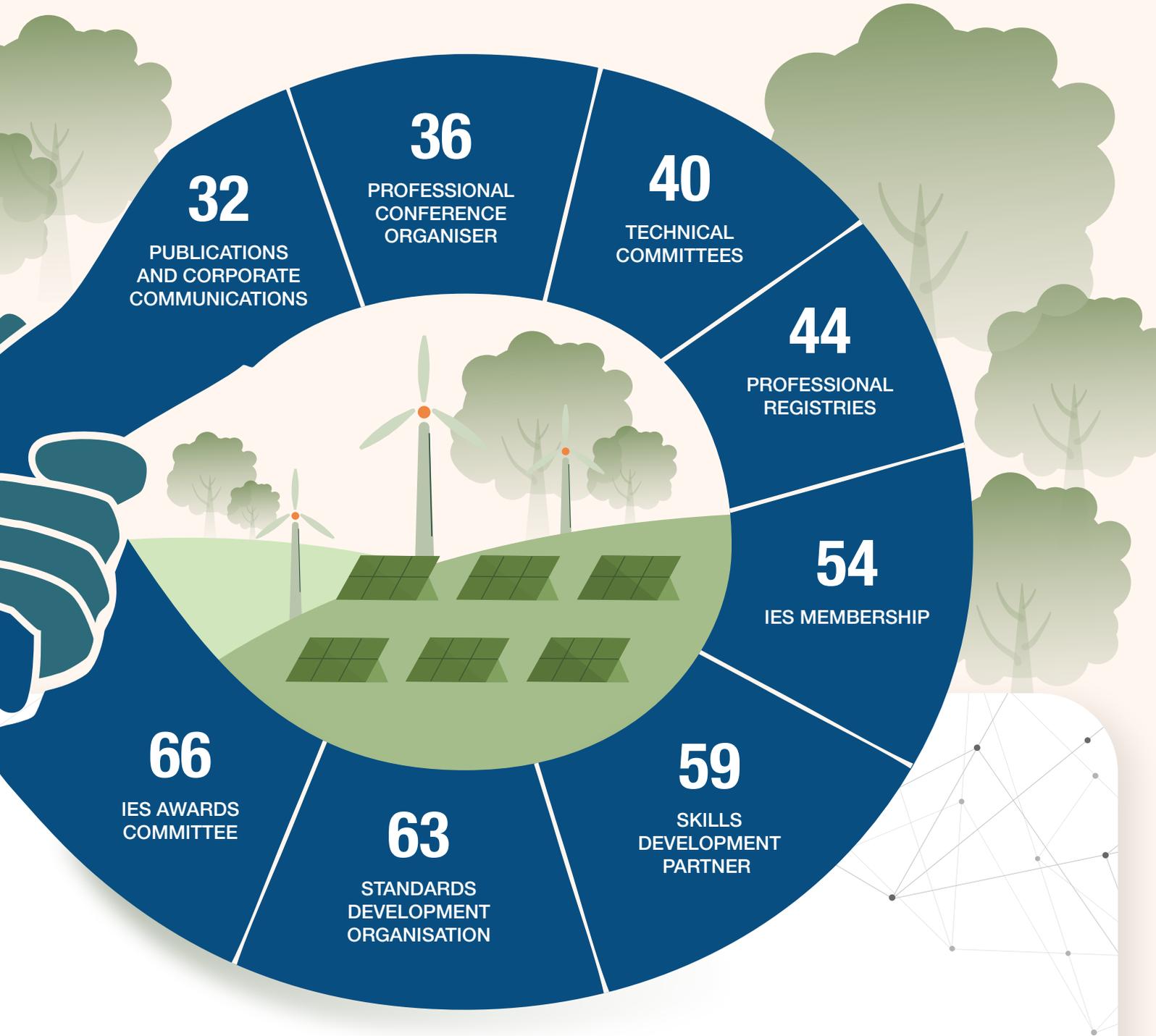
To advance and promote the science, art and profession of engineering for the well-being of mankind and national development of Singapore



## 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 58TH AGM NOTICE OF MEETING



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25 April 2024

To: All Corporate Members

## 58<sup>th</sup> ANNUAL GENERAL MEETING

Notice is hereby given that the 58th Annual General Meeting (AGM) of The Institution of Engineers, Singapore will be held at 1.00 pm on **Saturday, 25 May 2024, at Dunearn Ballroom II and III, Level 1, Raffles Town Club, 1 Plymouth Avenue Singapore 297753. (Raffles Town Club is near the Downtown Line Stevens MRT Station).**

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

The Minutes of the 57th Annual General Meeting held on Saturday 27 May 2023, President's Annual Report for Session 2023/24, Treasurer's Report and Statement of Accounts for FY2023 will be posted at the Members' Portal 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](mailto:honsec@iesnet.org.sg) by noon on Friday, 10 May 2024.

Please submit the completed e-Proxy Form via the link below at the latest by Thursday, 23 May 2024 if you are unable to attend the AGM.

Link for e-Proxy Form: [E-Proxy Form 2024](#)

For catering arrangements and to ensure seats are reserved for you, please click <https://form.jotform.com/241131574969463> to register online, by Friday, 17 May 2024.

(Associate Members are welcome to attend as Observers.)

Er. David Ng  
Honorary Secretary, IES

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25 April 2024

## IES 58<sup>th</sup> ANNUAL GENERAL MEETING

### A G E N D A

1. Meeting declared open by IES President, Mr Dalson Chung.
2. Confirmation of Minutes of the 57th AGM.
3. Matters Arising.
4. President's Annual Report for 2023/24 Session.
5. Treasurer's Report and Statement of Accounts for 2023.
6. Election of Honorary Auditors.
7. Results of Election of Vice Presidents for May 2024 to May 2026 Sessions.
8. Results of Election for vacancies in the Council for May 2024 to May 2026 Sessions.
9. Any Other Business.

Er. David Ng  
Honorary Secretary, IES

# MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

MINUTES OF THE 57TH ANNUAL GENERAL MEETING OF THE INSTITUTION OF ENGINEERS, SINGAPORE, HELD ON 27 MAY 2023 AT THE SUNTEC INTERNATIONAL CONVENTION AND EXHIBITION CENTRE

S/N	ITEM	ACTION BY
1.	<b>THE MEETING WAS DECLARED OPEN BY IES PRESIDENT, MR DALSON CHUNG</b>	
1.1	<p>The IES 57th Annual General Meeting (AGM) was called to order at 1.00 pm by IES President Mr Dalson Chung. A quorum was reached by virtue of the 135 Members present at the Meeting. The following EXCO Members were on the panel together with Mr Chung:</p> <ul style="list-style-type: none"> <li>• Er. Chan Ewe Jin (Vice President)</li> <li>• Er. Joseph Goh (Vice President)</li> <li>• Ms Jasmine Foo (Vice President)</li> <li>• Mr Danny Lee (Vice President)</li> <li>• Mr Mervyn Sirisena (Vice President)</li> <li>• Er. S Yogeeswaran (Vice President)</li> <li>• Er. David Ng (Hon Secretary)</li> <li>• Er. Simon Lee (Hon Treasurer)</li> </ul> <p>The Agenda for the AGM was emailed to Members on 27th April 2023 shared on the screen. It was adopted.</p> <p>Proposer: Mr Lee Kwok Weng Seconder: Mr Bhushan Kumar Oberoi</p>	
2.	<b>CONFIRMATION OF MINUTES OF 56th AGM</b>	
	<p>The minutes of the 56th AGM were posted at the Members' Corner page on the IES website and shared on the screen.</p> <p>As there were no comments, the minutes were confirmed without amendments.</p> <p>Proposer: Er. See King Chai Seconder: Er. Assoc Prof Lim Kok Hwa</p>	
3.	<b>MATTERS ARISING</b>	
	President went through the matters arising from the 56th AGM:	
3.1	<p><u>Action Item No 4.2:</u> One of the Members asked why the young engineers were not joining IES and how could IES reverse this situation.</p> <p>IES Vice President of 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 on how to encourage young engineers to join IES. They were fine-tuning the Membership package and would give an update at the next AGM.</p>	

	<p><u>Follow-Up Action from Er. Yogeewaran:</u>  <u>One impactful way was to engage current student members from Institutes of Higher Learning before and after they graduated. Especially for male students from polytechnics who would need to serve National Service (NS), it was important to engage them just before they completed their NS to ensure that they would not switch “career” easily and stay on with Engineering. When IES became successful in doing this, our young Engineers numbers should see an increasing trend. This practice was already in progress.</u></p> <p>As for the graduates from universities, reminder emails would be sent before their graduation followed by every half yearly email to keep them abreast of IES activities. Special rates would be rendered to this group of Engineers joining us as member of IES. This practice would start from Q4 2023.</p> <p>IES was also looking into finalising some new benefits and initiatives to attract engineers to join IES as members. IES Council had deliberated on this. These should be announced in Q4 of 2023.</p>	
<p>3.2</p>	<p><u>Action Item No 5.13</u>          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 would the Council plan to attract the younger engineers.</p>	
<p>3.3</p>	<p><u>Action Item No 5.14</u>          Mr Syafiq Shahul, Chairman of Young Engineers replied that they were running a series of 8 webinars recently 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.</p> <p><u>Follow-Up Actions from Mr Syafiq Shahul:</u>          Engagement with young graduating Engineers would be the focus in the coming session to beef up the number of members who were less than 30 years old. Some of the actions IES would be doing include:</p> <ul style="list-style-type: none"> <li>- Progressively looking for value propositions especially for graduating student members from universities.</li> <li>- Sending reminder emails to graduating student members before their graduation.</li> <li>- Reaching out to those graduated student members every half year to engage them for IES activities.</li> </ul> <p><u>Action Item No 5.10</u>          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 Professional Development requested the technical committee chairmen to look at this.</p> <p><u>Follow-Up Action from Er. Chan Ewe Jin:</u>          Vice President of Engineering Excellence, Er. Chan Ewe Jin updated that IES had been organising activities/events over the weekends to accommodate individuals and professionals who might have weekday commitments. Some of these events provided opportunities for more professionals to participate and they had proven to be successful in cultivating relevant knowledge, skills, and professional growth.</p> <p>For example, the event on “Root cause and Lesson Learnt from the 2019 Shenzhen Bay Bridge Tendon Failure Incident” was held on 16 July 2022 (Saturday) and “2009 Cologne Metro Collapse: Root Cause &amp; Lessons Learnt” on 19 February 2022 (Saturday). Er. Chan further encouraged all IES members to visit our website and social media for upcoming events.</p>	

## MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

	<p><u>Action Item No 10.1:</u> IES Member Mr Balaji raised the question on the fees of \$30 and \$60 charged by technical committees. Er. Chan Ewe Jin said he and the technical committees would look at it.</p> <p><u>Follow-Up Action from Er. Chan Ewe Jin</u> IES kept the fees charged for Technical Committees events competitive compared to other seminars in the industry while still offering great value for the price charged.</p> <p>Most of the events were conducted by industry experts who had years of experience in their respective fields. The information and insights shared during the seminar could be invaluable to professionals in the same field and even those who were just starting. The fees charged also covered the costs of hosting the seminar, including the venue rental, equipment, and other logistical expenses.</p> <p>IES aimed to provide a high-quality learning experience for all attendees. Hence, investment in the necessary resources was essential to make that happen.</p>	
<b>4.</b>	<b>PRESIDENT'S ANNUAL REPORT FOR 2022/2023 SESSION</b>	
4.1	<p>IES President presented his report at the 57th Annual General Meeting (AGM) of the Institution of Engineers, Singapore (IES).</p> <p>He said in the past year, IES had made significant progress on all fronts, and he was delighted to share the achievements with Members. The President's report is attached.</p>	
4.2	<p>After Mr Chung finished his report, one Member Mr Benjamin Chua enquired on the digitisation programme. He also asked if there would be a registry for digitisation and cybersecurity engineers. President gave an affirmative reply to both enquiries.</p>	
4.3	<p>IES Member Mr Adam Meng Au Khan asked about the basis of qualifying professional engineers, i.e. was it based on academic qualifications or years of experience? He felt that he should be qualified to be a professional engineer but was rejected as the Professional Engineers Board (PEB) said that he was not qualified enough though he had many years of professional experience. President requested Mr Adam Meng Au Khan to provide the details to the secretariat for IES' follow-up with PEB.</p>	
4.4	<p>IES Member Mr Althaf Hussain said that he had applied to be Resident Engineer, but he was told that his application was not successful. He had written to the Straits Times, after which he received a call from IES that his application was successful. He felt that education was a state of mind not qualification.</p>	
4.5	<p>President congratulated Mr Hussein and assured him that the engineering technicians had been looked after under the newly formed Chartered Engineering Board.</p>	
4.6	<p>Mr Adam Meng commented that IES should be more liberal and allowed his partner, an engineer but not IES Member to attend the AGM. Hon Secretary Er. David Ng explained that only IES Members were allowed to attend that AGM, as stipulated in the IES Constitution. Mr Lee Kwok Weng suggested that she joined IES as a Member so that she could attend IES AGMs.</p>	
4.7	<p>Another IES Member, Mr Warren Lim asked what IES had done to attract the young engineers to join IES. The President said that currently, IES had student chapters in five polytechnics and various universities, and there were about 5,000 Student Members.</p>	
4.8	<p>IES Member Mr Kogi felt very encouraged and said that it was not easy to get members to join IES and to stay as engineers. Hence, he saluted IES for its efforts..</p>	
4.9	<p>President's Report was adopted: Proposer: Mr Adam Meng Au Khan Secunder: Mr Jason Oh</p>	

## MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

<b>5.</b>	<b>ELECTION OF HONORARY AUDITORS FOR 2023</b>	
5.1	President Mr Dalson Chung expressed his appreciation to Dr Ang Keng Been and Dr Chandra Segaran for being the Honorary Auditors for 2022.	
5.2	The following Members were appointed as Honorary Auditors for the year 2023: First Honorary Auditor: David Shi Congfei Proposer: Mr Cheang Yu Kong Seconder: Er. Peter Yap Kwong Ling Second Honorary Auditor: Mr Yee Boon Cheow Proposer: Er. Assoc Prof Lim Kok Hwa Seconder: Er. Lew Yii Der	
<b>6.</b>	<b>HONORARY TREASURER'S REPORT AND STATEMENT OF ACCOUNTS FOR 2022</b>	
6.1	Er. Simon Lee presented the Financial Report. For the year 2022. IES Group generated revenue of \$5,892,216 in 2022. Our group net surplus was \$441,173 before tax	
6.2	As there were no questions, the Treasurer's report was adopted. Proposer: Mr Lee Kwok Weng Seconder: Er. Lum Chong Chuen	
<b>7.</b>	<b>RESULTS OF ELECTION OF DEPUTY PRESIDENT FOR MAY 2023 TO MAY 2024 SESSION</b>	
	Hon Secretary Er. David Ng announced that Er. Chan Ewe Jin had been elected as Deputy President.	
<b>8.</b>	<b>RESULTS OF ELECTION OF VICE PRESIDENT FOR MAY 2023 TO MAY 2025 SESSIONS</b>	
	Hon Secretary Er. David Ng announced that Er. Chan Ewe Jin had been elected as Deputy President.	
<b>9.</b>	<b>RESULTS OF ELECTION FOR VACANCIES IN COUNCIL FOR MAY 2023 TO MAY 2025 SESSIONS</b>	
9.1	Er. David Ng announced the results of the Council Election for 2023/24-2024/25 Sessions: For Civil & Structural Engineering Division, there were two vacancies, Mr Lew Yii Der and Er. Sharron Ng were elected. For Electrical Engineering Division, there were two vacancies, Er. Jacqueline Chan and Er. Seow Kang Seng were elected. For Electronics and Computer Engineering Division, there was one vacancy, Mr Chang Sau Sheong was elected. For Mechanical Engineering Division, there were two vacancies, Dr Harry Lim and Er. Ng Beow Suan were elected.	
9.2	For the three vacancies in any division of engineering, the following Members were elected: Dr Adrian Ang, Dr Victor Sim and Mr Soh Tiam Chwee	

## MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

9.3	<p>For the 1 vacancy in Associate Representative in Council, there was no election as there was no candidate.</p> <p>President thanked the following Council Members who would be retiring from the Council:</p> <p>Dr Boh Jaw Woei, Council Member Dr Er Meng Joo (Absent with apology), Council Member Mr Jason Oh, Council Member Mr Dennis Tan, Council Member Mr Yee Boon Cheow, Council Member</p>	
<b>10.</b>	<b>ANY OTHER BUSINESS</b>	
	<p>IES Member Mr David Shi suggested to raise the age limit of young engineers to 40 years of age. President Mr Chung said that he would discuss with Council before bringing it up at the next AGM. Mr Syafiq Shahul said that under the IES Constitution, the limit was 35 years of age.</p>	
<b>11.</b>	<b>CLOSE OF MEETING</b>	
	<p>The meeting was declared closed at 2.55 pm.</p>	

Recorded by: Ms Tan Siew Keow

Vetted by: Er. David Ng & Ms Emily Tan

Approved by: Mr Dalson Chung

# PRESIDENT'S MESSAGE

The past year abounded with exciting developments for The Institution of Engineers, Singapore (IES). Guided by our strategic 'Inclusive, Empathy, Stability' ('I.E.S.') framework, we have achieved significant milestones on multiple fronts.

## Key Accomplishments

### *IES Green Plan 2030*

We continued to take the IES Green Plan 2030 forward to advance Singapore's sustainable development. Throughout the year, the plan served as a cornerstone of our strategies, lending a crucial green directive to our three pillars.

### *'Inclusive' Pillar*

Under the 'Inclusive' pillar, we focused on creating a more equitable and supportive environment for current and future engineering professionals to thrive and contribute.

Key events in the past year include the Charles Rudd Distinguished Public Lectures held on 25 May 2023 themed 'Transitioning to a Net-Zero World' to move engineers to the driver's seat in Singapore's transition to a circular economy, with over 1,200 in-person attendees and 3,000 virtual attendees.

We continued to intensify our efforts to enhance professional recognition of our engineers. Notable milestones include unveiling of the IES Chartered Engineer (CEng) in Sustainability certification framework; expansion of CEng to Sustainability, Built Environment and Renewable Energy sectors by the restructured Chartered Engineering Board; growing the total number of CEng, Chartered Engineering Technologists and Chartered Engineering Technicians from 823 to 859; and increasing the total number of registered Resident Engineers (REs) and Resident Technical Officers (RTOs) from 4,415 to 4,673 and from 7,617 to 7,761 respectively.

In the year, the IES Academy partnered with the Workforce Singapore (WSG) to initiate the Career Conversion Programme for RTO. This is aligned to our goal of helping engineering professionals strengthen their career resilience and adaptability.



Continuous learning across all stakeholder groups is another integral aspect of promoting inclusivity. IES renewed our second Memorandum of Understanding (MoU) with the Institution of Mechanical Engineers (IMechE) Singapore Chapter and signed an MoU with 11 Institutes of Higher Learning (IHLs) to boost engineering expertise in Singapore. With these MOUs, we can tap on their global network and capability programmes to provide our members with more opportunities and tools for professional growth.

We also continued our good work with the IES Incubator and Accelerator (IES-INCA), adding four new incubatees to its name, organising eight events on best practices in technopreneurship and running six training courses on business skills for engineers.

To promote engineering to the younger generation, IES held the annual National Engineers Day (NED) on 26 August 2023 under the theme 'Engineering for Resilient City Living'. Deputy Prime Minister Heng Swee Keat engaged in a fireside chat with students as the guest-of-honour at the NED Prize Presentation Ceremony. The annual Engineering Innovation Challenge (EIC) gave local and international students the opportunity to apply their STEM knowledge to real-world challenges. At the event, IES launched three IES-ITE (East, Central and West) student chapters, which added another 5,000 engineering students, bringing the total number of engineering students among our 14 IES student chapters at the IHLs to 20,000.

On the international front, IES held the World Engineers Summit (WES) from 8 to 10 November 2023 to advance engineering solutions on a global scale, under the theme 'Engineering for a Sustainable Future'. WES featured the first-ever China Engineers Forum, a collaboration among IES, the China Association for Science and Technology (CAST) and its China Society

## PRESIDENT'S MESSAGE

of Engineers. IES also participated in CAFEO 41 in Bali, Indonesia and joined our friends in the ASEAN Federation of Engineering Organisations to promote efforts in "Igniting ASEAN's Blue Economy and Green Energy".

### *'Empathy' Pillar*

The 'Empathy' pillar underscores our responsibility towards the environment and the society. Exciting outcomes in the year include the installation of two electric vehicle (EV) chargers at the IES Building carpark and the first IES Mass Tree Planting event where DPM Heng Swee Keat joined 100 engineers in planting 50 trees at Tampines Eco Green in support of the OneMillionTrees movement.

In the area of corporate social responsibility, IES gifted \$300,000 to the National University of Singapore (NUS) for the establishment of the YC Wong IES Research in Construction Project Management Fund.

### *'Stability' Pillar*

Under the third pillar, 'Stability', IES persisted in uplifting the image of IES and the engineering profession. This was delivered through the presentation of several prestigious awards at the IES 57th Annual Dinner on 9 November 2023, including the inaugural IES Sustainability Awards.

I am pleased to share that our Emeritus President Er. Tan Seng Chuan, became the first Singaporean to be appointed as the President-Elect of the World Federation of Engineering Organizations (WFEO) in October 2023.

IES strengthened its branding by proactively deepening our partnership with more than 30 industry stakeholders under the IES Green Plan 2030. This series of engagements has paved the way for many exciting collaborative initiatives to build a green future.

We also continued to maintain significant media presence, securing opportunities for our representatives to contribute expert insights on various engineering matters in the media. In 2023, we garnered a total of 293 pieces of coverage, equivalent to about S\$3,134,463 in terms of media value – a 65% increase over 2022's media value of S\$1,902,435.

All in all, the I.E.S. framework has helped to advance IES' four strategic focal areas in Engineering Excellence, Professional Development, Professional Registration and Internationalisation.

For Engineering Excellence, our 16 Technical Committees (TC) organised more than 39 webinars

and seminars in 2023, focusing on sustainable engineering practices.

In Professional Development, our partnership with SkillsFuture Singapore as a Skills Development Partner blossomed into taskforces in four new sectors in Electric Vehicle (EV) Maintenance, EV Charger and Solar Panel Deployment, Sustainability and the Built Environment. This included the launch of the IES CEng in Sustainability sector certification to meet industry demands. In total, we have liaised with 80 enterprises to signal priority core skills, engaged 23 enterprises in job redesign and/or other skills intervention to meet sectorial demands and 22 enterprises to adopt skills recognition for credentialing pathways; and channelled 425 employees and individuals to SSG's training programmes.

In the area of Professional Registration, we have witnessed growth across all our accreditation programmes in 2023 over 2022. We have more than 800 Chartered Engineers, Chartered Technologists and Chartered Technicians; 1,371 Singapore Certified Energy Managers (SCEM) and 272 Associate Singapore Certified Energy Managers (ASCEM) in the SCEM Registry. We have 11 engineering programmes in Singapore being evaluated by IES' Engineering Accreditation Board (EAB) for full accreditation – more than double the number in 2022.

In the fourth strategic focal area, Internationalisation, we expanded our engineering blueprint significantly abroad, signing nine MoUs from 2023 to date. Our partnership has grown to include organisations across regions, such as the Institution of Engineers, Indonesia (PII), National Super Computer Centre Singapore (NSCC), CAST and several IHLs.

In total, together with a slew of membership activities, we have attracted 420 engineers to join IES, further expanding our membership database. Moving forward, members can anticipate the progressive launch of lifestyle benefits with commercial merchants.

I would like to express my deepest gratitude to all our members, the IES Council and the IES Secretariat for their invaluable contributions in making the past year such a fruitful one. I came across an emphatic statement that "engineers have to save the world" recently and hope that IES will continue to reach greater heights in making this maxim a reality.

Mr Dalson Chung  
IES President

# ENGINEERING ACCREDITATION BOARD

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

The Engineering Accreditation Board (EAB), which is a unit of IES, is responsible for accrediting engineering degree programmes offered by local universities and academies. It comprises 19 members and is chaired by Dr Lim Kiang Wee.

In 2023, a total of 11 engineering programmes in Singapore were evaluated by EAB for Full 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 Kiang Wee and Director Dr Chau Fook Siang.

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

At the IEA Meeting, Advisor to EAB, Er. Prof Lock Kai Sang was elected Chair of the Washington Accord for a two-year term effective June 2023.

Several EAB members participated in WA's Reviews of other jurisdictions during the year; they were Mr Harish Pillay (Australia), Prof Cheong Hee Kiat (Chile) and Prof Pey Kin Leong (China). Meanwhile, Prof Paul Sharratt and Er. Lim Peng Hong have been appointed as members of the Review Teams for South Africa and Saudi Arabia respectively.

## Other EAB Activities

EAB, in collaboration with the Hong Kong Institution of Engineers, the China Association for Science and Technology (CAST) Talent Service Centre and three universities in China organised the International Engineering Education Symposium 2023 in Ningbo, China in November 2023. The Symposium, which was hosted by the China Engineering Education Accreditation Association, featured four keynote lectures as well as 42 sub-forum presentations covering diverse topics. The delegates also toured sites of engineering achievements and cultural interest in the region. The Workshop was attended by over 300 scholars and administrators from 27 global engineering educational institutions and 127 universities.



Members of the EAB Evaluation Team for the BEng (Civil Engineering) and BEng (Environmental Engineering) Programmes with some faculty of Nanyang Technological University.

# INTERNATIONAL OUTREACH COMMITTEE

## World Engineering Day (WED) 2023 - IES Green Festival 2023

In celebration of the World Engineering Day (WED) on 4 March, IES once again partnered the World Federation of Engineering Organisations (WFEO) to organise a first-of-a-kind celebration – the IES Green Festival 2023. To drive the message of sustainable development, the Festival was curated to enthuse the younger generation of Singaporeans and to promote the awareness of the contributions engineering & engineers have made to our daily lives by showcasing sustainable initiatives being developed and amplifying the appreciation and adoption of green activities through fun and interactive programmes and activities.

The 3-hour Festival attracted over 500 physical attendees and the event is one of two WFEO signature events to be broadcasted live to the WFEO network, comprising of more than 100 nations, reaching over 30 million engineers globally.

Singapore also participated in the WED Hackathon and Singapore Polytechnic and Temasek Polytechnic flew Singapore's flag high for making it to the top 12 finalist, beating over 112 other teams from over 23 countries.

## Highlights of the IES Green Festival

### Fireside Chat



Fireside Chat with Dr Amy Khor, Senior Minister of State, Ministry of Sustainability and the Environment.

### Bicycle Dynamo Challenge



Bicycle Dynamo Challenge - to light up World Engineering Day (WED)



Bike Dynamo

Trivia Trail



Trivia Trail

Tech Talks



Tech Talk Speaker Mr Peter Ho, HOPE Technik



Tech Talk Speaker Mr Atem S. Ramsundersingh, WEnergy Global

Green Nation Pledge



Pledge Wall

Exhibitions



Exhibitions 1



Exhibitions 2

## INTERNATIONAL OUTREACH COMMITTEE

### Special-edition WED: The Singapore Engineer magazine



WED E Mag

### Women in Sustainability Interviews



GF - Women

### Drone Challenge



GF - Drones

### MoU Signing with Persatuan Insinyur Indonesia (PII)

The Festival also saw the inking of an MoU with Persatuan Insinyur Indonesia (PII) to strengthen ties and collaborate on potential business opportunities / events, growing of the organisations' membership, facilitation of internship exchange programme as well as organisation of technical visits.



IES – PII MoU Signing (from left to right) Ir. Andi Sanjaya Tjong, Chairman PII Singapore Branch, Er. Edwin Khew, IES Emeritus President, Mr Dalson Chung, IES President, Dr. Ir. Danis Hidayat Sumadilaga, PII President, His Excellency Ambassador Suryopratomo, Indonesia Ambassador to Singapore, Dr Boh Jaw Woei, Chairman IES-WED 2023 Organising Committee

### Charles Rudd Distinguished Public Lectures 2023

Organised jointly with the World Federation of Engineering Organisations (WFEO) and the Singapore Polytechnic (SP), the Charles Rudd Distinguished Public Lectures 2023 centered around the theme of “Transitioning to a Net-Zero World”, addressing crucial issues related to the world’s worsening climate crisis.

The event was graced by Guest-of-Honour Mr Desmond Lee, Minister for National Development and Minister-in-Charge of Social and Services Integration. Mr Lim Tuang Liang, the first Government Chief Sustainability Officer, Ministry of Sustainability and the Environment delivered the distinguished keynote address, offering insights into Singapore’s sustainability efforts and the global imperative for environmental stewardship.

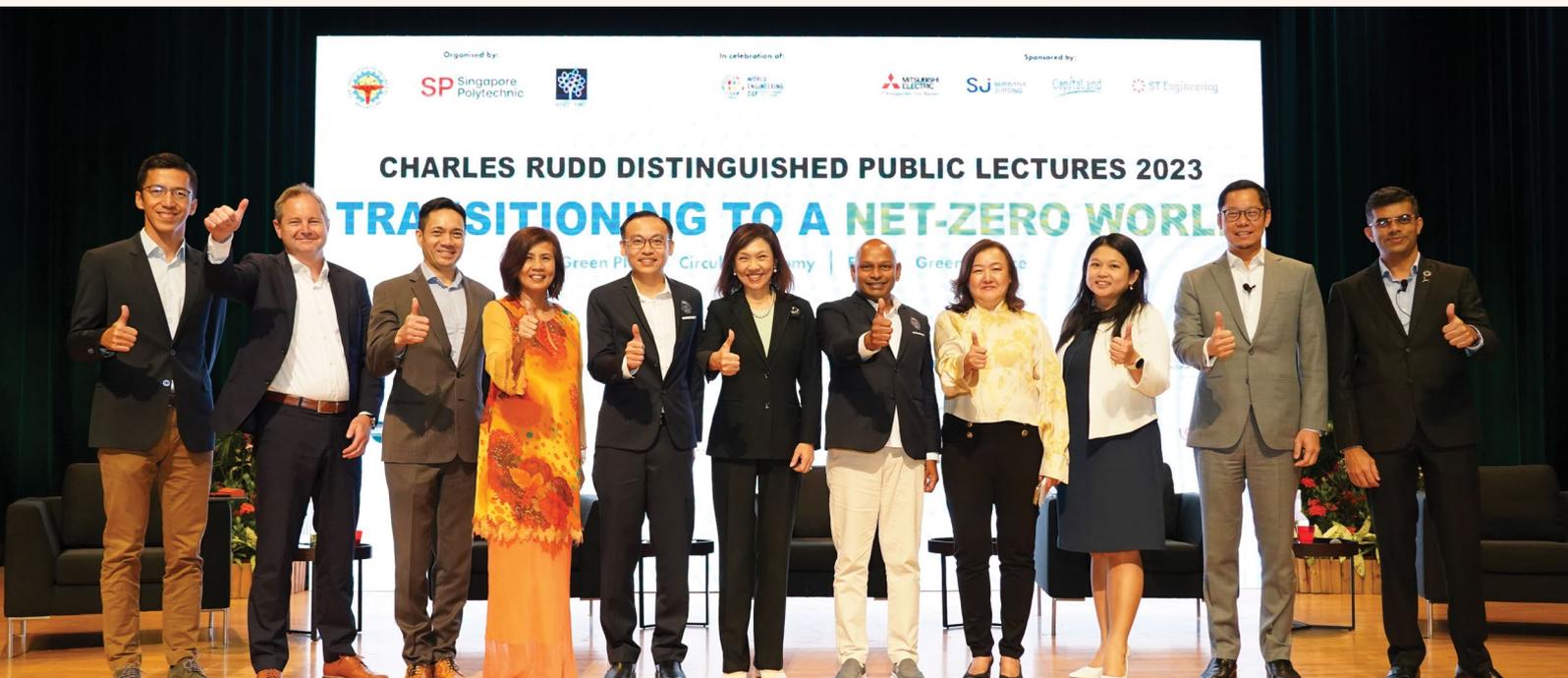
The event also comprised of panel discussions where sustainability practitioners and experts provided their insights on two topics: “Empowering Net-Zero Transition through Green Plan and Circular Economy” and “ESG and Green Finance: Latest Strategies, Trends and Future Outlook”



Mr Desmond Lee, Minister for National Development and Minister-in-Charge of Social and Services Integration delivering the GOH Address



Mr Lim Tuang Liang, the first Government Chief Sustainability Officer, Ministry of Sustainability and the Environment delivering the distinguished keynote address



Group Photo with the Panelists (from left to right): Mr Henry Woon, Director, Atelier Ten (Asia), Mr Truls Lystang, Group Senior Vice President, Head of Sales, INDUSTRY Division, Grundfos, Mr Manuel Ong, General Manager, Danfoss Singapore, Ms Rohaya Saharom, Vice President, Sustainable Solutions, Mandai Wildlife Group, Mr Danny Lee, Chairman, Charles Rudd Distinguished Public Lecture 2023, Ms Georgina Phua, Deputy Principal (Development), Singapore Polytechnic, Prof Seeram Ramakrishna (Moderator), Chairman, Circular Economy Taskforce, NUS & Chairman, Sustainable Manufacturing Technical, Committee, IES, Ms. Isabella Huang-Loh, Chairman, Singapore Environment Council, Dr Lee Hui Mien, Senior Director, Group Environmental Sustainability, Singtel, Mr Eric Lim, Chief Sustainability Officer, UOB, Mr Vinamra Srivastava, Chief Sustainability Officer, CapitalLand Investment

## INTERNATIONAL OUTREACH COMMITTEE

### 41st Conference of the ASEAN Federation of Engineering Organisations (CAFEO 41)

The 41st Conference of the ASEAN Federation of Engineering Organisations (CAFEO 41), themed "Igniting ASEAN's Blue Economy and Green Energy" was held on 20 – 23 November 2023 in Bali International Convention Centre, Indonesia.

The event was hosted by PII, the AFEO Chair for 2023, and gathered more than 1000 engineering delegates from ASEAN and worldwide.

#### Opening Ceremony

CAFEO 41 was officially opened on 22 November 2023 by the Coordinating Minister for Economic Affairs of Indonesia, Ir. Airlangga Hartarto. The ceremony also saw the conferment of the Distinguished Honorary Patron to the Fifth Indonesian President, Megawati Soekarnoputri for her contribution to the engineering profession.



Ir. Airlangga Hartarto, Coordinating Minister for Economic Affairs of Indonesia giving the Opening Speech

### 2023 ASEAN-China Engineers Forum

The ASEAN-China Engineers Forum at CAFEO 41 was organized as a platform for collaboration and exchange between engineering professionals from the ASEAN region and China. The forum also saw the inking of an MoU between the Chinese Society of Engineers (CSE) and PII.



CSE



MOU Signing between CSE and PII



Fifth Indonesian President, Megawati Soekarnoputri receiving the AFEO Distinguished Honorary Patron Award

**Closing Dinner**

CAFEO 41 concluded with the closing dinner with several significant events, bringing together delegates, speakers, and organisers to mark the end of the conference.



Remarks by WFEO President Engr. Mustafa B. Shehu



IES Vice President, Ms Jasmine Foo receiving the AFEO Honorary Fellow award.



Project recipients of the ASEAN Outstanding Engineering Achievement Award. (from left: Rolls Royce, NUS, PSA Corporation, A\*Star and Customize Technologies).



IES President Mr Dalson Chung receiving the token of appreciation on behalf of founding AFEO Member, Mr Tay Sin Yan



Handover of the AFEO Chairmanship from Indonesia to Malaysia



IES country performance

## INTERNATIONAL OUTREACH COMMITTEE



Group photo of the IES delegation to CAFEO 41

CAFEO plays a pivotal role in fostering cooperation and knowledge sharing among ASEAN countries serving as a platform for attendees to network, interact with industry leaders, establish collaborations, and explore potential partnerships to continuously develop and advance engineering practices within the region.

### WFEO New President-Elect - IES Emeritus President Er. Tan Seng Chuan

For the first time in its history, the World Federation of Engineering Organisations (WFEO) has elected Singaporean Er. Tan Seng Chuan to be its President-Elect at the organisation's general assembly, which was held in Prague, Czech Republic on October 14, 2023.

This is the first time a Singaporean national will assume the leadership in a global-level engineering body. WFEO is a high-level international organisation for the field of engineering, with more than 100 member nations representing over 30 million engineers across the world.

Er. Tan Seng Chuan was nominated to represent Singapore at the WFEO general assembly, where he received the majority of votes which secured his place as the next President of the organisation. He will take on his new role in Shanghai, China end of 2025, for a period of two years.



Er. Tan Seng Chuan

A highly accomplished engineer, Er. Tan served in various capacities in the WFEO, the ASEAN Federation of Engineering Organisations (AFEO), the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) as well as the International Engineering Alliance (IEA).

Back home, Er. Tan was the President of the Institution of Engineers, Singapore (IES) from 2006 – 2008 and is currently the chairman of the Chartered Engineering Board of Singapore, the chairman of PUB Active, Beautiful, Clean Waters Professional Monitoring Committee, a member of the Industry Advisory Committee for Sustainability Education Committee at the Singapore Institute of Technology (SIT) and a member of the NTU Advisory Committee for their BSc environmental programme.

# IES-INCUBATOR AND ACCELERATOR

In 2023, 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 since 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.

At the end of 2023, INCA has 4 new incubatees and cumulatively supported 27 incubatees. We have organised 8 events to share best practices in technopreneurship, technology commercialisation as well as ran 6 courses in our portfolio of business skills training to equip our engineers. We highlight some of the key milestones for the year and more information is available on our social media pages in Facebook, YouTube and LinkedIn.

## Event: INCA Pitch and Deep Tech Community Days

Date: 17 Jan, 19 Apr, 16 Aug 2023



INCA Incubatees present at the 17 Jan 2023 Pitching and Deep Tech Community Day. (L-R) – Pradeep (iBay System), Dr Chong (TechnoCorp), Devan Nair (Alife Air), Joseph Lew (Aison), Andy Wee (INCA), Kevin Neo (ACE SG), Jason Loh (PieceFuture)



Dr Chong Chee Leong pitching at the Event, sharing about his venture which provide Digital Twin and Advanced Engineering Analysis solutions



INCA celebrating our 4th Anniversary at our 16 Aug 2023 Deep Tech Pitch and Community Evening

## IES-INCUBATOR AND ACCELERATOR

### Event: IES-INCA MOU Signing with National Super Computer Center Singapore

Date: 28th February 2023

On the 28th Feb 2023, IES-INCA and NSCC had jointly sign an MoU agreement. The signing was led by NSCC Chief Executive, Associate Prof Tan Tin Wee and our own IES-INCA Executive Director Mr Chow Kok Wah. Under the agreement, both parties will identify potential areas of collaboration in the field of supercomputing, networking and engineering software applications.

The partnership will draw on complementary strengths of the signatories to enable engineers to harness the power of HPC to accelerate their innovation journey where NSCC manages Singapore's first national petascale facility providing the HPC resources while IES-INCA will source for suitable applications from the Engineering and Innovation community.

We would also like to thank, Tommy Ng and Angie Huang from the NSCC Team on their great support to help achieve the finalisation of this agreement.



Presenting here: Er. Chong Kee Sen Chairman of IES-INCA, IES Emeritus President Dean of College of Fellows (CoF) Er. Chong was seen here supporting our very own Chow Kok Wah, IES-INCA Executive Director to help establishes new industry outreach to bring engineering and High Performance Computing to the forefront



Left Photo: (L-R) – Professor Mohan Kankanhalli-Deputy Executive Chairman (AISG) – Mr Boo Chong-Han- Deputy Principal (SkillsFuture & Organisational Development), Ms Low Kah Gek, CEO (ITE), Dr Tan Tin Wee- Chief Executive (NSCC), Mr Chow Kok Wah- Executive Director (IES-INCA), Mr Lim Peng Hun, Deputy Principal, Academic (Singapore Polytechnic), Mr Bernard Nee, Vice President (SIT Industry & Community)

## Event: Technopreneur Dialogue 2023

Date: 5 May 2023

The Technopreneur Dialogue 2023 brought together Engineering & Technology, Business Leaders to celebrate the journeys undertaken by our Tech Ventures and Enterprises in pursuit of technology commercialisation and business growth.

Our key note speaker Mr Jeremy Peh shared with the audience on the Four Megatrends that Singapore facing and where Engineers, Innovators and Technopreneurs can leverage on.

We heard from local entrepreneurs like Mr Jax Lee from Nanolumi on his experience of starting his materials engineering company from a small office to a full lab where they are now, pioneering new materials for industrial use.

We also learned from the journey of Mr Jason Yeo for JCS Group on how he grew his business from the beginning to where it is now with several groups and also an innovation lab, yet he never stops learning and upgrading himself.

Overall, it was an excellent opportunity to come together to learn and network, let us continue to join hands to grow Team Singapore Deep Tech!



Our SME Corporate Panel shares their experience in growing and innovating their organization  
(L-R) – Mr Kau Yi Ming (Founder, Krux Asia), Ms Leong Wye Houn (Director of Future Mobility, Goldbell Investments), Mr Jason Yeo (Founder, JCS Group)



Our Technopreneur Panel shares their experience in starting and growing their organization  
(L-R) – Mr Eric Khoo (Business Development Head, IPO International), Mr Jax Lee (Founder, Nanolumi), Mr Tan Yeow Kee (Founder, Soundeye)



IES President Mr Dalson Chung addressing the audience



IES-INCA Team with our Corporate Innovation Consultants  
(L-R) – Mr Andy Wee (GM, IES-INCA), Mr Kau Yi Ming (Founder, Krux Asia), Mr Chow Kok Wah (ED, IES-INCA), Mr Jeremy Peh (Managing Partner, BluC 53)



Our partners from ISCA joined us for the event  
(L-R) – Ms Ariana Tan (Staff, ISCA), Ms Koh Soo Hoon (Staff, ISCA), Mr Chow Kok Wah (ED, IES-INCA), Mr Dalson Chung (IES President)

# IES-INCUBATOR AND ACCELERATOR

## Event: INCA MOU Signing with IIPCC

Date: 16 Aug 2023

INCA signed a MoU as part of our new partnership with International Intellectual Property Commercialization Council (IIPCC), a non-profit organisation promoting the commercialisation of technology and reorganising the value of IP in the industry. This MoU marks a closer collaboration between INCA and IIPCC to support the awareness, education of the industry on IP and also provide mentors on IP to INCA incubatees. These collaborations will help INCA and the Deep Tech commercial activities become more sustainable and also the value of IP be better recognised in the process of valuation and fundraising.



An MOU was also signed with IIPCC at this event (L-R) – Mr Chow Kok Wah (Executive Director of INCA), Ms Esther Wee (President of IIPCC)



Signatories showing the MOU and a joint photo with the event Guest of Honour Mr Shawn Huang, MP for Jurong GRC (L-R) – Mr Andy Wee (General Manager of INCA), Mr Chow Kok Wah (Executive Director of INCA), Ms Esther Wee (President of IIPCC), Mr Shawn Huang (MP for Jurong GRC)

## Event: INCA MOU Signing with ISCA, Sustainability Forum

Date: 2 Aug 2023

INCA signed a MoU as of our renewed partnership with Institute of Singapore Chartered Accountants (ISCA), the national body for the profession of Accounting. This MoU marks a closer collaboration between INCA and ISCA for fostering interaction among the professions, creating opportunities for networking and collaboration. For ISCA and IES members, we also

aim to build up our INCA Deep Tech Investor Network to enhance the support for our INCA incubatees and enhancing the success of their companies.

### Summary:

We had a very fruitful year of engagement with the IES Engineering and INCA Technopreneurs community where we ran many programs in support of our IES future pillar in Technopreneurship. IES members and INCA participants has greatly benefited from the technology, business and networking exchanges and we look forward to enhancing this in the new year ahead. Our INCA activities continue to expand into Corporate Innovation, Overseas Market expansion and Landing progress for the benefit of the Engineering and Technology Ventures' business growth.

For more info about IES-INCA, visit our website: [ies-inca.com](http://ies-inca.com)



(L-R) – Teo Ser Luck, President of ISCA, Er Chong Kee Sen, Chairman of IES-INCA



A good turn out of members from IES and ISCA for the MOU signing and Sustainability Forum



An engaging discussion between members of IES and ISCA on the topic of Sustainability

## IES Technopreneur Development Committee

In 2023, TDC's goal was to encourage various members from IES and the IHLs to participate in more of activities and in the promotion in technopreneurship.

### Republic Polytechnic: Innovation for Impact, an Engineering and Entrepreneur project

For the academic year 2023 Semester 1, Republic Polytechnic ran the E112 Engineering Design module where the students submitted posters on the theme of "Innovate for Impact" for the Design projects. The RP students used the Design Thinking framework to identify suitable problem statements after interacting with beneficiaries of their service-learning projects. The students then had to innovate and deliver tangible prototypes that positively impact the beneficiaries. They also designed posters to showcase their problems and solutions.

A total of 135 posters were submitted, and the top 15 entries were shortlisted. These posters are judged by an IES-TDC and IES-INCA panel of which RP identified the top three teams, as well as the team with the best solution. An Award Presentation was held on 19-Oct-23 in Republic Polytechnic, where IES-INCA GM Andy Wee presented the prizes to the RP students.

As part of the Award Presentation, our INCA incubatee Dr Michael L. Abundo, CEO and co-founder of OceanPixel Pte Ltd, was also invited to share with the RP students on how his start-up identifies opportunities and becomes a first-mover in the Blue Economy, focusing on engineering solutions for sustainable coastal, marine, and offshore development.



### Collaboration with NSCC: High Performance Computing Artificial Intelligence Innovation Challenge 2023

In September 2023, IES TDC and IES-INCA, collaborated together with ACE.SG to launch the High Performance Computing Artificial Intelligence Innovation Challenge 2023. This initiative aims to leverage the potential of artificial intelligence (AI) and high performance computing (HPC) by encouraging innovators to revamp processes and accelerate solutions.

The ultimate goal is to support sustainable business growth, enhance public services, and contribute to the advancement of smart cities. Participants and students will also have opportunities working on solutions incorporating AI, HPC to address real life issues and building AI skill sets for potential career paths.

The Challenge had the following objectives:

- Tackle real-world complex issues, fostering collaboration and knowledge sharing within the AI and HPC communities.
- Introduce fresh perspectives to existing problems, stimulating innovative AI and HPC solutions.
- Act as a link between academia and industry, offering students opportunities to develop skills and companies chances to find new talent and inventive solutions.



Bottom Photo: – Professor Tan Tin Wee, Chief Executive (NSCC), giving the welcoming address for the start of the NSCC HPCIC23

# IES ACADEMY

**IESA Chairman: Er. Chong Kee Sen**  
**IES Vice President (Professional Development):**  
**Mr Mervyn Sirisena**

## COURSES

IES Academy (IESA) serves as the professional training arm for IES, delivering a diverse array of engineering courses to its members and the engineering community. These courses are organised into four key pillars:

- 1) Certifiable Courses
- 2) Continuing Education Courses
- 3) Preparatory Courses for Professional Engineer Exams
- 4) Engineers Leadership Programmes

While the first three pillars concentrate on honing technical skills and knowledge within specific

domains, the Engineers Leadership Programmes, including Young Engineers Leadership Programme, Advanced Engineers Leadership Programme, and Global Engineers Leadership Programme, are designed to empower young engineers, mid-level engineers, and engineering leaders with a comprehensive set of leadership skills tailored to the ever-evolving dynamics of the engineering and business realms.

In 2023, IESA exhibited consistent growth, expanding its course offerings and catering to a larger audience for their professional development. The number of courses experienced a 2% year-on-year increase, reaching 201 in FY 2023, up from 198 in the preceding year. Furthermore, the total student-hours surged by 10%, totalling 71,395 compared to 64,640 in FY 2022. Table 1 below provides an overview of the courses conducted and the quantity of training activities in 2023, offering a comparative analysis with the figures from 2022.

Main Target Participants & Types of Courses	Continuing Professional Development	2023 No. of courses	2022 No. of courses
Professional Engineers	PDU	29	21
Singapore Certified Energy Managers	PDU	20	18
Resident Engineers / Resident Technical Officers	STU	108	113
WSH Officers	SDU	16	19
Preparatory Courses	CET Hours	15	14
Exam Administration / Others	Nil	13	13
<b>Total</b>		<b>201</b>	<b>198</b>
<b>Total Student-Hours</b>		<b>71,395 student-hours</b>	<b>64,640 student-hours</b>

Table 1. Number of Courses Conducted by IES Academy

In order to cater to the diverse demands of both IES members and the general public, IESA maintained a flexible approach in its course delivery modes during FY 2023. The academy offered courses through various formats, including physical classroom sessions, virtual courses conducted via online platform, and a hybrid model that combined both virtual and in-person elements.

Out of the 201 courses offered, a significant portion, constituting 56%, took place in traditional physical classrooms. Meanwhile, 37% of the courses were facilitated virtually using platforms such as Zoom.

The remaining 7% were conducted in a hybrid format, seamlessly blending the advantages of both virtual and in-person learning experiences.

The recovery from the challenges posed by the COVID-19 pandemic in 2023 notably contributed to IESA's ability to increase the number of in-person courses conducted in physical classrooms. This flexibility in course delivery modes allowed IESA to better address the evolving needs and preferences of its audience. For a detailed breakdown of the modes and the corresponding number of courses conducted by IESA in FY 2023, please refer to Table 2 below.

Mode of Course	2023 No. of Courses	2022 No. of Courses
Physical Classroom Courses	113	99
Virtual Courses	74	86
Virtual-classroom Hybrid Courses	14	12
Online Interactive / Asynchronous Courses	0	1
<b>Total</b>	<b>201</b>	<b>198</b>

Table 2. Number of Courses conducted in Various Modes in 2023 and 2022

**DEVELOPMENT OF NEW COURSES**

IESA continued its commitment to staying ahead of the fast-paced industry landscape and addressing specific requests from its customers by introducing 12 new courses in 2023. These courses were thoughtfully designed to cater to a wide range of participants. The details of these new courses are presented in Table 3 below.

No	Course Title	Target Participants
1	Examine, Inspect & Test for Lift & Escalator	Professional Engineer, Lift & Escalator Inspector
2	Project Management for Engineers	Professional Engineer, INCA Incubatee
3	Digital Construction Part I (IDD Concept and Digital Tools)	Resident Engineer, Resident Technical Officer
4	Digital Construction Part II (VDC Concept and Digital Tools)	Resident Engineer, Resident Technical Officer
5	Understanding ACoP SS667: 2020 Code of Practice for handling, storage and processing of combustible dust - Level 1: Combustible Dust Hazard Awareness Course	WSH Officer
6	Understanding ACoP SS667: 2020 Code of Practice for handling, storage and processing of combustible dust - Level 2: Combustible Dust Hazard Competent Person Course	WSH Officer
7	Heat Transfer for Industrial Professionals	Professional Engineer, Singapore Certified Energy Manger, Chartered Engineer
8	Approved Code of Practice on Chief Executives' and Board of Directors' WSH Duties	Professional Engineer, Resident Engineer, Resident Technical Officer, WSH Officer
9	Fundamentals of IEC 61511 – Safety Instrumented Systems (SIS) for the Process Industry Sector	Professional Engineer, WSH Officer
10	Certification Course for Piling Personnel	Professional Engineer, Resident Engineer, Resident Technical Officer
11	Supervision and Monitoring of Deep Excavation Works for Building Basements and Civil Engineering Projects and Workplace Safety and Health (WSH) Risk Management and Incident Investigation	Resident Engineer, Resident Technical Officer
12	Supervision of Prestressing in Singapore	Resident Engineer, Resident Technical Officer

Table 3. New Courses Conducted in 2023



Launching of ACoP SS667: 2020 Code of Practice for Handling, Storage and Processing of Combustible Dust Course by IES President, Mr Dalson Chung (4th from left) witnessed by Ms Evelyn Koh (3rd from left), Deputy Director, Ministry of Manpower; Mr Winston Yew (5th from right), Director, WSH Council; and Mr Raymond Wong (4th from right), Senior Asst Director, WSH Council. As an initiative to support Vision Zero, this course is supported by MOM and WSHC.

## BANGABANDHU SHEIKH MUJIBUR RAHMAN TUNNEL TRAINING PROGRAMME

Aligned with the overarching mission of the IES to advance and promote the science, art, and profession of engineering for the well-being of mankind, IESA is dedicated to elevating the knowledge and expertise of both local and international engineers. IESA highly values opportunities to host foreign delegates, fostering collaborative learning and knowledge exchange on a global scale.

In a noteworthy stride towards international engagement in 2023, IESA facilitated a customised corporate class for China Communications Construction Company (CCCC). This initiative aimed at providing specialised training for clients from the Bangladesh Bridge Authority (BBA) in the operation and maintenance of the Bangabandhu Sheikh Mujibur

Rahman Tunnel. The training programme, comprising two individual two-week classes, successfully equipped two batches of BBA delegates with essential skills and knowledge.

In collaboration with MSI Global, a subsidiary of the Land Transport Authority (LTA), IESA organised insightful site visits to various tunnels and their facilities in Singapore. These included prominent structures such as the Central Expressway (CTE), Marina Coastal Expressway (MCE), Kallang-Paya Lebar Expressway (KPE), Sentosa Gateway Tunnel, Woodsville Road Tunnel, and Fort Canning Tunnel. The comprehensive training course not only enriched the knowledge of the BBA delegates but also strategically prepared them for the imminent commissioning of the Bangabandhu Sheikh Mujibur Rahman Tunnel. It is a road tunnel located under the Karnaphuli River in the port city of Chattogram, Bangladesh.



Group Photo of 1st Batch of BBA delegates with IES President, Mr Dalson Chung (7th from left), IESA Chairman, Er. Chong Kee Sen (6th from left) and IES Vice President (Professional Development), Mr Mervyn Sirisena (7th from right). 8th from left is Mr Li Wei, a representative from China Communications Construction Company. Together are Er. Yang Kin Seng, a course trainer as well as Mr Chow Kok Wah and Mr Andy Ong from IES Academy.



Site Visit to a Tunnel and its Facility in Singapore



### LIFT & ESCALATOR INSPECTION ABRIDGE COURSE

In an additional testament to its expertise and industry recognition, IESA received a request from the Land Transport Authority (LTA) in 2023 to conduct a specialized corporate class in the Lift & Escalator Abridge course. Collaborating with Temasek Polytechnic, IESA delivered a tailored program with the specific goal of empowering LTA participants with comprehensive knowledge in the inspection of lift and escalator installations and maintenance practices, aligning with prevailing regulatory standards.

The customised course covered a spectrum of essential topics, including the regulatory framework governing lifts and escalators, diverse types of mobility equipment installed in buildings, the intricacies of installation, operation, and maintenance of components in lifts and escalators, pre-inspection procedures, site audits, and the nuances of maintenance and functional testing for lifts and escalators.



Practical Session for Customised Lift & Escalator Inspection Abridge Course

### WSQ COURSES

In partnership with Enterprise Singapore (ESG), IESA has revitalized its existing “Standards Development Training” course within the framework of the Workforce Skills Qualifications (WSQ) with funding support from SkillsFuture Singapore (SSG). This revamped course was officially launched in December 2023. More WSQ courses will be developed to provide increased accessibility to quality training for IES members and the broader public, with lower course fees attributed to SSG funding. This effort underscores IESA's commitment to fostering continuous learning and professional development in alignment with national workforce frameworks.

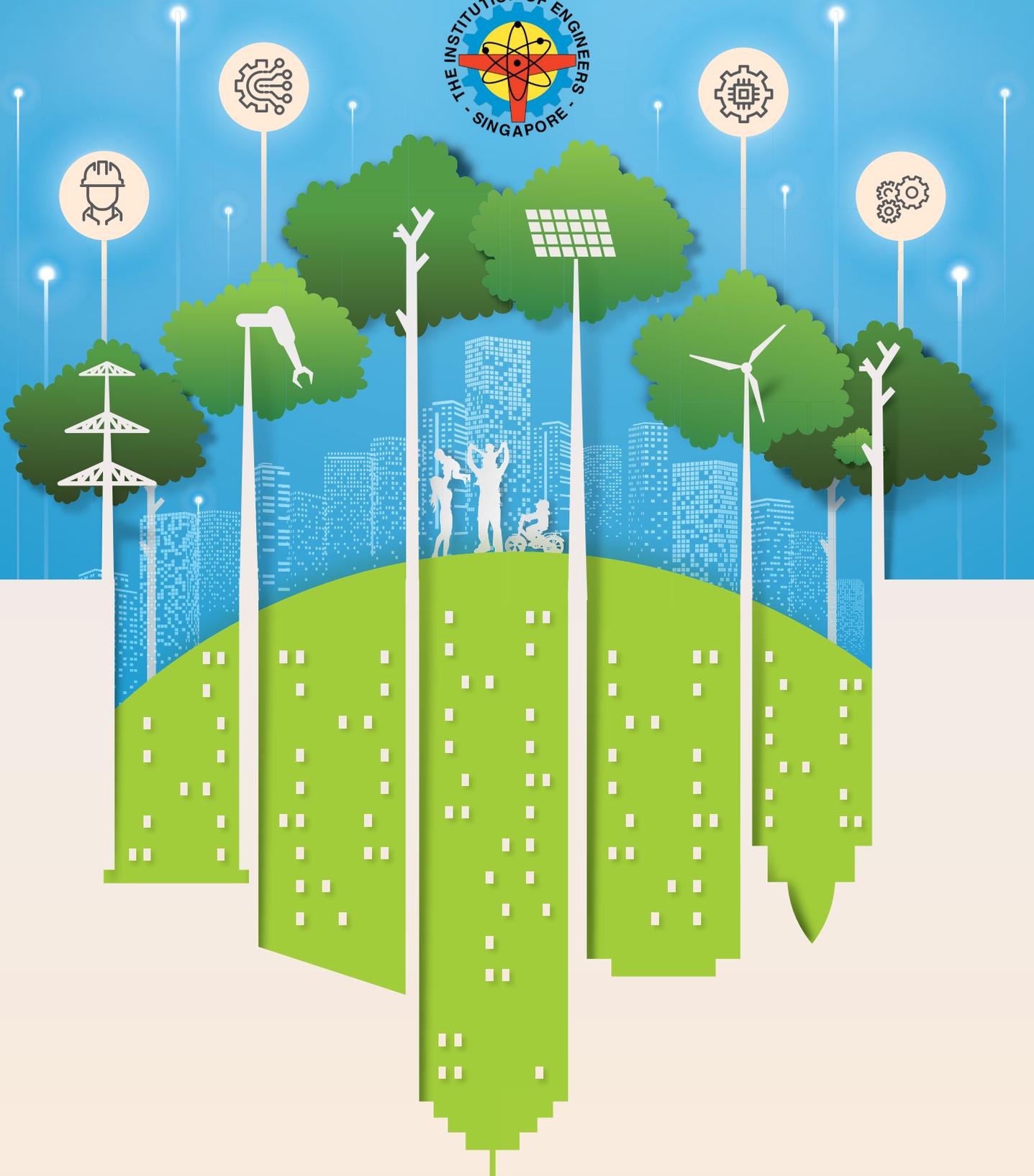
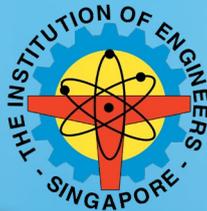
### SUSTAINABILITY COURSES

Simultaneously, IESA is actively collaborating with Institutes of Higher Learning (IHLs) to craft new courses centred around the theme of Sustainability, catering specifically to the requirements of the IES Sustainability Chartership. The comprehensive curriculum will consist of four core modules, complemented by a minimum of six elective modules, with the goal of launching these offerings by second quarter of 2024. This strategic collaboration reflects IESA's forward-looking approach, addressing the growing importance of sustainability in the engineering profession while providing a structured and robust pathway for professionals to attain the IES Sustainability Chartership.

### CAREER CONVERSION PROGRAMME FOR RESIDENT TECHNICAL OFFICERS

Amidst the current scarcity of Resident Technical Officers (RTOs) in the market, IESA entered into an agreement with Workforce Singapore (WSG) to initiate the Career Conversion Programme for Resident Technical Officers. This ground-breaking programme extends a 4-month on-the-job training opportunity at participating companies specifically tailored for former RTOs (Civil & Structural) whose certifications have lapsed for more than three years, providing a viable pathway for their reintegration into the industry.

IESA plays an important role as a program partner, responsible for the administration of this career conversion initiative while WSG provides salary support for participating companies for the four-month duration of the programme. The objective of this initiative is to facilitate the placement of RTOs who are Singaporean Citizens or Singapore Permanent Residents.



# ANNUAL REPORT

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HEART AND VOICE OF ENGINEERS

# CONTENTS



## MISSION

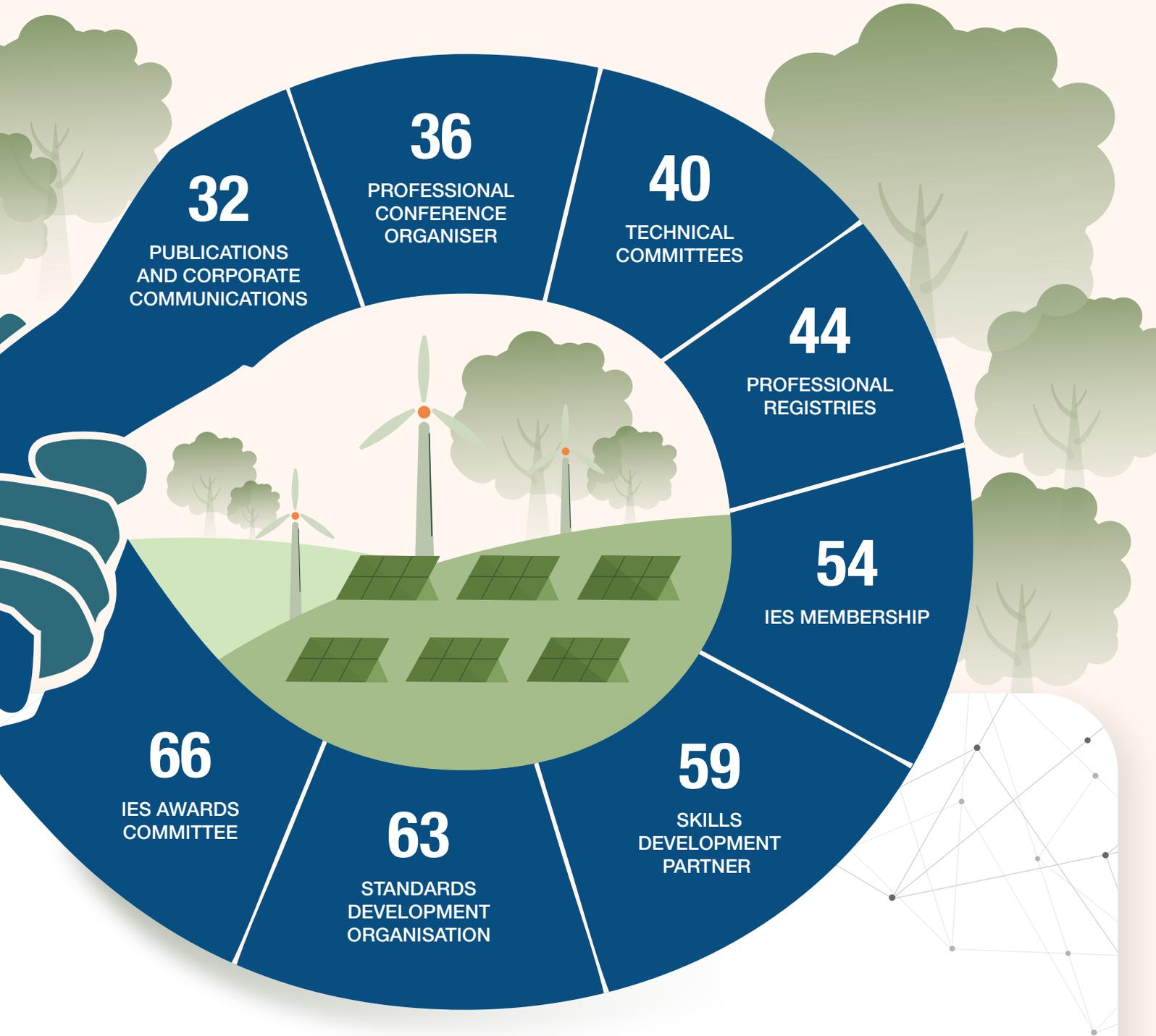
To advance and promote the science, art and profession of engineering for the well-being of mankind and national development of Singapore



## 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 58TH AGM NOTICE OF MEETING



The Institution of Engineers, Singapore  
70 Bukit Timah Road, Singapore 289758  
Tel: (65) 6469 5000 Fax: (65) 64671108  
E-mail: [ies@iesnet.org.sg](mailto:ies@iesnet.org.sg)  
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25 April 2024

To: All Corporate Members

## 58<sup>th</sup> ANNUAL GENERAL MEETING

Notice is hereby given that the 58th Annual General Meeting (AGM) of The Institution of Engineers, Singapore will be held at 1.00 pm on **Saturday, 25 May 2024, at Dunearn Ballroom II and III, Level 1, Raffles Town Club, 1 Plymouth Avenue Singapore 297753. (Raffles Town Club is near the Downtown Line Stevens MRT Station).**

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

The Minutes of the 57th Annual General Meeting held on Saturday 27 May 2023, President's Annual Report for Session 2023/24, Treasurer's Report and Statement of Accounts for FY2023 will be posted at the Members' Portal 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](mailto:honsec@iesnet.org.sg) by noon on Friday, 10 May 2024.

Please submit the completed e-Proxy Form via the link below at the latest by Thursday, 23 May 2024 if you are unable to attend the AGM.

Link for e-Proxy Form: [E-Proxy Form 2024](#)

For catering arrangements and to ensure seats are reserved for you, please click <https://form.jotform.com/241131574969463> to register online, by Friday, 17 May 2024.

(Associate Members are welcome to attend as Observers.)

Er. David Ng  
Honorary Secretary, IES

|

25 April 2024

## IES 58<sup>th</sup> ANNUAL GENERAL MEETING

### A G E N D A

1. Meeting declared open by IES President, Mr Dalson Chung.
2. Confirmation of Minutes of the 57th AGM.
3. Matters Arising.
4. President's Annual Report for 2023/24 Session.
5. Treasurer's Report and Statement of Accounts for 2023.
6. Election of Honorary Auditors.
7. Results of Election of Vice Presidents for May 2024 to May 2026 Sessions.
8. Results of Election for vacancies in the Council for May 2024 to May 2026 Sessions.
9. Any Other Business.

Er. David Ng  
Honorary Secretary, IES

# MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

MINUTES OF THE 57TH ANNUAL GENERAL MEETING OF THE INSTITUTION OF ENGINEERS, SINGAPORE, HELD ON 27 MAY 2023 AT THE SUNTEC INTERNATIONAL CONVENTION AND EXHIBITION CENTRE

S/N	ITEM	ACTION BY
1.	<b>THE MEETING WAS DECLARED OPEN BY IES PRESIDENT, MR DALSON CHUNG</b>	
1.1	<p>The IES 57th Annual General Meeting (AGM) was called to order at 1.00 pm by IES President Mr Dalson Chung. A quorum was reached by virtue of the 135 Members present at the Meeting. The following EXCO Members were on the panel together with Mr Chung:</p> <ul style="list-style-type: none"> <li>• Er. Chan Ewe Jin (Vice President)</li> <li>• Er. Joseph Goh (Vice President)</li> <li>• Ms Jasmine Foo (Vice President)</li> <li>• Mr Danny Lee (Vice President)</li> <li>• Mr Mervyn Sirisena (Vice President)</li> <li>• Er. S Yogeeswaran (Vice President)</li> <li>• Er. David Ng (Hon Secretary)</li> <li>• Er. Simon Lee (Hon Treasurer)</li> </ul> <p>The Agenda for the AGM was emailed to Members on 27th April 2023 shared on the screen. It was adopted.</p> <p>Proposer: Mr Lee Kwok Weng Seconder: Mr Bhushan Kumar Oberoi</p>	
2.	<b>CONFIRMATION OF MINUTES OF 56th AGM</b>	
	<p>The minutes of the 56th AGM were posted at the Members' Corner page on the IES website and shared on the screen.</p> <p>As there were no comments, the minutes were confirmed without amendments.</p> <p>Proposer: Er. See King Chai Seconder: Er. Assoc Prof Lim Kok Hwa</p>	
3.	<b>MATTERS ARISING</b>	
	President went through the matters arising from the 56th AGM:	
3.1	<p><u>Action Item No 4.2:</u> One of the Members asked why the young engineers were not joining IES and how could IES reverse this situation.</p> <p>IES Vice President of 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 on how to encourage young engineers to join IES. They were fine-tuning the Membership package and would give an update at the next AGM.</p>	

	<p><u>Follow-Up Action from Er. Yogeewaran:</u>  <u>One impactful way was to engage current student members from Institutes of Higher Learning before and after they graduated. Especially for male students from polytechnics who would need to serve National Service (NS), it was important to engage them just before they completed their NS to ensure that they would not switch “career” easily and stay on with Engineering. When IES became successful in doing this, our young Engineers numbers should see an increasing trend. This practice was already in progress.</u></p> <p>As for the graduates from universities, reminder emails would be sent before their graduation followed by every half yearly email to keep them abreast of IES activities. Special rates would be rendered to this group of Engineers joining us as member of IES. This practice would start from Q4 2023.</p> <p>IES was also looking into finalising some new benefits and initiatives to attract engineers to join IES as members. IES Council had deliberated on this. These should be announced in Q4 of 2023.</p>	
<p>3.2</p>	<p><u>Action Item No 5.13</u>          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 would the Council plan to attract the younger engineers.</p>	
<p>3.3</p>	<p><u>Action Item No 5.14</u>          Mr Syafiq Shahul, Chairman of Young Engineers replied that they were running a series of 8 webinars recently 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.</p> <p><u>Follow-Up Actions from Mr Syafiq Shahul:</u>          Engagement with young graduating Engineers would be the focus in the coming session to beef up the number of members who were less than 30 years old. Some of the actions IES would be doing include:</p> <ul style="list-style-type: none"> <li>- Progressively looking for value propositions especially for graduating student members from universities.</li> <li>- Sending reminder emails to graduating student members before their graduation.</li> <li>- Reaching out to those graduated student members every half year to engage them for IES activities.</li> </ul> <p><u>Action Item No 5.10</u>          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 Professional Development requested the technical committee chairmen to look at this.</p> <p><u>Follow-Up Action from Er. Chan Ewe Jin:</u>          Vice President of Engineering Excellence, Er. Chan Ewe Jin updated that IES had been organising activities/events over the weekends to accommodate individuals and professionals who might have weekday commitments. Some of these events provided opportunities for more professionals to participate and they had proven to be successful in cultivating relevant knowledge, skills, and professional growth.</p> <p>For example, the event on “Root cause and Lesson Learnt from the 2019 Shenzhen Bay Bridge Tendon Failure Incident” was held on 16 July 2022 (Saturday) and “2009 Cologne Metro Collapse: Root Cause &amp; Lessons Learnt” on 19 February 2022 (Saturday). Er. Chan further encouraged all IES members to visit our website and social media for upcoming events.</p>	

## MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

	<p><u>Action Item No 10.1:</u> IES Member Mr Balaji raised the question on the fees of \$30 and \$60 charged by technical committees. Er. Chan Ewe Jin said he and the technical committees would look at it.</p> <p><u>Follow-Up Action from Er. Chan Ewe Jin</u> IES kept the fees charged for Technical Committees events competitive compared to other seminars in the industry while still offering great value for the price charged.</p> <p>Most of the events were conducted by industry experts who had years of experience in their respective fields. The information and insights shared during the seminar could be invaluable to professionals in the same field and even those who were just starting. The fees charged also covered the costs of hosting the seminar, including the venue rental, equipment, and other logistical expenses.</p> <p>IES aimed to provide a high-quality learning experience for all attendees. Hence, investment in the necessary resources was essential to make that happen.</p>	
<b>4.</b>	<b>PRESIDENT'S ANNUAL REPORT FOR 2022/2023 SESSION</b>	
4.1	<p>IES President presented his report at the 57th Annual General Meeting (AGM) of the Institution of Engineers, Singapore (IES).</p> <p>He said in the past year, IES had made significant progress on all fronts, and he was delighted to share the achievements with Members. The President's report is attached.</p>	
4.2	<p>After Mr Chung finished his report, one Member Mr Benjamin Chua enquired on the digitisation programme. He also asked if there would be a registry for digitisation and cybersecurity engineers. President gave an affirmative reply to both enquiries.</p>	
4.3	<p>IES Member Mr Adam Meng Au Khan asked about the basis of qualifying professional engineers, i.e. was it based on academic qualifications or years of experience? He felt that he should be qualified to be a professional engineer but was rejected as the Professional Engineers Board (PEB) said that he was not qualified enough though he had many years of professional experience. President requested Mr Adam Meng Au Khan to provide the details to the secretariat for IES' follow-up with PEB.</p>	
4.4	<p>IES Member Mr Althaf Hussain said that he had applied to be Resident Engineer, but he was told that his application was not successful. He had written to the Straits Times, after which he received a call from IES that his application was successful. He felt that education was a state of mind not qualification.</p>	
4.5	<p>President congratulated Mr Hussein and assured him that the engineering technicians had been looked after under the newly formed Chartered Engineering Board.</p>	
4.6	<p>Mr Adam Meng commented that IES should be more liberal and allowed his partner, an engineer but not IES Member to attend the AGM. Hon Secretary Er. David Ng explained that only IES Members were allowed to attend that AGM, as stipulated in the IES Constitution. Mr Lee Kwok Weng suggested that she joined IES as a Member so that she could attend IES AGMs.</p>	
4.7	<p>Another IES Member, Mr Warren Lim asked what IES had done to attract the young engineers to join IES. The President said that currently, IES had student chapters in five polytechnics and various universities, and there were about 5,000 Student Members.</p>	
4.8	<p>IES Member Mr Kogi felt very encouraged and said that it was not easy to get members to join IES and to stay as engineers. Hence, he saluted IES for its efforts..</p>	
4.9	<p>President's Report was adopted: Proposer: Mr Adam Meng Au Khan Secunder: Mr Jason Oh</p>	

## MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

<b>5.</b>	<b>ELECTION OF HONORARY AUDITORS FOR 2023</b>	
5.1	President Mr Dalson Chung expressed his appreciation to Dr Ang Keng Been and Dr Chandra Segaran for being the Honorary Auditors for 2022.	
5.2	The following Members were appointed as Honorary Auditors for the year 2023: First Honorary Auditor: David Shi Congfei Proposer: Mr Cheang Yu Kong Seconder: Er. Peter Yap Kwong Ling Second Honorary Auditor: Mr Yee Boon Cheow Proposer: Er. Assoc Prof Lim Kok Hwa Seconder: Er. Lew Yii Der	
<b>6.</b>	<b>HONORARY TREASURER'S REPORT AND STATEMENT OF ACCOUNTS FOR 2022</b>	
6.1	Er. Simon Lee presented the Financial Report. For the year 2022. IES Group generated revenue of \$5,892,216 in 2022. Our group net surplus was \$441,173 before tax	
6.2	As there were no questions, the Treasurer's report was adopted. Proposer: Mr Lee Kwok Weng Seconder: Er. Lum Chong Chuen	
<b>7.</b>	<b>RESULTS OF ELECTION OF DEPUTY PRESIDENT FOR MAY 2023 TO MAY 2024 SESSION</b>	
	Hon Secretary Er. David Ng announced that Er. Chan Ewe Jin had been elected as Deputy President.	
<b>8.</b>	<b>RESULTS OF ELECTION OF VICE PRESIDENT FOR MAY 2023 TO MAY 2025 SESSIONS</b>	
	Hon Secretary Er. David Ng announced that Er. Chan Ewe Jin had been elected as Deputy President.	
<b>9.</b>	<b>RESULTS OF ELECTION FOR VACANCIES IN COUNCIL FOR MAY 2023 TO MAY 2025 SESSIONS</b>	
9.1	Er. David Ng announced the results of the Council Election for 2023/24-2024/25 Sessions: For Civil & Structural Engineering Division, there were two vacancies, Mr Lew Yii Der and Er. Sharron Ng were elected. For Electrical Engineering Division, there were two vacancies, Er. Jacqueline Chan and Er. Seow Kang Seng were elected. For Electronics and Computer Engineering Division, there was one vacancy, Mr Chang Sau Sheong was elected. For Mechanical Engineering Division, there were two vacancies, Dr Harry Lim and Er. Ng Beow Suan were elected.	
9.2	For the three vacancies in any division of engineering, the following Members were elected: Dr Adrian Ang, Dr Victor Sim and Mr Soh Tiam Chwee	

## MINUTES OF THE IES 57TH ANNUAL GENERAL MEETING

9.3	<p>For the 1 vacancy in Associate Representative in Council, there was no election as there was no candidate.</p> <p>President thanked the following Council Members who would be retiring from the Council:</p> <p>Dr Boh Jaw Woei, Council Member Dr Er Meng Joo (Absent with apology), Council Member Mr Jason Oh, Council Member Mr Dennis Tan, Council Member Mr Yee Boon Cheow, Council Member</p>	
10.	<b>ANY OTHER BUSINESS</b>	
	<p>IES Member Mr David Shi suggested to raise the age limit of young engineers to 40 years of age. President Mr Chung said that he would discuss with Council before bringing it up at the next AGM. Mr Syafiq Shahul said that under the IES Constitution, the limit was 35 years of age.</p>	
11.	<b>CLOSE OF MEETING</b>	
	<p>The meeting was declared closed at 2.55 pm.</p>	

Recorded by: Ms Tan Siew Keow

Vetted by: Er. David Ng & Ms Emily Tan

Approved by: Mr Dalson Chung



# PRESIDENT'S MESSAGE

The past year abounded with exciting developments for The Institution of Engineers, Singapore (IES). Guided by our strategic 'Inclusive, Empathy, Stability' ('I.E.S.') framework, we have achieved significant milestones on multiple fronts.

## Key Accomplishments

### *IES Green Plan 2030*

We continued to take the IES Green Plan 2030 forward to advance Singapore's sustainable development. Throughout the year, the plan served as a cornerstone of our strategies, lending a crucial green directive to our three pillars.

### *'Inclusive' Pillar*

Under the 'Inclusive' pillar, we focused on creating a more equitable and supportive environment for current and future engineering professionals to thrive and contribute.

Key events in the past year include the Charles Rudd Distinguished Public Lectures held on 25 May 2023 themed 'Transitioning to a Net-Zero World' to move engineers to the driver's seat in Singapore's transition to a circular economy, with over 1,200 in-person attendees and 3,000 virtual attendees.

We continued to intensify our efforts to enhance professional recognition of our engineers. Notable milestones include unveiling of the IES Chartered Engineer (CEng) in Sustainability certification framework; expansion of CEng to Sustainability, Built Environment and Renewable Energy sectors by the restructured Chartered Engineering Board; growing the total number of CEng, Chartered Engineering Technologists and Chartered Engineering Technicians from 823 to 859; and increasing the total number of registered Resident Engineers (REs) and Resident Technical Officers (RTOs) from 4,415 to 4,673 and from 7,617 to 7,761 respectively.

In the year, the IES Academy partnered with the Workforce Singapore (WSG) to initiate the Career Conversion Programme for RTO. This is aligned to our goal of helping engineering professionals strengthen their career resilience and adaptability.



Continuous learning across all stakeholder groups is another integral aspect of promoting inclusivity. IES renewed our second Memorandum of Understanding (MoU) with the Institution of Mechanical Engineers (IMechE) Singapore Chapter and signed an MoU with 11 Institutes of Higher Learning (IHLs) to boost engineering expertise in Singapore. With these MOUs, we can tap on their global network and capability programmes to provide our members with more opportunities and tools for professional growth.

We also continued our good work with the IES Incubator and Accelerator (IES-INCA), adding four new incubatees to its name, organising eight events on best practices in technopreneurship and running six training courses on business skills for engineers.

To promote engineering to the younger generation, IES held the annual National Engineers Day (NED) on 26 August 2023 under the theme 'Engineering for Resilient City Living'. Deputy Prime Minister Heng Swee Keat engaged in a fireside chat with students as the guest-of-honour at the NED Prize Presentation Ceremony. The annual Engineering Innovation Challenge (EIC) gave local and international students the opportunity to apply their STEM knowledge to real-world challenges. At the event, IES launched three IES-ITE (East, Central and West) student chapters, which added another 5,000 engineering students, bringing the total number of engineering students among our 14 IES student chapters at the IHLs to 20,000.

On the international front, IES held the World Engineers Summit (WES) from 8 to 10 November 2023 to advance engineering solutions on a global scale, under the theme 'Engineering for a Sustainable Future'. WES featured the first-ever China Engineers Forum, a collaboration among IES, the China Association for Science and Technology (CAST) and its China Society

## PRESIDENT'S MESSAGE

of Engineers. IES also participated in CAFEO 41 in Bali, Indonesia and joined our friends in the ASEAN Federation of Engineering Organisations to promote efforts in "Igniting ASEAN's Blue Economy and Green Energy".

### *'Empathy' Pillar*

The 'Empathy' pillar underscores our responsibility towards the environment and the society. Exciting outcomes in the year include the installation of two electric vehicle (EV) chargers at the IES Building carpark and the first IES Mass Tree Planting event where DPM Heng Swee Keat joined 100 engineers in planting 50 trees at Tampines Eco Green in support of the OneMillionTrees movement.

In the area of corporate social responsibility, IES gifted \$300,000 to the National University of Singapore (NUS) for the establishment of the YC Wong IES Research in Construction Project Management Fund.

### *'Stability' Pillar*

Under the third pillar, 'Stability', IES persisted in uplifting the image of IES and the engineering profession. This was delivered through the presentation of several prestigious awards at the IES 57th Annual Dinner on 9 November 2023, including the inaugural IES Sustainability Awards.

I am pleased to share that our Emeritus President Er. Tan Seng Chuan, became the first Singaporean to be appointed as the President-Elect of the World Federation of Engineering Organizations (WFEO) in October 2023.

IES strengthened its branding by proactively deepening our partnership with more than 30 industry stakeholders under the IES Green Plan 2030. This series of engagements has paved the way for many exciting collaborative initiatives to build a green future.

We also continued to maintain significant media presence, securing opportunities for our representatives to contribute expert insights on various engineering matters in the media. In 2023, we garnered a total of 293 pieces of coverage, equivalent to about S\$3,134,463 in terms of media value – a 65% increase over 2022's media value of S\$1,902,435.

All in all, the I.E.S. framework has helped to advance IES' four strategic focal areas in Engineering Excellence, Professional Development, Professional Registration and Internationalisation.

For Engineering Excellence, our 16 Technical Committees (TC) organised more than 39 webinars

and seminars in 2023, focusing on sustainable engineering practices.

In Professional Development, our partnership with SkillsFuture Singapore as a Skills Development Partner blossomed into taskforces in four new sectors in Electric Vehicle (EV) Maintenance, EV Charger and Solar Panel Deployment, Sustainability and the Built Environment. This included the launch of the IES CEng in Sustainability sector certification to meet industry demands. In total, we have liaised with 80 enterprises to signal priority core skills, engaged 23 enterprises in job redesign and/or other skills intervention to meet sectorial demands and 22 enterprises to adopt skills recognition for credentialing pathways; and channelled 425 employees and individuals to SSG's training programmes.

In the area of Professional Registration, we have witnessed growth across all our accreditation programmes in 2023 over 2022. We have more than 800 Chartered Engineers, Chartered Technologists and Chartered Technicians; 1,371 Singapore Certified Energy Managers (SCEM) and 272 Associate Singapore Certified Energy Managers (ASCEM) in the SCEM Registry. We have 11 engineering programmes in Singapore being evaluated by IES' Engineering Accreditation Board (EAB) for full accreditation – more than double the number in 2022.

In the fourth strategic focal area, Internationalisation, we expanded our engineering blueprint significantly abroad, signing nine MoUs from 2023 to date. Our partnership has grown to include organisations across regions, such as the Institution of Engineers, Indonesia (PII), National Super Computer Centre Singapore (NSCC), CAST and several IHLs.

In total, together with a slew of membership activities, we have attracted 420 engineers to join IES, further expanding our membership database. Moving forward, members can anticipate the progressive launch of lifestyle benefits with commercial merchants.

I would like to express my deepest gratitude to all our members, the IES Council and the IES Secretariat for their invaluable contributions in making the past year such a fruitful one. I came across an emphatic statement that "engineers have to save the world" recently and hope that IES will continue to reach greater heights in making this maxim a reality.

Mr Dalson Chung  
IES President

# ENGINEERING ACCREDITATION BOARD

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

The Engineering Accreditation Board (EAB), which is a unit of IES, is responsible for accrediting engineering degree programmes offered by local universities and academies. It comprises 19 members and is chaired by Dr Lim Kiang Wee.

In 2023, a total of 11 engineering programmes in Singapore were evaluated by EAB for Full 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 Kiang Wee and Director Dr Chau Fook Siang.

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

At the IEA Meeting, Advisor to EAB, Er. Prof Lock Kai Sang was elected Chair of the Washington Accord for a two-year term effective June 2023.

Several EAB members participated in WA's Reviews of other jurisdictions during the year; they were Mr Harish Pillay (Australia), Prof Cheong Hee Kiat (Chile) and Prof Pey Kin Leong (China). Meanwhile, Prof Paul Sharratt and Er. Lim Peng Hong have been appointed as members of the Review Teams for South Africa and Saudi Arabia respectively.

## Other EAB Activities

EAB, in collaboration with the Hong Kong Institution of Engineers, the China Association for Science and Technology (CAST) Talent Service Centre and three universities in China organised the International Engineering Education Symposium 2023 in Ningbo, China in November 2023. The Symposium, which was hosted by the China Engineering Education Accreditation Association, featured four keynote lectures as well as 42 sub-forum presentations covering diverse topics. The delegates also toured sites of engineering achievements and cultural interest in the region. The Workshop was attended by over 300 scholars and administrators from 27 global engineering educational institutions and 127 universities.



Members of the EAB Evaluation Team for the BEng (Civil Engineering) and BEng (Environmental Engineering) Programmes with some faculty of Nanyang Technological University.

# INTERNATIONAL OUTREACH COMMITTEE

## World Engineering Day (WED) 2023 - IES Green Festival 2023

In celebration of the World Engineering Day (WED) on 4 March, IES once again partnered the World Federation of Engineering Organisations (WFEO) to organise a first-of-a-kind celebration – the IES Green Festival 2023. To drive the message of sustainable development, the Festival was curated to enthuse the younger generation of Singaporeans and to promote the awareness of the contributions engineering & engineers have made to our daily lives by showcasing sustainable initiatives being developed and amplifying the appreciation and adoption of green activities through fun and interactive programmes and activities.

The 3-hour Festival attracted over 500 physical attendees and the event is one of two WFEO signature events to be broadcasted live to the WFEO network, comprising of more than 100 nations, reaching over 30 million engineers globally.

Singapore also participated in the WED Hackathon and Singapore Polytechnic and Temasek Polytechnic flew Singapore's flag high for making it to the top 12 finalist, beating over 112 other teams from over 23 countries.

## Highlights of the IES Green Festival

### Fireside Chat



Fireside Chat with Dr Amy Khor, Senior Minister of State, Ministry of Sustainability and the Environment.

### Bicycle Dynamo Challenge



Bicycle Dynamo Challenge - to light up World Engineering Day (WED)



Bike Dynamo

Trivia Trail



Trivia Trail

Tech Talks



Tech Talk Speaker Mr Peter Ho, HOPE Technik



Tech Talk Speaker Mr Atem S. Ramsundersingh, WEnergy Global

Green Nation Pledge



Pledge Wall

Exhibitions



Exhibitions 1



Exhibitions 2

## INTERNATIONAL OUTREACH COMMITTEE

### Special-edition WED: The Singapore Engineer magazine



WED E Mag

### Women in Sustainability Interviews



GF - Women

### Drone Challenge



GF - Drones

### MoU Signing with Persatuan Insinyur Indonesia (PII)

The Festival also saw the inking of an MoU with Persatuan Insinyur Indonesia (PII) to strengthen ties and collaborate on potential business opportunities / events, growing of the organisations' membership, facilitation of internship exchange programme as well as organisation of technical visits.



IES – PII MoU Signing (from left to right) Ir. Andi Sanjaya Tjong, Chairman PII Singapore Branch, Er. Edwin Khew, IES Emeritus President, Mr Dalson Chung, IES President, Dr. Ir. Danis Hidayat Sumadilaga, PII President, His Excellency Ambassador Suryopratomo, Indonesia Ambassador to Singapore, Dr Boh Jaw Woei, Chairman IES-WED 2023 Organising Committee

**Charles Rudd Distinguished Public Lectures 2023**

Organised jointly with the World Federation of Engineering Organisations (WFEO) and the Singapore Polytechnic (SP), the Charles Rudd Distinguished Public Lectures 2023 centered around the theme of “Transitioning to a Net-Zero World”, addressing crucial issues related to the world’s worsening climate crisis.

The event was graced by Guest-of-Honour Mr Desmond Lee, Minister for National Development and Minister-in-Charge of Social and Services Integration. Mr Lim Tuang Liang, the first Government Chief Sustainability Officer, Ministry of Sustainability and the Environment delivered the distinguished keynote address, offering insights into Singapore’s sustainability efforts and the global imperative for environmental stewardship.

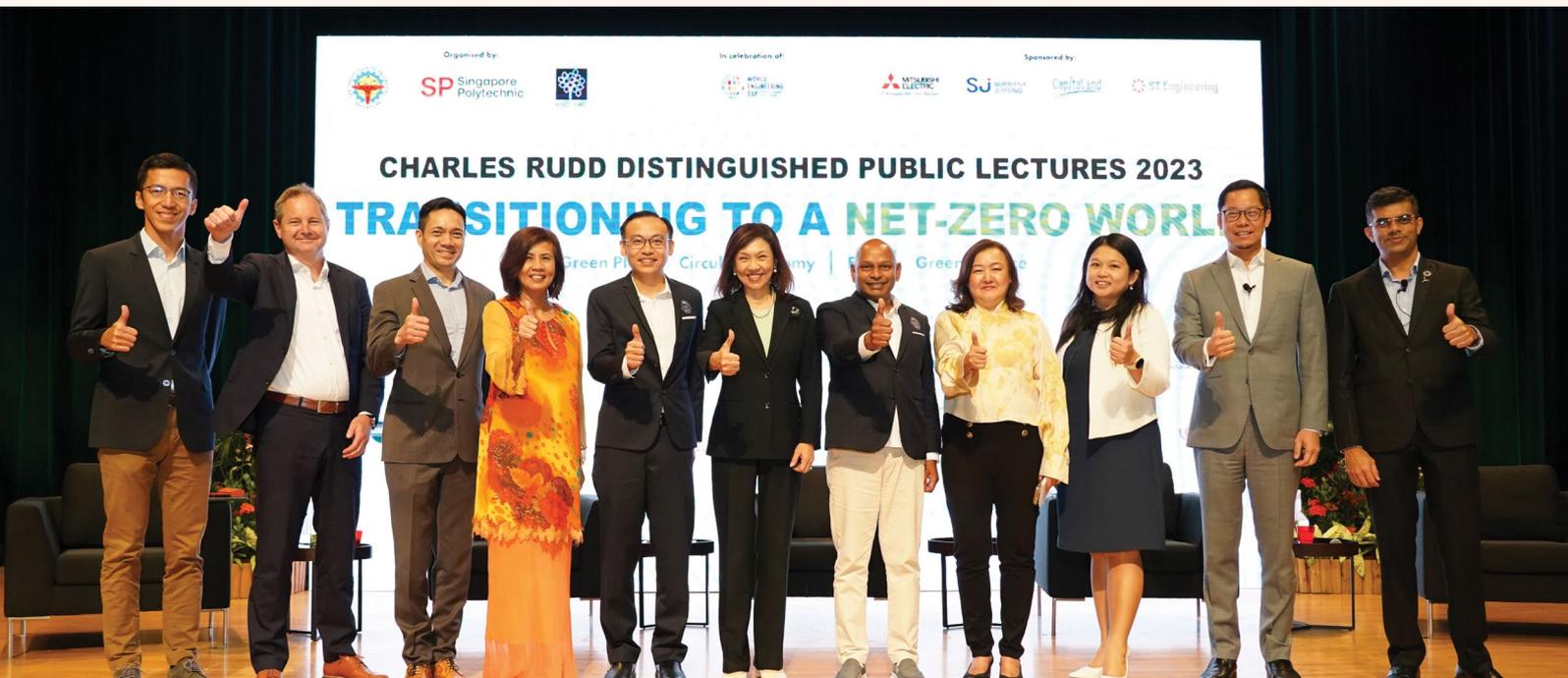
The event also comprised of panel discussions where sustainability practitioners and experts provided their insights on two topics: “Empowering Net-Zero Transition through Green Plan and Circular Economy” and “ESG and Green Finance: Latest Strategies, Trends and Future Outlook”



Mr Desmond Lee, Minister for National Development and Minister-in-Charge of Social and Services Integration delivering the GOH Address



Mr Lim Tuang Liang, the first Government Chief Sustainability Officer, Ministry of Sustainability and the Environment delivering the distinguished keynote address



Group Photo with the Panelists (from left to right): Mr Henry Woon, Director, Atelier Ten (Asia), Mr Truls Lystang, Group Senior Vice President, Head of Sales, INDUSTRY Division, Grundfos, Mr Manuel Ong, General Manager, Danfoss Singapore, Ms Rohaya Saharom, Vice President, Sustainable Solutions, Mandai Wildlife Group, Mr Danny Lee, Chairman, Charles Rudd Distinguished Public Lecture 2023, Ms Georgina Phua, Deputy Principal (Development), Singapore Polytechnic, Prof Seeram Ramakrishna (Moderator), Chairman, Circular Economy Taskforce, NUS & Chairman, Sustainable Manufacturing Technical, Committee, IES, Ms. Isabella Huang-Loh, Chairman, Singapore Environment Council, Dr Lee Hui Mien, Senior Director, Group Environmental Sustainability, Singtel, Mr Eric Lim, Chief Sustainability Officer, UOB, Mr Vinamra Srivastava, Chief Sustainability Officer, CapitalLand Investment

## INTERNATIONAL OUTREACH COMMITTEE

### 41st Conference of the ASEAN Federation of Engineering Organisations (CAFEO 41)

The 41st Conference of the ASEAN Federation of Engineering Organisations (CAFEO 41), themed "Igniting ASEAN's Blue Economy and Green Energy" was held on 20 – 23 November 2023 in Bali International Convention Centre, Indonesia.

The event was hosted by PII, the AFEO Chair for 2023, and gathered more than 1000 engineering delegates from ASEAN and worldwide.

#### Opening Ceremony

CAFEO 41 was officially opened on 22 November 2023 by the Coordinating Minister for Economic Affairs of Indonesia, Ir. Airlangga Hartarto. The ceremony also saw the conferment of the Distinguished Honorary Patron to the Fifth Indonesian President, Megawati Soekarnoputri for her contribution to the engineering profession.



Ir. Airlangga Hartarto, Coordinating Minister for Economic Affairs of Indonesia giving the Opening Speech

### 2023 ASEAN-China Engineers Forum

The ASEAN-China Engineers Forum at CAFEO 41 was organized as a platform for collaboration and exchange between engineering professionals from the ASEAN region and China. The forum also saw the inking of an MoU between the Chinese Society of Engineers (CSE) and PII.



CSE



MOU Signing between CSE and PII



Fifth Indonesian President, Megawati Soekarnoputri receiving the AFEO Distinguished Honorary Patron Award

**Closing Dinner**

CAFEO 41 concluded with the closing dinner with several significant events, bringing together delegates, speakers, and organisers to mark the end of the conference.



Remarks by WFEO President Engr. Mustafa B. Shehu



IES Vice President, Ms Jasmine Foo receiving the AFEO Honorary Fellow award.



Project recipients of the ASEAN Outstanding Engineering Achievement Award. (from left: Rolls Royce, NUS, PSA Corporation, A\*Star and Customize Technologies).



IES President Mr Dalson Chung receiving the token of appreciation on behalf of founding AFEO Member, Mr Tay Sin Yan



Handover of the AFEO Chairmanship from Indonesia to Malaysia



IES country performance

## INTERNATIONAL OUTREACH COMMITTEE



Group photo of the IES delegation to CAFEO 41

CAFEO plays a pivotal role in fostering cooperation and knowledge sharing among ASEAN countries serving as a platform for attendees to network, interact with industry leaders, establish collaborations, and explore potential partnerships to continuously develop and advance engineering practices within the region.

### WFEO New President-Elect - IES Emeritus President Er. Tan Seng Chuan

For the first time in its history, the World Federation of Engineering Organisations (WFEO) has elected Singaporean Er. Tan Seng Chuan to be its President-Elect at the organisation's general assembly, which was held in Prague, Czech Republic on October 14, 2023.

This is the first time a Singaporean national will assume the leadership in a global-level engineering body. WFEO is a high-level international organisation for the field of engineering, with more than 100 member nations representing over 30 million engineers across the world.

Er. Tan Seng Chuan was nominated to represent Singapore at the WFEO general assembly, where he received the majority of votes which secured his place as the next President of the organisation. He will take on his new role in Shanghai, China end of 2025, for a period of two years.



Er. Tan Seng Chuan

A highly accomplished engineer, Er. Tan served in various capacities in the WFEO, the ASEAN Federation of Engineering Organisations (AFEO), the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) as well as the International Engineering Alliance (IEA).

Back home, Er. Tan was the President of the Institution of Engineers, Singapore (IES) from 2006 – 2008 and is currently the chairman of the Chartered Engineering Board of Singapore, the chairman of PUB Active, Beautiful, Clean Waters Professional Monitoring Committee, a member of the Industry Advisory Committee for Sustainability Education Committee at the Singapore Institute of Technology (SIT) and a member of the NTU Advisory Committee for their BSc environmental programme.

# IES-INCUBATOR AND ACCELERATOR

In 2023, 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 since 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.

At the end of 2023, INCA has 4 new incubatees and cumulatively supported 27 incubatees. We have organised 8 events to share best practices in technopreneurship, technology commercialisation as well as ran 6 courses in our portfolio of business skills training to equip our engineers. We highlight some of the key milestones for the year and more information is available on our social media pages in Facebook, YouTube and LinkedIn.

## Event: INCA Pitch and Deep Tech Community Days

Date: 17 Jan, 19 Apr, 16 Aug 2023



INCA Incubatees present at the 17 Jan 2023 Pitching and Deep Tech Community Day. (L-R) – Pradeep (iBay System), Dr Chong (TechnoCorp), Devan Nair (Alife Air), Joseph Lew (Aison), Andy Wee (INCA), Kevin Neo (ACE SG), Jason Loh (PieceFuture)



Dr Chong Chee Leong pitching at the Event, sharing about his venture which provide Digital Twin and Advanced Engineering Analysis solutions



INCA celebrating our 4th Anniversary at our 16 Aug 2023 Deep Tech Pitch and Community Evening

## IES-INCUBATOR AND ACCELERATOR

### Event: IES-INCA MOU Signing with National Super Computer Center Singapore

Date: 28th February 2023

On the 28th Feb 2023, IES-INCA and NSCC had jointly sign an MoU agreement. The signing was led by NSCC Chief Executive, Associate Prof Tan Tin Wee and our own IES-INCA Executive Director Mr Chow Kok Wah. Under the agreement, both parties will identify potential areas of collaboration in the field of supercomputing, networking and engineering software applications.

The partnership will draw on complementary strengths of the signatories to enable engineers to harness the power of HPC to accelerate their innovation journey where NSCC manages Singapore's first national petascale facility providing the HPC resources while IES-INCA will source for suitable applications from the Engineering and Innovation community.

We would also like to thank, Tommy Ng and Angie Huang from the NSCC Team on their great support to help achieve the finalisation of this agreement.



Presenting here: Er. Chong Kee Sen Chairman of IES-INCA, IES Emeritus President Dean of College of Fellows (CoF) Er. Chong was seen here supporting our very own Chow Kok Wah, IES-INCA Executive Director to help establishes new industry outreach to bring engineering and High Performance Computing to the forefront



Left Photo: (L-R) – Professor Mohan Kankanhalli-Deputy Executive Chairman (AISG) – Mr Boo Chong-Han- Deputy Principal (SkillsFuture & Organisational Development), Ms Low Kah Gek, CEO (ITE), Dr Tan Tin Wee- Chief Executive (NSCC), Mr Chow Kok Wah- Executive Director (IES-INCA), Mr Lim Peng Hun, Deputy Principal, Academic (Singapore Polytechnic), Mr Bernard Nee, Vice President (SIT Industry & Community)

## Event: Technopreneur Dialogue 2023

Date: 5 May 2023

The Technopreneur Dialogue 2023 brought together Engineering & Technology, Business Leaders to celebrate the journeys undertaken by our Tech Ventures and Enterprises in pursuit of technology commercialisation and business growth.

Our key note speaker Mr Jeremy Peh shared with the audience on the Four Megatrends that Singapore facing and where Engineers, Innovators and Technopreneurs can leverage on.

We heard from local entrepreneurs like Mr Jax Lee from Nanolumi on his experience of starting his materials engineering company from a small office to a full lab where they are now, pioneering new materials for industrial use.

We also learned from the journey of Mr Jason Yeo for JCS Group on how he grew his business from the beginning to where it is now with several groups and also an innovation lab, yet he never stops learning and upgrading himself.

Overall, it was an excellent opportunity to come together to learn and network, let us continue to join hands to grow Team Singapore Deep Tech!



Our SME Corporate Panel shares their experience in growing and innovating their organization (L-R) – Mr Kau Yi Ming (Founder, Krux Asia), Ms Leong Wye Houn (Director of Future Mobility, Goldbell Investments), Mr Jason Yeo (Founder, JCS Group)



Our Technopreneur Panel shares their experience in starting and growing their organization (L-R) – Mr Eric Khoo (Business Development Head, IPO International), Mr Jax Lee (Founder, Nanolumi), Mr Tan Yeow Kee (Founder, Soundeye)



IES President Mr Dalson Chung addressing the audience



IES-INCA Team with our Corporate Innovation Consultants (L-R) – Mr Andy Wee (GM, IES-INCA), Mr Kau Yi Ming (Founder, Krux Asia), Mr Chow Kok Wah (ED, IES-INCA), Mr Jeremy Peh (Managing Partner, BluC 53)



Our partners from ISCA joined us for the event (L-R) – Ms Ariana Tan (Staff, ISCA), Ms Koh Soo Hoon (Staff, ISCA), Mr Chow Kok Wah (ED, IES-INCA), Mr Dalson Chung (IES President)

# IES-INCUBATOR AND ACCELERATOR

## Event: INCA MOU Signing with IIPCC

Date: 16 Aug 2023

INCA signed a MoU as part of our new partnership with International Intellectual Property Commercialization Council (IIPCC), a non-profit organisation promoting the commercialisation of technology and reorganising the value of IP in the industry. This MoU marks a closer collaboration between INCA and IIPCC to support the awareness, education of the industry on IP and also provide mentors on IP to INCA incubatees. These collaborations will help INCA and the Deep Tech commercial activities become more sustainable and also the value of IP be better recognised in the process of valuation and fundraising.



An MOU was also signed with IIPCC at this event (L-R) – Mr Chow Kok Wah (Executive Director of INCA), Ms Esther Wee (President of IIPCC)



Signatories showing the MOU and a joint photo with the event Guest of Honour Mr Shawn Huang, MP for Jurong GRC (L-R) – Mr Andy Wee (General Manager of INCA), Mr Chow Kok Wah (Executive Director of INCA), Ms Esther Wee (President of IIPCC), Mr Shawn Huang (MP for Jurong GRC)

## Event: INCA MOU Signing with ISCA, Sustainability Forum

Date: 2 Aug 2023

INCA signed a MoU as of our renewed partnership with Institute of Singapore Chartered Accountants (ISCA), the national body for the profession of Accounting. This MoU marks a closer collaboration between INCA and ISCA for fostering interaction among the professions, creating opportunities for networking and collaboration. For ISCA and IES members, we also

aim to build up our INCA Deep Tech Investor Network to enhance the support for our INCA incubatees and enhancing the success of their companies.

### Summary:

We had a very fruitful year of engagement with the IES Engineering and INCA Technopreneurs community where we ran many programs in support of our IES future pillar in Technopreneurship. IES members and INCA participants has greatly benefited from the technology, business and networking exchanges and we look forward to enhancing this in the new year ahead. Our INCA activities continue to expand into Corporate Innovation, Overseas Market expansion and Landing progress for the benefit of the Engineering and Technology Ventures' business growth.

For more info about IES-INCA, visit our website: [ies-inca.com](http://ies-inca.com)



(L-R) – Teo Ser Luck, President of ISCA, Er Chong Kee Sen, Chairman of IES-INCA



A good turn out of members from IES and ISCA for the MOU signing and Sustainability Forum



An engaging discussion between members of IES and ISCA on the topic of Sustainability

## IES Technopreneur Development Committee

In 2023, TDC's goal was to encourage various members from IES and the IHLs to participate in more of activities and in the promotion in technopreneurship.

### Republic Polytechnic: Innovation for Impact, an Engineering and Entrepreneur project

For the academic year 2023 Semester 1, Republic Polytechnic ran the E112 Engineering Design module where the students submitted posters on the theme of "Innovate for Impact" for the Design projects. The RP students used the Design Thinking framework to identify suitable problem statements after interacting with beneficiaries of their service-learning projects. The students then had to innovate and deliver tangible prototypes that positively impact the beneficiaries. They also designed posters to showcase their problems and solutions.

A total of 135 posters were submitted, and the top 15 entries were shortlisted. These posters are judged by an IES-TDC and IES-INCA panel of which RP identified the top three teams, as well as the team with the best solution. An Award Presentation was held on 19-Oct-23 in Republic Polytechnic, where IES-INCA GM Andy Wee presented the prizes to the RP students.

As part of the Award Presentation, our INCA incubatee Dr Michael L. Abundo, CEO and co-founder of OceanPixel Pte Ltd, was also invited to share with the RP students on how his start-up identifies opportunities and becomes a first-mover in the Blue Economy, focusing on engineering solutions for sustainable coastal, marine, and offshore development.



### Collaboration with NSCC: High Performance Computing Artificial Intelligence Innovation Challenge 2023

In September 2023, IES TDC and IES-INCA, collaborated together with ACE.SG to launch the High Performance Computing Artificial Intelligence Innovation Challenge 2023. This initiative aims to leverage the potential of artificial intelligence (AI) and high performance computing (HPC) by encouraging innovators to revamp processes and accelerate solutions.

The ultimate goal is to support sustainable business growth, enhance public services, and contribute to the advancement of smart cities. Participants and students will also have opportunities working on solutions incorporating AI, HPC to address real life issues and building AI skill sets for potential career paths.

The Challenge had the following objectives:

- Tackle real-world complex issues, fostering collaboration and knowledge sharing within the AI and HPC communities.
- Introduce fresh perspectives to existing problems, stimulating innovative AI and HPC solutions.
- Act as a link between academia and industry, offering students opportunities to develop skills and companies chances to find new talent and inventive solutions.



Bottom Photo: – Professor Tan Tin Wee, Chief Executive (NSCC), giving the welcoming address for the start of the NSCC HPCIC23

# IES ACADEMY

**IESA Chairman: Er. Chong Kee Sen**  
**IES Vice President (Professional Development):**  
**Mr Mervyn Sirisena**

## COURSES

IES Academy (IESA) serves as the professional training arm for IES, delivering a diverse array of engineering courses to its members and the engineering community. These courses are organised into four key pillars:

- 1) Certifiable Courses
- 2) Continuing Education Courses
- 3) Preparatory Courses for Professional Engineer Exams
- 4) Engineers Leadership Programmes

While the first three pillars concentrate on honing technical skills and knowledge within specific

domains, the Engineers Leadership Programmes, including Young Engineers Leadership Programme, Advanced Engineers Leadership Programme, and Global Engineers Leadership Programme, are designed to empower young engineers, mid-level engineers, and engineering leaders with a comprehensive set of leadership skills tailored to the ever-evolving dynamics of the engineering and business realms.

In 2023, IESA exhibited consistent growth, expanding its course offerings and catering to a larger audience for their professional development. The number of courses experienced a 2% year-on-year increase, reaching 201 in FY 2023, up from 198 in the preceding year. Furthermore, the total student-hours surged by 10%, totalling 71,395 compared to 64,640 in FY 2022. Table 1 below provides an overview of the courses conducted and the quantity of training activities in 2023, offering a comparative analysis with the figures from 2022.

Main Target Participants & Types of Courses	Continuing Professional Development	2023 No. of courses	2022 No. of courses
Professional Engineers	PDU	29	21
Singapore Certified Energy Managers	PDU	20	18
Resident Engineers / Resident Technical Officers	STU	108	113
WSH Officers	SDU	16	19
Preparatory Courses	CET Hours	15	14
Exam Administration / Others	Nil	13	13
<b>Total</b>		<b>201</b>	<b>198</b>
<b>Total Student-Hours</b>		<b>71,395 student-hours</b>	<b>64,640 student-hours</b>

Table 1. Number of Courses Conducted by IES Academy

In order to cater to the diverse demands of both IES members and the general public, IESA maintained a flexible approach in its course delivery modes during FY 2023. The academy offered courses through various formats, including physical classroom sessions, virtual courses conducted via online platform, and a hybrid model that combined both virtual and in-person elements.

Out of the 201 courses offered, a significant portion, constituting 56%, took place in traditional physical classrooms. Meanwhile, 37% of the courses were facilitated virtually using platforms such as Zoom.

The remaining 7% were conducted in a hybrid format, seamlessly blending the advantages of both virtual and in-person learning experiences.

The recovery from the challenges posed by the COVID-19 pandemic in 2023 notably contributed to IESA's ability to increase the number of in-person courses conducted in physical classrooms. This flexibility in course delivery modes allowed IESA to better address the evolving needs and preferences of its audience. For a detailed breakdown of the modes and the corresponding number of courses conducted by IESA in FY 2023, please refer to Table 2 below.

Mode of Course	2023 No. of Courses	2022 No. of Courses
Physical Classroom Courses	113	99
Virtual Courses	74	86
Virtual-classroom Hybrid Courses	14	12
Online Interactive / Asynchronous Courses	0	1
<b>Total</b>	<b>201</b>	<b>198</b>

Table 2. Number of Courses conducted in Various Modes in 2023 and 2022

**DEVELOPMENT OF NEW COURSES**

IESA continued its commitment to staying ahead of the fast-paced industry landscape and addressing specific requests from its customers by introducing 12 new courses in 2023. These courses were thoughtfully designed to cater to a wide range of participants. The details of these new courses are presented in Table 3 below.

No	Course Title	Target Participants
1	Examine, Inspect & Test for Lift & Escalator	Professional Engineer, Lift & Escalator Inspector
2	Project Management for Engineers	Professional Engineer, INCA Incubatee
3	Digital Construction Part I (IDD Concept and Digital Tools)	Resident Engineer, Resident Technical Officer
4	Digital Construction Part II (VDC Concept and Digital Tools)	Resident Engineer, Resident Technical Officer
5	Understanding ACoP SS667: 2020 Code of Practice for handling, storage and processing of combustible dust - Level 1: Combustible Dust Hazard Awareness Course	WSH Officer
6	Understanding ACoP SS667: 2020 Code of Practice for handling, storage and processing of combustible dust - Level 2: Combustible Dust Hazard Competent Person Course	WSH Officer
7	Heat Transfer for Industrial Professionals	Professional Engineer, Singapore Certified Energy Manger, Chartered Engineer
8	Approved Code of Practice on Chief Executives' and Board of Directors' WSH Duties	Professional Engineer, Resident Engineer, Resident Technical Officer, WSH Officer
9	Fundamentals of IEC 61511 – Safety Instrumented Systems (SIS) for the Process Industry Sector	Professional Engineer, WSH Officer
10	Certification Course for Piling Personnel	Professional Engineer, Resident Engineer, Resident Technical Officer
11	Supervision and Monitoring of Deep Excavation Works for Building Basements and Civil Engineering Projects and Workplace Safety and Health (WSH) Risk Management and Incident Investigation	Resident Engineer, Resident Technical Officer
12	Supervision of Prestressing in Singapore	Resident Engineer, Resident Technical Officer

Table 3. New Courses Conducted in 2023



Launching of ACoP SS667: 2020 Code of Practice for Handling, Storage and Processing of Combustible Dust Course by IES President, Mr Dalson Chung (4th from left) witnessed by Ms Evelyn Koh (3rd from left), Deputy Director, Ministry of Manpower; Mr Winston Yew (5th from right), Director, WSH Council; and Mr Raymond Wong (4th from right), Senior Asst Director, WSH Council. As an initiative to support Vision Zero, this course is supported by MOM and WSHC.

## BANGABANDHU SHEIKH MUJIBUR RAHMAN TUNNEL TRAINING PROGRAMME

Aligned with the overarching mission of the IES to advance and promote the science, art, and profession of engineering for the well-being of mankind, IESA is dedicated to elevating the knowledge and expertise of both local and international engineers. IESA highly values opportunities to host foreign delegates, fostering collaborative learning and knowledge exchange on a global scale.

In a noteworthy stride towards international engagement in 2023, IESA facilitated a customised corporate class for China Communications Construction Company (CCCC). This initiative aimed at providing specialised training for clients from the Bangladesh Bridge Authority (BBA) in the operation and maintenance of the Bangabandhu Sheikh Mujibur

Rahman Tunnel. The training programme, comprising two individual two-week classes, successfully equipped two batches of BBA delegates with essential skills and knowledge.

In collaboration with MSI Global, a subsidiary of the Land Transport Authority (LTA), IESA organised insightful site visits to various tunnels and their facilities in Singapore. These included prominent structures such as the Central Expressway (CTE), Marina Coastal Expressway (MCE), Kallang-Paya Lebar Expressway (KPE), Sentosa Gateway Tunnel, Woodsville Road Tunnel, and Fort Canning Tunnel. The comprehensive training course not only enriched the knowledge of the BBA delegates but also strategically prepared them for the imminent commissioning of the Bangabandhu Sheikh Mujibur Rahman Tunnel. It is a road tunnel located under the Karnaphuli River in the port city of Chattogram, Bangladesh.



Group Photo of 1st Batch of BBA delegates with IES President, Mr Dalson Chung (7th from left), IESA Chairman, Er. Chong Kee Sen (6th from left) and IES Vice President (Professional Development), Mr Mervyn Sirisena (7th from right). 8th from left is Mr Li Wei, a representative from China Communications Construction Company. Together are Er. Yang Kin Seng, a course trainer as well as Mr Chow Kok Wah and Mr Andy Ong from IES Academy.



Site Visit to a Tunnel and its Facility in Singapore



### LIFT & ESCALATOR INSPECTION ABRIDGE COURSE

In an additional testament to its expertise and industry recognition, IESA received a request from the Land Transport Authority (LTA) in 2023 to conduct a specialized corporate class in the Lift & Escalator Abridge course. Collaborating with Temasek Polytechnic, IESA delivered a tailored program with the specific goal of empowering LTA participants with comprehensive knowledge in the inspection of lift and escalator installations and maintenance practices, aligning with prevailing regulatory standards.

The customised course covered a spectrum of essential topics, including the regulatory framework governing lifts and escalators, diverse types of mobility equipment installed in buildings, the intricacies of installation, operation, and maintenance of components in lifts and escalators, pre-inspection procedures, site audits, and the nuances of maintenance and functional testing for lifts and escalators.



Practical Session for Customised Lift & Escalator Inspection Abridge Course

### WSQ COURSES

In partnership with Enterprise Singapore (ESG), IESA has revitalized its existing “Standards Development Training” course within the framework of the Workforce Skills Qualifications (WSQ) with funding support from SkillsFuture Singapore (SSG). This revamped course was officially launched in December 2023. More WSQ courses will be developed to provide increased accessibility to quality training for IES members and the broader public, with lower course fees attributed to SSG funding. This effort underscores IESA's commitment to fostering continuous learning and professional development in alignment with national workforce frameworks.

### SUSTAINABILITY COURSES

Simultaneously, IESA is actively collaborating with Institutes of Higher Learning (IHLs) to craft new courses centred around the theme of Sustainability, catering specifically to the requirements of the IES Sustainability Chartership. The comprehensive curriculum will consist of four core modules, complemented by a minimum of six elective modules, with the goal of launching these offerings by second quarter of 2024. This strategic collaboration reflects IESA's forward-looking approach, addressing the growing importance of sustainability in the engineering profession while providing a structured and robust pathway for professionals to attain the IES Sustainability Chartership.

### CAREER CONVERSION PROGRAMME FOR RESIDENT TECHNICAL OFFICERS

Amidst the current scarcity of Resident Technical Officers (RTOs) in the market, IESA entered into an agreement with Workforce Singapore (WSG) to initiate the Career Conversion Programme for Resident Technical Officers. This ground-breaking programme extends a 4-month on-the-job training opportunity at participating companies specifically tailored for former RTOs (Civil & Structural) whose certifications have lapsed for more than three years, providing a viable pathway for their reintegration into the industry.

IESA plays an important role as a program partner, responsible for the administration of this career conversion initiative while WSG provides salary support for participating companies for the four-month duration of the programme. The objective of this initiative is to facilitate the placement of RTOs who are Singaporean Citizens or Singapore Permanent Residents.

**LEARNING ENTERPRISE ALLIANCE (LEA) AWARD 2023**

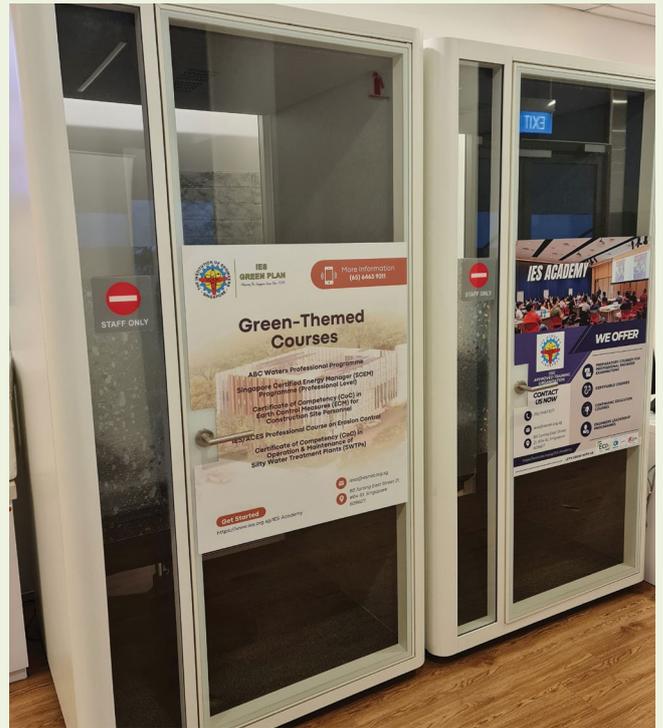
IESA was presented the Learning Enterprise Alliance (LEA) Grant in 2023 by the Institute for Adult Learning (IAL) for its commitment to transform and digitalise its workplace. This grant covers 90% of the expenses for a 100-hour consultancy service by an external consultant assigned to IESA to elevate its work processes in preparation for workflow transformation and digitalization. The LEA initiative is planned to align with IES' broader digitalisation project which is aimed at achieving operational efficiency across its organization.



Learning Enterprise Alliance (LEA) Awards Ceremony 2023. Er. Chong Kee Sen, IESA Chairman (1st from right) received the award from IAL's special guest, Mr Lim Swee Say who is the Chairman of NTUC LearningHub

**OFFICE POD**

In terms of IESA facility, two office pods were acquired to facilitate the administration of virtual courses and meetings post COVID-19 pandemic, given that all IESA staff are currently working in the office at full capacity. IESA is also working with IES Publications & Corporate Communications to leverage the office pod for promotional/advertisement purposes through the display of posters.



2 Office Pods Used by IES Academy



Group Photo of Learning Enterprise Alliance (LEA) Awards Ceremony 2023

# PUBLICATIONS AND CORPORATE COMMUNICATIONS

The year 2023 marked a significant year as the Corporate Communications Committee geared its efforts into further establishing IES' presence into the local media as the voice of engineers and engineering thought leader in Singapore.

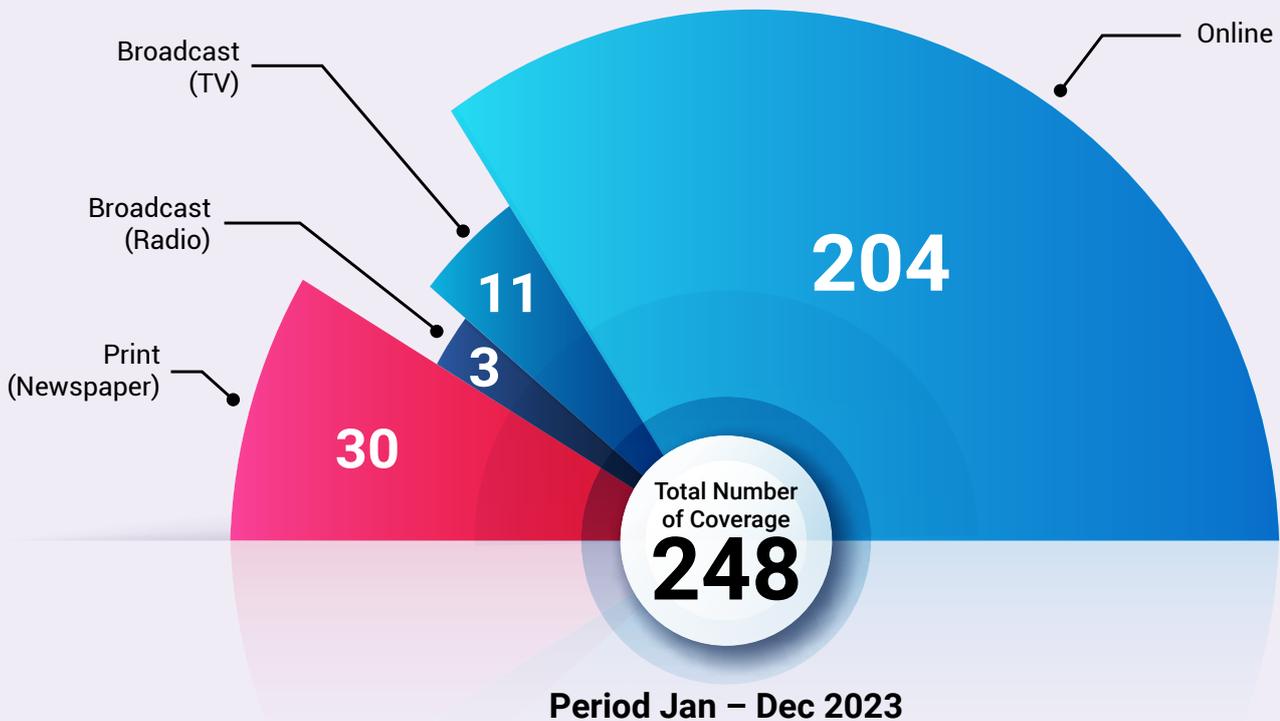
The Corporate Communications Committee strived to garner recognition through lending expert engineering opinions to media queries, opinion pieces, and feature interviews on several platforms ranging from print, online, and broadcast media.

IES is continually being sought for expert commentary for any engineering-related incidents in Singapore, as well as sparking up an interest among the youth, for the engineering vocation, sustainability in engineering and engineering education.

IES-led events such as the IES Green Festival in conjunction with World Engineering Day and National Engineers' Day (NED) 2023, World Engineers Summit (WES) 2023, and partnerships with local and international stakeholders such as SkillsFuture Singapore, Institute of Technical Education Singapore and China Society of Engineers were also covered in the media. 2023 is the year of sustainability and green movements, and a signified the year where the IES' sustainability efforts were featured prominently and recognised in the media.

The statistics below show the amount of media coverage in 2023:

## Number of pieces of coverage



Across the board, media value and coverage increased due to the rise in the topic of Net Zero future and sustainability in engineering as compared to 2022, which saw the launch of the new certification framework for Chartered Engineers in Sustainability with SkillsFuture Singapore, the Charles Rudd Distinguished Public Lectures, the appointment of IES Council member as the next WFEO president-elect, and the World Engineers Summit 2023 which garnered international coverage, among other notable media mentions.

The IES Corporate Communications Committee will continue its working partnership with our PR consultants, The Right Spin, and will continue putting its best efforts towards showcasing IES' progressive efforts in a reputable way.

**MEDIA COVERAGE HIGHLIGHTS: BROADCAST**  
CNA938's sustainability segment 'Your Singapore Weekend'

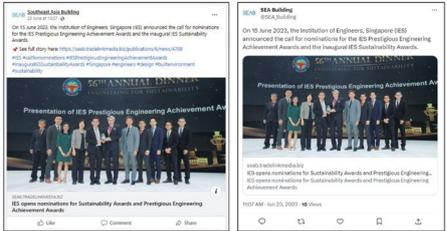



**Spokesperson:**  
**Mr Dalsion Chung, IES President** interviewed on IES Green Plan 2030

theR!GHTspin 12

**MEDIA COVERAGE HIGHLIGHTS: ONLINE**  
Nomination call for Sustainability Awards and Prestigious Engineering Achievement Awards on Southeast Asia Building's social media





theR!GHTspin 10

**MEDIA COVERAGE HIGHLIGHTS: PRINT**  
**Interview on the Boon Lay gondola incident in The Straits Times**



**Broken parapet wall contributed to Boon Lay gondola incident**



A gondola giving way after part of an HDB roof parapet in Boon Lay collapses. ST PHOTO: SHEN/STAFF

**Spokespersons:**  
**Er. Chong Kee Sen, IES Emeritus President**  
**Er. David Ng, IES Honorary Secretary**

theR!GHTspin 13

## MEDIA COVERAGE HIGHLIGHTS: PRINT

### Interview on the Boon Lay gondola incident in The Straits Times

#### THE STRAITS TIMES

Broken parapet wall contributed to Boon Lay gondola incident



A gondola giving way after part of an HDB roof parapet in Boon Lay collapses. ST PHOTO: SHEN/STAFF

Engineer Chong Kee Sen, emeritus president of the Institution of Engineers, Singapore, said that a mechanical engineer has to conduct a load test to verify that the gondola system is capable of withstanding the intended loads.

He also has to ensure that the gondola mechanism is in good working condition.

Aside from testing the gondola mechanism, engineers also need to test the structures where the anchor, which holds the platform, is placed. This job is handled by a structural engineer.

Engineer David Ng, the institution's honorary secretary, said that rooftop structures for anchoring gondola support must be designed and checked for loading of the anchor by a structural engineer.

He said that loads have to be added onto the anchor points prior to construction to test its strength.

"Before the commencement of a construction project, a structural engineer also reviews design and construction plans to ensure that the gondola system is capable of withstanding the intended loads," said Mr Ng.

**Spokespersons:**  
**Er. Chong Kee Sen, IES Emeritus President**  
**Er. David Ng, IES Honorary Secretary**

## PUBLICATIONS AND CORPORATE COMMUNICATIONS

### Media Spokesperson Networking Event

The IES Corporate Communications Committee will continue its working partnership with our PR consultants, The Right Spin, and will continue putting its best efforts towards showcasing IES' progressive efforts in a reputable way



To further equip our engineering professionals for media interviews, media appearances and help them create effective messages and present themselves while on camera, the Committee conducted a Media Spokespersons Networking Event as part of its efforts to expand the Spokespersons team, and to encourage new members of various engineering disciplines to come forth and learn more about becoming the appointed engineer-spokespersons for future media requests.

Over 30 members attended the session. Together with our PR Consultants, The Right Spin, the Committee presented on the Communications Work Plan and the various type of media coverages.

This event aimed to identify potential individuals who could contribute engineering insights and perspectives to media stories on various engineering-related matters. In doing so, these representatives will be sought to enhance the public's understanding and appreciation of engineering work, as well as raise the profile of IES.

### Publications Committee

In 2023, the Publications Committee continued its efforts to provide quality in-trend content to members through the magazine, as well as maintain outreach efforts through various activities and social media.

### Building Façade Inspection Seminar





Further in the pursuit of keeping engineers informed and updated on the latest regulations, learning curves and lessons in the field of façade inspection, the Publications Committee organised the 'Seminar on Building Façade Inspection' on 27 June 2023, with over 200 participants in attendance.

The seminar allowed them to understand how engineering technologies are useful in this line of work, from building structurally-sound facades that are not only safe, long-lasting, weather-proof, yet safe for the public and building tenants, resolving common and complex issues related to façade inspection, as well as insightful sharing from the experts during the panel discussion. On top of that, participants walked away with tips and tricks on how to manage the implementation and enforcement of building façade safety regulations and enhance the work processes for efficiency. The Committee will continue to seek new topics and work with relevant industry partners to bring in future seminars on a variety of subjects in 2024.

### IES Milestone Publication – History Book

The Editorial Committee has finalised the draft manuscript of the IES History Book, and it is now in the final review stage, projected to publish by Q3 of 2024.

The IES Publications Committee is supporting this endeavour by providing materials and working with the appointed publisher to ensure accuracy, before editorial layout begins. The History Book Editorial Committee has been working together to piece information for seamless storytelling with every stakeholder involved. More information will be provided in due course about the book's completion.

### Social Media

IES has some 4,000 likes and 4,500 followers on Facebook and more than 940 followers on Instagram, gaining about 500 and 660 more followers respectively over the FY2023. On LinkedIn, where IES reaches out to a more professional demographic, the number of followers has grown at an accelerated rate of about 5,028 over the past year to reach 8,734.



To further expand its social reach, the Committee will continue to share updates on various IES activities – including those from the Corporate Social Responsibility Committee, Young Engineers Committee and Student Chapters, mention 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 new certification framework for Chartered Engineers in Sustainability, and the recent collective MOU with eleven IHLs in Singapore during National Engineers Day 2023, aside from various IES-organised events with various partners and stakeholders locally and internationally. IES will see a growing trend in visibility and social media presence 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

Professional Conference Organiser (PCO) endeavours to achieve the specific goals and objectives established by the associations and organisations that have enlisted IES for the provision of the following services, with the aim of ensuring the success of their events:

- Event management (physical and virtual)
- Source conference and social event venues
- 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 2023:

## National Engineers Day

Having initiated National Engineers Day (NED) in 2010, the Institution of Engineers, Singapore (IES) has collaborated with tertiary institutions, government agencies, engineering organisations, and industry experts annually to implement a rewarding program. To adapt to the challenges posed by COVID-19 in 2020, NED embraced a hybrid format since then, integrating both physical and digital elements, facilitating greater involvement from overseas participants.

In its 14th edition, which took place between 15 to 26 August 2023, NED took on “Shaping a Circular Economy through Engineering” as its theme. The circular economy is key to strengthen our future resilience as a nation and it is important to engage students and the public on this journey to reduce waste and drive greater resource productivity in our daily lives.

Similar to previous years, an array of enjoyable and educational activities organised with different engineering organisations and government agencies, e.g. LTA, HDB, NEA, MPA etc. to demonstrate the ingenuity of engineers and the myriad of possibilities of an engineering career.

To broaden the perspective globally, NED also extended invitations to international speakers, from Amazon Web Services and Microsoft, to share with local and regional audiences about how their organisations integrate sustainable practices into their daily work. The responses were well received and overwhelming.



Guided tour – Rolls-Royce Singapore @ Seletar Aerospace Park



Hybrid talk by Mr Amos Foong, partner of BCA, with students at ITE Central



Facilitator sharing with participants on board ferry to visit offshore islands and vessels

## PROFESSIONAL CONFERENCE ORGANISER



EIC participants presenting virtually to the panel of judges



Panel of judges reviewing EIC team presentations via Zoom



Fireside Chat with GOH, DPM Mr Heng Swee Keat, moderated by Mr Syafiq Shahul, NED 2023 Chairman

In conjunction with NED, the Engineering Innovation Challenge (EIC) is a key component that students look forward to annually. EIC provides opportunities for students, both locally and overseas, ranging from Secondary Schools, Junior Colleges, ITE, Polytechnics and Universities to explore the essence of innovation, acquire new technical skills in prototyping and product development, and enhance presentation and collaboration abilities, all guided under the mentorship of experienced engineers. Evaluation of teams was based on the final product and prototype, the

effectiveness of team strategy and collaboration, and the determination exhibited by the students.

This year, the teams were tasked to demonstrate ideas or make innovative improvements which contribute to Resilient City Living in areas such Health Innovation, Clean Water Supply, Food Security and Sustainable Supply Chain.

Winning teams were presented with enticing cash prizes and trophies at the NED-EIC Prize Presentation Ceremony which was held on 26 August 2023 at ITE College Central. The ceremony was graced by Guest-of-Honour, Deputy Prime Minister and Coordination Minister for Economic Policies, Mr Heng Swee Keat who was also invited for a fireside chat with the students during the session.



Scan the QR code to watch the Highlights from National Engineers Day (NED) 2023.

## World Engineers Summit & Conference Dinner 2023

IES initiated the World Engineers Summit (WES) in 2013 as a platform to address crucial issues confronting the world through engineering solutions. WES 2023 was a key event in 2023 for the IES Green Plan 2030, which was unveiled in January 2023 to support Singapore's sustainability journey.

IES hosted WES 2023 in Singapore on 8 – 10 November 2023 at Marina Bay Sands, Singapore. The sixth biennial conference continued to advance engineering-centric discussions on sustainable, climate-resilient, and low carbon urban developments.

Themed "Engineering for a Sustainable Future", WES 2023 facilitated the timely exchange of knowledge, ideas, and solutions amongst engineers to support the world's net-zero transition. The summit was well participated by the engineering community and thought leaders, policymakers, specialists, business leaders and academics from across the globe.

IES was honoured to have invited Mr Teo Chee Hean, Senior Minister and Coordinating Minister for National Security as the Guest-of-Honour to grace the WES Opening Ceremony on 8 November 2023.

# PROFESSIONAL CONFERENCE ORGANISER



GOH, Mr Teo Chee Hean addressing delegates at the WES 2023 Opening Ceremony on 8 November



The inaugural China Engineers Forum at WES 2023 on 9 November



Delegates networking at the exhibition during the lunch break



Delegates had the opportunity to hear from industry leaders such as LTA's Mr Lam Wee Shann



Enthusiastic participants engaged in the track room



Both local and overseas delegates learned more about Danfoss Integrated Technology at their Sustainability Technology Center

This year's WES featured eminent sustainability leaders as plenary speakers. Dr Steve Howard, Vice Chairman, Sustainability, Temasek speaks on "Re-imaginings of our Net Zero Future" and Professor Low Teck Seng, Senior Vice President (Sustainability and Resilience), National University of Singapore (NUS) shared on "Sustainability – Research and Translation for a Resilient Singapore". Mr Lam Wee Shann, Deputy Chief Executive (Technology)/ Chief Technology Officer, Land Transport Authority (LTA) provided insights into "Building a Green Land Transport Ecosystem" while Professor Wang Tianyi, Professor at Hong Kong University of Science and

Technology (Guangzhou), Former Chairman & CEO of China Everbright Environmental Group shared about "Hong Kong's Roadmap to Carbon Neutrality".

The conference facilitated discussions on pressing current issues and new growth opportunities via seven tracks: Sustainable Living through Technology, Building a Resilient Future against Climate Change, Future of Industry Sustainability, Smart and Sustainable Urban Mobility, A Greener and Renewable Built Environment, Pedagogy and Education Technology in Engineering Education, and the 7th track on the China Engineers Forum.

This year, for the very first time, IES and China Society of Engineers, strategic partner of WES 2023 jointly hosted the China Engineers Forum, where key learnings from the implementation of notable sustainable development projects in China were shared with a special focus on technology application.

The forum was graced by Mr Zhu Jing, Charge d'Affaires from the Embassy of the People's Republic of China in the Republic of Singapore. Delegates were able to hear from various experts on harnessing power from the sea in Guangzhou, developing sustainable space solutions in Hong Kong, nuclear power technology development and excellence in engineering education in China.

WES 2023 concluded with Technical Site Visits on Day 3 for delegates to witness outstanding sustainable practices in action to maximise learning experience. The visits were the Sustainability Technology Center (STC) at Danfoss Singapore, the Emerson Digital Plant, the Sembcorp Tengeh Floating Solar Farm and Gardens by the Bay.



Scan the QR code to watch the Highlights from World Engineers Summit (WES) 2023.

The WES 2023 Conference Dinner and IES 57th Annual Dinner was held at the Sands Grand Ballroom, Marina Bay Sands Singapore on 9 November 2023. The dinner celebrated the successful conclusion of WES 2023 and underscored the institution's commitment to advancing Singapore's sustainable development.

Mr Chee Hong Tat, Acting Minister for Transport graced the event as the Guest-of-Honour, presented the inaugural IES Sustainability Awards and other engineering awards to winning teams and individuals.

Event highlights included:

- Conferment of IES Honorary Fellow
- Presentation of IES Outstanding Partner
- Presentation of IES Prestigious Engineering Achievement Awards
- Presentation of the first IES Sustainability Awards to 10 engineering teams that emerged as winners out of 54 submissions across three categories: Completed Engineering Projects, Innovation Projects / Solutions for Sustainability, and Promising Start-ups for Sustainability



GOH, Mr Chee Hong Tat delivering his speech at the WES 2023 Conference Dinner & IES 57th Annual Dinner



Prof Su Guanng, President Emeritus, Nanyang Technological University was the recipient of the IES Lifetime Engineering Achievement Award



Building and Construction Authority, one of the 10 IES Sustainability Award winners

### Other events in 2023

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

#### IES-Standards Development Organisation (SDO) Launches

- Seminar Launch on SS 333:2022 Specification for Fire Dampers on 21 March 2023
- Webinar Launch of NEW Technical References in railway - TR 94:2021, TR 98:2021 and TR 107:2022 on 14 July 2023

#### Ad-hoc Events

- IES Spring Festival and Appreciation Awards Night 2023 on 2 February 2023
- IES Away Day 2023 from 28 to 29 April 2023
- IES 57th Annual General Meeting on 27 May 2023

# TECHNICAL COMMITTEES

The Technical Committees have been organising activities that specifically address and focus on sustainable engineering practices. The activities involved organising conference and seminars which involved experts in the field to share their knowledge and best practices with the engineering community. The activities also provided hand-on training and opportunities for the engineering community to learn about new sustainable technologies and solutions.

## INFRASTRUCTURE CLUSTER

The Technical Committees have been organising webinars since 2020 and the Technical Committees started to organise physical seminars in 2022.

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

The 4 Technical Committees under 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: Er. Ms Ng Beow Suan

### 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 80 participants on Risk Mitigation for Slope Design, Construction & Maintenance held on 10 January 2023 at One Farrer Hotel



Attended by 200 participants on Understanding the Requirement for Development Interfacing with Rail Infrastructure held on 12 July 2023 at One Farrer Hotel



Attended by 180 participants on IES Webinar on Advanced Structural Projects held on 13 October 2022 via webinar



Attended by 120 Ashrare-IES Distinguished Lectures - Decarbonization and Sustainable Singapore 2023 held on 18 April 2023 at e2i



Attended by 80 participants on "IES-NEA-PUB Joint Seminar" held on 22 Sep 2023 at e2i.



Attended by 50 participants on "Schneider Electric Innovation Talk: Partnership for Sustainable Future" held on 9 Feb 2023 at Mandarin Oriental



Attended by 30 participants on "Site Visit to Marina East Desalination Plant" held on 20 Nov 2023



Attended by 120 participants on "Technical Seminar on Sustainable and Safe Approaches for Deep Excavation and Tunnelling in Singapore's Urban Development" held on 10 October 2023 at One Farrer Hotel



Attended by 60 participants on "Digital Twin Seminar" held on 26 January 2023 at Conrad Centennial

## MANUFACTURING CLUSTER

The Technical Committees have been organising webinars and physical events in 2023.

Led by Mr Soh Tiam Chwee (Chairman) and Mr Dennis Tan (Chairman) and Ms Wan Siew Ping (Deputy Chairman), the 3 Technical Committees had organised 3 events in 2023.

The 3 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

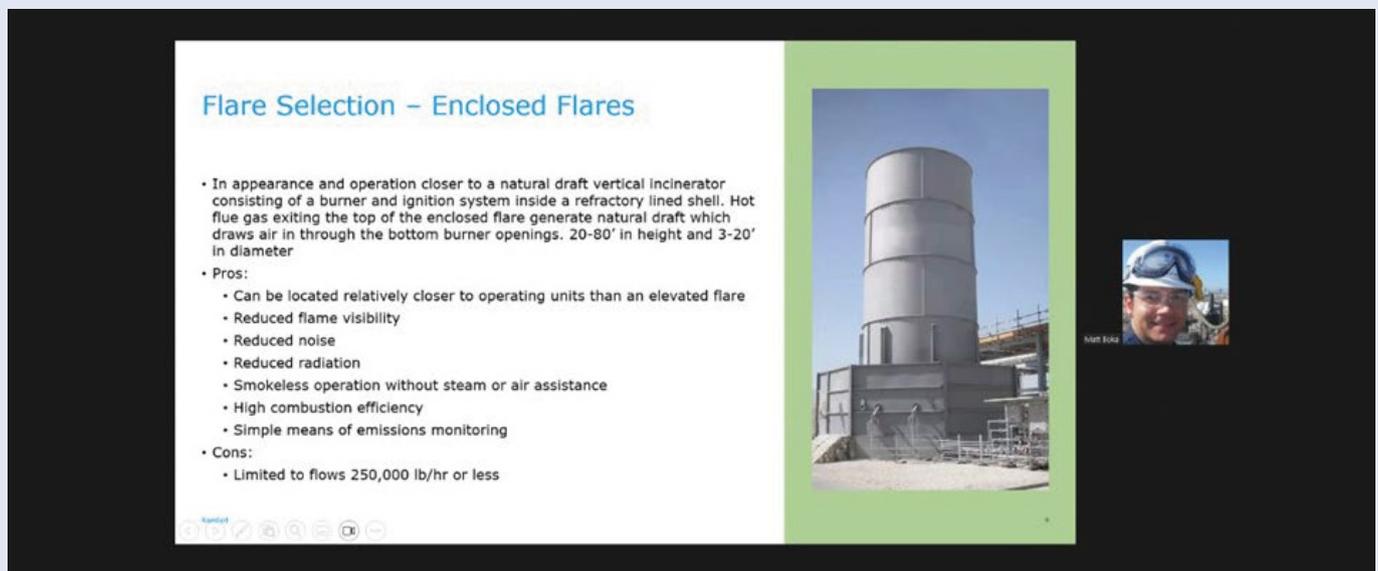
Chairman: Mr Soh Tiam Chwee

Deputy Chairman: Ms Ng Mee Lin

### Intelligent Manufacturing Technical Committee

Chairman: Ms Wan Siew Ping

## Some of the highlights taken during the webinars/seminars



Attended by 70 participants on Flare Design, Types, and Selection held on 15 March 2023 via webinar



Attended by 150 participants on Combustible Dust Explosion Symposium held on 8 September 2023 at One Farrer Hotel



Attended by 10 participants on New Sustainability Technology Developments For Carbon Legislations held on 30 November 2023 at The Institution of Engineers, Singapore

## TECHNICAL COMMITTEES

### SUSTAINABILITY CLUSTER

The Technical Committees have been organising webinars and physical events in 2023.

Led by Dr Victor Sim (Chairman) and Prof Seeram Ramakrishna (Deputy Chairman), the 4 Technical Committee had organised 2 events.

The 4 Technical Committees under the Sustainability Cluster are:

#### Climate Change Technical Committee

Chairman: Dr Li Yuzhu, Pearl

#### Energy Technical Committee

Chairman: Mr Norman Lee

#### Environment & Water Engineering Technical Committee

Chairman: Ms Jasmine Foo

Deputy Chairman: Dr Ang Keng Been

#### Infocomm Technology Technical Committee

Chairman: Mr Chang Sau Sheong

### Some of the highlights taken during the webinars/seminars



Attended by 40 participants on Site Visit to TuasOne Waste To Energy (WTE) Plant held on 6 April 2023 at TuasOne Waste To Energy Plant



Attended by 130 participants on Sharing Seminar on Earth Control Measures for Qualified Erosion Control Professional held on 4 August 2023 at e2i West, Devan Nair Institute for Employment and Employability

## TRANSPORTATION CLUSTER

The Technical Committees have been organising webinars and physical events in 2023.

Led by Mr Lew Yii Der (Chairman) and Associate Prof Zhou Yi (Deputy Chairman), the four Technical Committees had organised 4 events in 2023.

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 / Mr Quek Gim Chuah

### Systems Engineering Technical Committee

Chairman: Mr Tan Yang How

Deputy Chairman: Mr Koh Eng Wah Bernard & Associate Prof Yee Fook Cheong

### Maritime Engineering Technical Committee

Chairman: Mr Eugene Khoo

## Some of the highlights taken during the webinars/seminars



Attended by 80 participants on Sustainable Energy for Sustainable Transportation held on 12 May 2023 at SIT@Dover



Attended by 120 participants on IES & IRSE Railway Innovation Seminar 2023 held on 12 September 2023 at National University of Singapore, Shaw Foundation Alumni House



Attended by 30 participants on IES & IRSE Railway Technical Visit 2023 held on 13 September 2023 at Integrated Train Testing Centre and Kim Chuan Depot



Attended by 15 participants on Innovations for Sustainability held on 10 November 2023 at IES Academy

# PROFESSIONAL REGISTRIES

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

### Monitoring Committee

Chairman: Er. Tan Seng Chuan (IES)

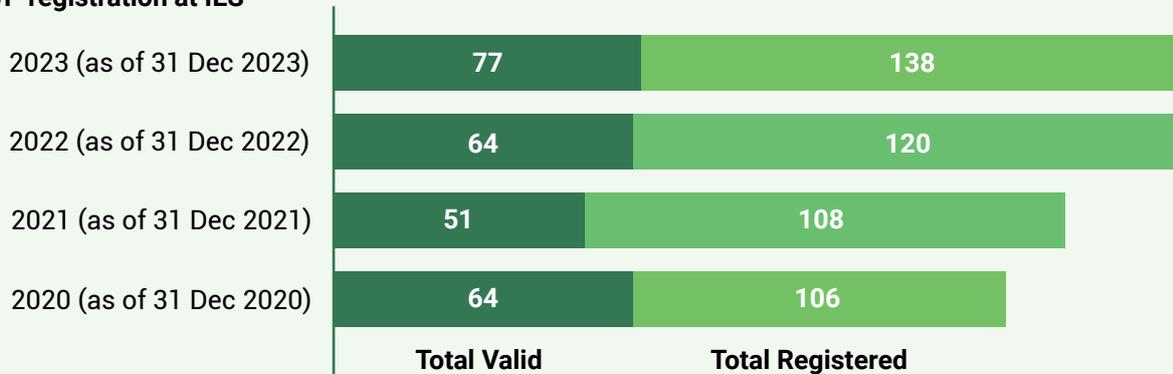
Co-Chairman: Mr Tan Nguan Sen (PUB)

### Programme Committee

Chairman: Er. Sim Mui Leng (IES)

Co-Chairman: Mrs Ong Geok Suat (PUB)

### ABCWP registration at IES



### Total ABCWP registration at IES, SIA and SILA

ABCWP	IES	SIA	SILA	Total
Total Registered	138	20	53	211
Total Valid	77	7	44	128

There is a total number of 128 valid ABCWPs practising their profession to oversee ABC Waters projects.

ABCWP monitoring committee has endorsed the requirement for ABC WP (LA) to be co-signatory of DC submission for developments of area exceeding 0.4 hectares. There is also an initiative to include Biodiversity in EU3 and Riverbank protection in EU4 slope design engineering.

ABCWP Seminar and Networking Nights were held in Mar 2023 and Jan 2024 respectively at PUB RC. There will be another seminar to be held in June 2024 in conjunction with Singapore International Water Week (SIWW) at Sands Expo & Convention Centre, Marina Bay Sands.

### Singapore Certified Energy Manager (SCEM) Registry

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

#### EEO Assessor – SCEM Monitoring Committee Structure

**Chairman**

Mr Norman Lee

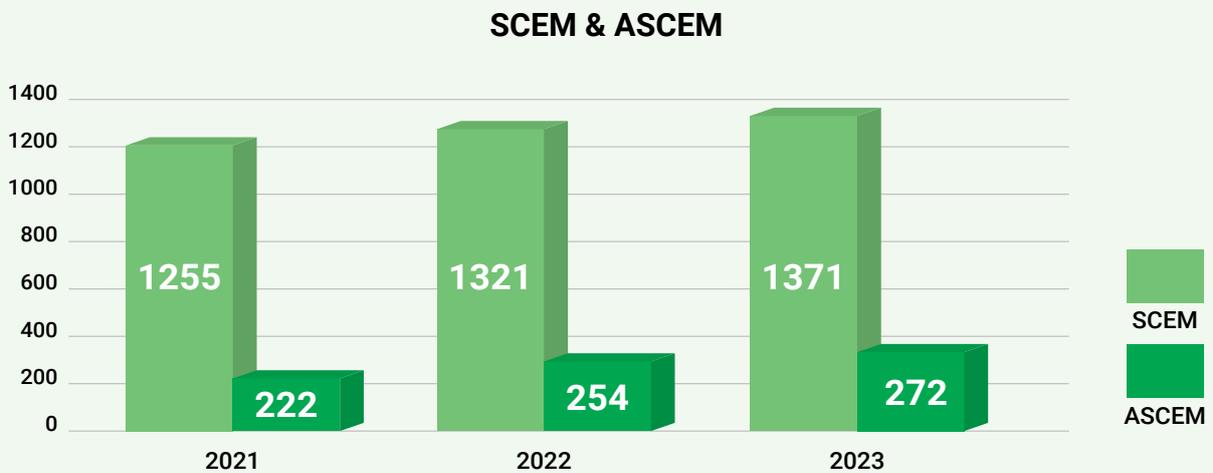
**Members**

Dr Sharmilal Jayamaha

Er. Goh Chee Tiong

Mr Tan Guan Qun

#### Total Certified SCEMs



**Comments:**

As at 31st December 2023, SCEM registry has registered 1371 SCEM members and 272 ASCEM members. This is a healthy trend with increased in Certified SCEM and ASCEM respectively compare to 2022.

In term of programs awarded with SCEM-PDU for 2023, we have a good 153 in our record.

#### Total Certified EEOA



**Comments:**

As at 31st December 2023, EEOA registry has registered 86 EEOAs. This is about 3.61% increase over year 2022. As an EEOA applicant, you are also given the opportunity to be accessed during the interview to be a CEng under the Energy sector. As a result, this brings up the overall image and add value to an EEOA.

## PROFESSIONAL REGISTRIES

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

#### C&S Joint Accreditation Committee Structure

##### Co-Chairs

Er. Chan Ewe Jin (IES)  
 Er. Chuck Kho (ACES)  
 Er. Kwa Chin Soon (BCA)

##### Members

Er. Liao Wai Kun (IES)  
 Er. Low Kam Fook (IES)  
 Er. Victor Tay Lian Peng (BCA)  
 Er. Sivakumaran Murugesu (ACES)  
 Er. Chua Tong Seng (ACES)

Total Registered	RE	RTO
2023 (as of 31 Dec 2023)	4673	7761
2022 (as of 31 Dec 2022)	4415	7617
2021 (as of 31 Dec 2021)	4224	7484

Total Valid	RE	RTO
2023 (as of 31 Dec 2023)	2086	4151
2022 (as of 31 Dec 2022)	1999	4129
2021 (as of 31 Dec 2021)	2041	4260

#### Comments:

We have observed a steady growth in total RE/RTOs in term of total registered & total valid. This is a clear indicator that the economy has begun to pick up in the construction industry where more RE/RTOs had registered and renewed their certification with IES.

#### C&S RE/RTO Award Night 2023

The C&S RE/RTO Award Night 2023 was hosted by IES/ACES and held at JTC Summit on 8th December 2023. Closed to 300 RE/RTOs and invited guests attended the event, where the Guest of Honour was Er. Thanabal (Group Director, Building Resilience Group, Commissioner of Building Control).

Exemplary Site Supervisor Awards were given out to a total of six REs and RTOs nominated by Professional Engineers in recognition of their outstanding and exceptional contribution as site supervisor.

Talks by Professor Goh Yang Miang, Director of the Centre for Project and Facilities Management, NUS Department of the Built Environment (DBE) followed by Er. Chong Chee Hoe, Senior Engineer, BCA and lastly, Talks by Er. Yow Cheong Hoe, Commercial Engineering Director, Chye Joo Construction were some key highlights for the night.

We look forward to organising an even larger event in the year 2024.



The recipients of the Exemplary Site Supervisor Awards in a group photo with Er. Thanabal and Co-Chairs of JAC

**IES/ACES Facade Inspector (FI) Registry**

**FI Joint Accreditation Committee (JAC) Structure:**

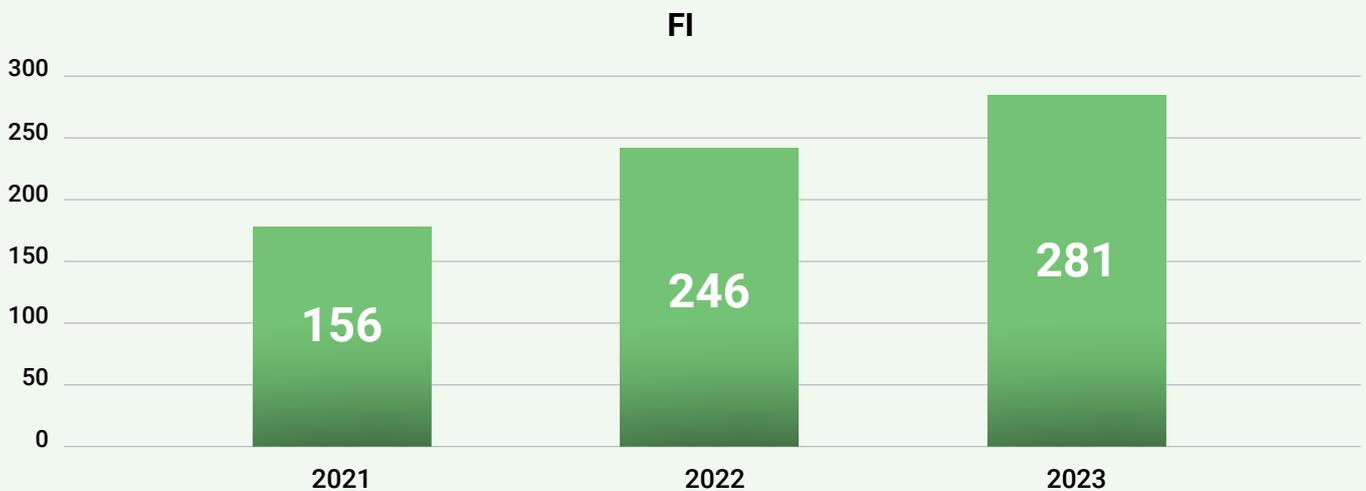
**Co-Chairs**

- 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
2023 (as of 31 Dec 2023)	281
2022 (as of 31 Dec 2022)	246
2021 (as of 31 Dec 2021)	156



**Comments:**

FI registry started registration in 2020 with 37 new registrants. Over a 2-year period, the number of registrations has increased >6 times. The pre-requisite for FI includes a mandatory Certificate in Façade Inspection course held in IESA/BCAA. The Committee is creating an awareness to the Façade industry as we expect to see higher registration rate with higher demand for FI.

As of this year, we have implemented STU (FI) points for those Façade Inspectors who are renewing their certification. There are 6 courses currently with STU (FI) points and we are in discussion to implement more façade-related courses with variation of topics.

## PROFESSIONAL REGISTRIES

### 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 Registered	RE	RTO
2023 (as of 31 Dec 2023)	43	505
2022 (as of 31 Dec 2022)	39	484
2021 (as of 31 Dec 2021)	38	462

Total Valid	RE	RTO
2023 (as of 31 Dec 2023)	33	390
2022 (as of 31 Dec 2022)	30	388
2021 (as of 31 Dec 2021)	34	376

#### M&E RE/RTO Interviews

Total number of interviews conducted: 20

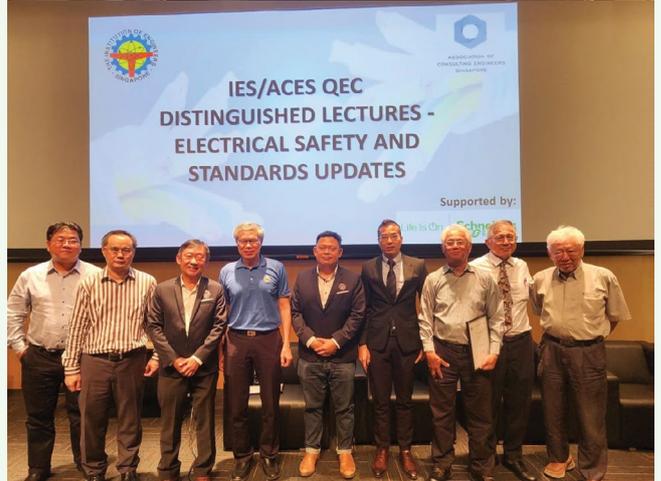
##### Comments:

As of end year 2023, the number of valid RE and RTO remained consistent. The total number of interviews conducted was maintained at 20 in the year 2023.

For the past years, we had a bi-yearly combined seminar with the Qualified Electrical Contractors (QEC) Registry. This year, the QEC Networking Nights were held on the 25th May 2023 at Lifelong Learning Institute and on 27th October 2023 at NUSS Guild House Suntec.

Both events were full house with a strong crowd of 270 and 160 participants including invited guests respectively.

We are planning to hold our very first annual M&E Networking Night. It will be happening in the second half of the year 2024. Do lookout for the event and lend us your full support.



25th May 2023 - QEC Networking Night



27th October 2023 - QEC Networking Night

**IES/ACES EARTH CONTROL MEASURES OFFICER (ECMO) REGISTRY**

**IES/ACES QUALIFIED EROSION CONTROL PROFESSIONAL (QECP) REGISTRY**

**ECM Registry Committee Structure**

**Chairman:** Er. Teo Ee Huat (IES)

**Co-Chairman:** Er. Leong Sow Hon (ACES)

**Registrar:** Er. Teo Yen Pai (IES)

**Members:**

Dr Chew Soon Hoe (Tertiary Institution Representative)

Er. Sim Mui Leng (ACES)

Er. Chan Ewe Jin (IES)

Ms. Sherlyn Lee (PUB)

Mr Rajandran Veerappan (PUB)

Mr Lee Cai Jie (PUB)

Mr Koh Jit Ming (HDB)

Mr Loo Hong En (LTA)

**QECP Registry**

	Total Registered	Total Valid
2023 (as of 31 Dec 2023)	1907	1523
2022 (as of 31 Dec 2022)	1734	1071
2021 (as of 31 Dec 2021)	1568	682

**Comments:**

Good trend on total registered and total valid rate observed for the ECMO Registry. The registry had increased steadily in the last three years. The lower valid ECMO may not reflect the true as renewal is done every 2 years and number of expected renewals vary accordingly.

Go Green! In place of ECMO card, from October 2023 onwards, E-certificate (certificate in softcopy) was issued via email. This way, the E-certificate will reach the ECMOs more efficiently while saving the earth by reduction of plastics and papers. For ease of verification of the validity of the ECMOs, a QR code was printed on the E-certificate.

**ECMO Registry**

	Total Registered	Total Valid
2023 (as of 31 Dec 2023)	386	193
2022 (as of 31 Dec 2022)	360	197
2021 (as of 31 Dec 2021)	342	195

**Comments:**

The QECP Registry also saw an increased in the number of new QECPs while the number of valid QECPs remains with a steady number. This is the usual trend as some QECPs do not renew until they need to do ECM Plan Submission. For ease of verification of the validity of the QECPs, a QR code was printed on the E-certificate.

**ECM Night 2023 – Celebrating Clear Waterway**

The annual ECM Night was held on 17 November 2023 at HDB Hub Convention Centre. We saw a strong crowd of 300 participants comprising of QECPs and ECMOs as well as invited guests. The event was graced by Guest of Honour, Mr Dalson Chung, President of IES, who also announced the Outstanding ECM Achievement (Project) Award which will be presented in the ECM Night 2024.

A total of 16 Exemplary ECMO Awards were given to top ECMOs to recognize those who had been outstanding working with the Qualified Erosion Control Professionals (QECP) and leading the implementation, operation and maintenance of Earth Control Measures at the construction sites, to prevent causing silty discharge to the waterways.

We would also like to thank the following companies who supported the ECM Night 2023:

- Flexi Systems (Singapore) Pte. Ltd.
- Scotts Vickers Pte Ltd
- Wall Tag Pte Ltd
- Witco Environtech Pte Ltd
- red horn Engineering Pte. Ltd.

## PROFESSIONAL REGISTRIES

### Chartered Engineering Board (CEB)

**Chairman:** Er. Tan Seng Chuan

**Deputy Chairmen:** Mr Lew Yii Der and Mr Danny Lee

Sector	Sector Chair
Aerospace	Mr Mervyn Sirisena
Built Environment	Er. Chan Ewe Jin
Chemical & Energy	Mr Soh Tiam Chwee
Engineering Project Management	Er. Vince Goh Chee Siong
Environment & Water	Mr Dalson Chung
Infrastructure	Er. Teo Tiong Yong
Railway & Transportation	Mr Yee Boon Cheow
Renewable Energy	Mr Chen MingJin
Sustainability	Prof Yeoh Lean Weng
Systems	Mr Tan Yang How

Total number of Chartered Engineers (CEng), Chartered Technologists (CETg) and Chartered Technicians (CETn) as of 31 Dec 2023

Chartered Engineers	Chartered Technologists	Chartered Technicians	Total
686	90	83	859

The inaugural meeting of Chartered Engineering Board was held on 21 Mar 2023. The restructured Chartered Engineering Board (CEB) is the merger of the IES' Chartered Engineer Board and IES' Chartered Engineering Technologist and Technician Accreditation Board. The merger is to strengthen and streamline the operation and management of IES chartership certification schemes, paving the way for a more holistic, tiered career progression pathway for the engineering community. The new chartership scheme will offer better opportunities for career development and progression as it supports certification from both the academy and non-academy pathways, in line with SSG SkillsFuture Framework and fostering lifelong learning culture. To ensure the smooth running and successful implementation of CEB matters and initiatives, Chartered Engineering Advisory Panel consists of various stakeholders including public sectors, industry, institutes of higher learning, trade associations etc. was formed and the inaugural meeting was held on 26 June 2023.

There are 3 new sectors formed in this new restructured Chartered Engineering Board, namely Sustainability, Built Environment and Renewable Energy sectors. New Sector Committees were formed with members from industries with in-depth knowledge, contribute to benchmark industry standard and aimed to meet the demand of the industry.

Moving towards 2024, training modules for Renewable Energy sector will be identified. More activities and update information will be provided for both Built Environment and Renewable Energy sectors as well. For Sustainability sector :

- It would adopt examination systems to qualify for the Chartered Engineers and focus on academic route to start with.
- IES has signed MOUs with 11 IHLs to collaborate on upskilling programmes developing Engineers' competencies in Sustainability and other relevant sectors.
- Training modules tailored for this sector have been identified and the accreditation process for training providers is currently underway.
- The registration for Chartership would commence from September 2024.

IES has signed MOU with China Association of Science and Technology including Mutual Recognition Agreement with CAST-China Society of Engineers. Senior Chartered Engineer was introduced to be in line with industry's needs. To ensure alignment with international benchmark standards, the interview criteria were updated and mapped to the revised Graduate Attributes and Professional Competencies set forth by the International Engineering Alliance (IEA) in 2023. These updated standards have been integrated into the Assessors' Training material. The first training session for assessors were conducted by CEB's Chairman, Er. Tan to align and harmonise peer review mechanism.

#### Training session for Assessors on 26 Aug 2023



In Dec 2023, IES' CEB obtained endorsement from Central Procural Panel (CPP) on Chartership Engineering Scheme for both Infrastructure and Built Environment sectors. This represents a significant milestone in the recognition of Chartership, thereby enhancing its value proposition. CEB is also striving to secure endorsement from CPP for Engineering Project Management (EPM) sector. This is a commendable initiative that demonstrates a commitment to excellence and adherence to industry standards.

The CEB has arranged several outreach initiatives aimed at specific target audiences to disseminate information and increase awareness of the Chartered Engineering Scheme, with the goal of encouraging greater adoption of Chartership within the engineering community.

**Outreach to promote Chartership during inaugural Army Engineers Day on 23 Feb 2024**



**Outreach to promote Chartership during HDB Event on 18 Aug 2023**

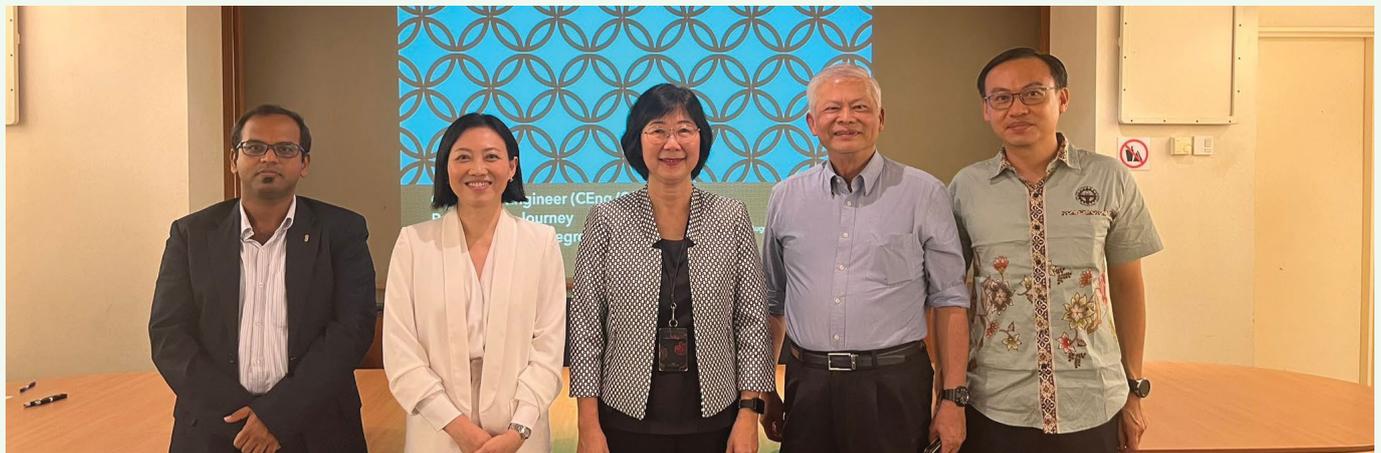


Image courtesy of the Housing & Development Board

**Outreach to promote Chartership at AECOM Singapore Pte Ltd on 27 Oct 2023**



**Accredited Assessment Centre**

Assessment Centre	Sector	Date
Singapore Bus Academy (SGBA)	Railway & Transportation (Automotive)	21 Jan 2021 – 20 Jan 2026
Singapore Rail Academy (SGRA)	Railway & Transportation (Rail)	15 Dec 2021 – 14 Dec 2026

Assessment centres for both Infrastructure and Built Environment sectors will be established in 2024 to support Chartership registration via non-academic route. Moving into 2024, more assessment centre for other sectors will be established to support non-academic route as well as academic route to Chartership Accreditation Scheme.

# PROFESSIONAL REGISTRIES

## 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)

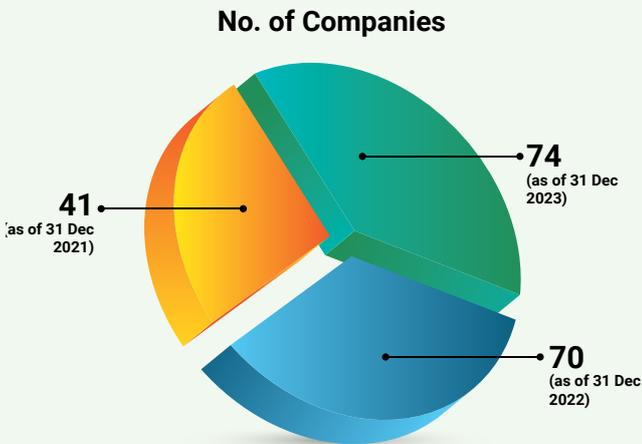
Mr Ivan Liew (IES)

Mr Kenett Low (ACES)

Dr Jiang Fan

Mr Eddie Lee

Total Registered	No. of Companies
2023 (as of 31 Dec 2023)	74
2022 (as of 31 Dec 2022)	70
2021 (as of 31 Dec 2021)	41



**Comments:**

As of end year 2023, there was a slight increase in the number of companies remaining in the QEC Registry. Renewal is every 3 years and most of the companies opted to renew for 3 years instead of 1 year.

We were glad that we had resumed the QEC Networking Night which were held on the 25th May 2023 at Lifelong Learning Institute and on the 27th October 2023 at NUSS Guild House Suntec.

Both events were full house with a strong crowd of 270 and 160 participants including invited guests respectively.

Electrical experts Er. Teo Chor Kok, Er. Lee Wai Meng, Mr Michael Teh, Mr Ong Peck Seng and Mr Francis Wong were among the speakers.

We would like to thank Schneider Electric and Tai Sin Electric Limited for supporting the Networking Night.



25th May 2023 - QEC Networking Night



27th October 2023 - QEC Networking Night

**IES/ACES LIFT & ESCALATOR INSPECTOR (LEI) REGISTRY**

**IES/ACES LEI Joint Accreditation Committee (JAC) Structure**

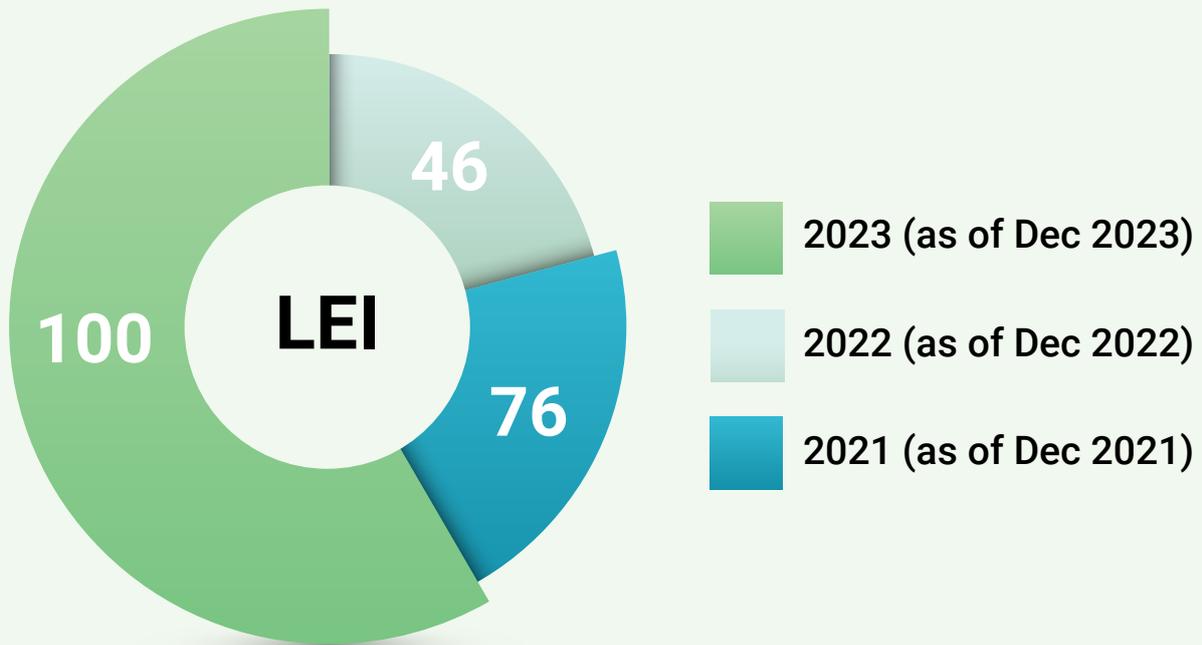
**Co-Chairs**

- 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
2023 (as of 31 Dec 2023)	100
2022 (as of 31 Dec 2022)	76
2021 (as of 31 Dec 2021)	46



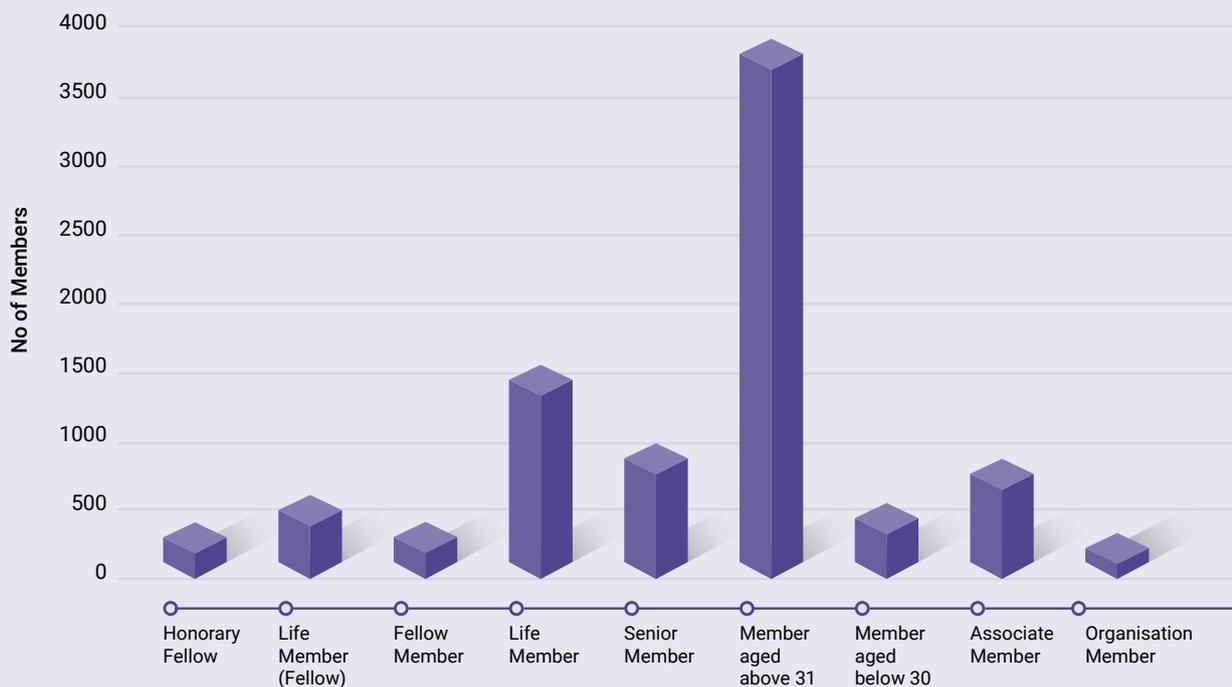
**Comments:**

LEI started registration in the year 2020 with 7 members. Over one year, the number of registrations had increased >6 times. The pre-requisite for LEI includes an Interview Examination after the mandatory LEI course held in IESA/BCAA. As the requirement is stringent, passing rate remains low and only qualified and competent applicants had successfully obtained the LEI certifications under IES.

# IES MEMBERSHIP

Membership Class	Number
Honorary Fellow	41
Life Member (Fellow)	225
Fellow Member	124
Life Member	1172
Senior Member	715
Member aged above 31	3670
Member aged below 30	318
Associate Member	618
Organisation Member	19
<b>Total</b>	<b>6902</b>

IES Membeship Class



The membership statistics of The Institution of Engineers, Singapore (IES) reveal a diverse and substantial membership base, reflecting the institution's broad appeal and significant role within the engineering community in Singapore. Here's a detailed commentary on the membership distribution:

**Honorary Fellow (41 members):** This exclusive category is reserved for individuals who have made exceptional contributions to the engineering profession or to

the institution itself. The small number of Honorary Fellows underscores the prestige and selectivity of this recognition, highlighting the institution's commitment to excellence and leadership in the engineering field.

**Life Member (Fellow) (225 members) and Fellow Member (124 members):** These categories represent a significant achievement within the IES, indicating members who have not only demonstrated a sustained commitment to the profession but have also been

recognized for their contributions and leadership. The distinction between Life Members (Fellow) and Fellow Members may relate to the length of membership or specific contributions, but both categories underscore the depth of professional experience and leadership within the institution.

**Life Member (1172 members):** As one of the largest categories, Life Members represent a core group of engineers who have committed to a lifelong affiliation with IES. This reflects a strong base of support and engagement within the engineering community, indicating a high level of satisfaction and loyalty among members.

**Senior Member (715 members):** This category likely represents experienced engineers who have demonstrated a significant level of professional development and contribution to the field. The substantial number of Senior Members suggests that IES successfully retains and engages engineers as they advance in their careers.

**Member aged above 31 (3670 members):** This is the largest membership category, indicating that IES has a strong appeal among established engineers. This demographic is crucial for the institution's activities and leadership, providing a broad base of expertise and experience.

**Member aged below 30 (318 members):** While smaller in number, this category is essential for the institution's future growth and vitality. Attracting and engaging younger engineers is critical for fostering the next generation of leaders and innovators in the engineering field.

**Associate Member (618 members):** This category likely includes individuals in the early stages of their engineering careers or those in related fields. The significant number of Associate Members suggests that IES is accessible and appealing to those seeking professional development and networking opportunities.

**Organisation Member (19 members):** Although the smallest category, organizational members play a vital role in supporting the institution through partnerships, sponsorships, and collaboration on initiatives that advance the engineering profession.

Overall, the membership statistics of The Institution of Engineers, Singapore, reflect a vibrant and engaged community of engineers at various stages of their

careers. The institution's ability to attract and retain members across a wide range of categories speaks to its relevance, value, and impact within the engineering profession in Singapore. As IES continues to support its members through professional development, advocacy, and networking opportunities, it remains a pivotal force in advancing engineering excellence and innovation in Singapore and beyond.

Year	2021	2022	2023
<b>Membership Size</b>	<b>6848</b>	<b>7220</b>	<b>6902</b>



Membership Size in Year 2023: 6,902, after delisting 625 members whose annual subscriptions arrear between 2018 and 2020

The membership size of The Institution of Engineers, Singapore increased from 2021 to 2022, going from 6,848 to 7,220 members, which indicates growth.

In year 2023, there was a delisting of 625 members who arrears in fee payment from year 2018 to 2020. There were conscious repeated efforts to contact these members but eventually there was no payment received.

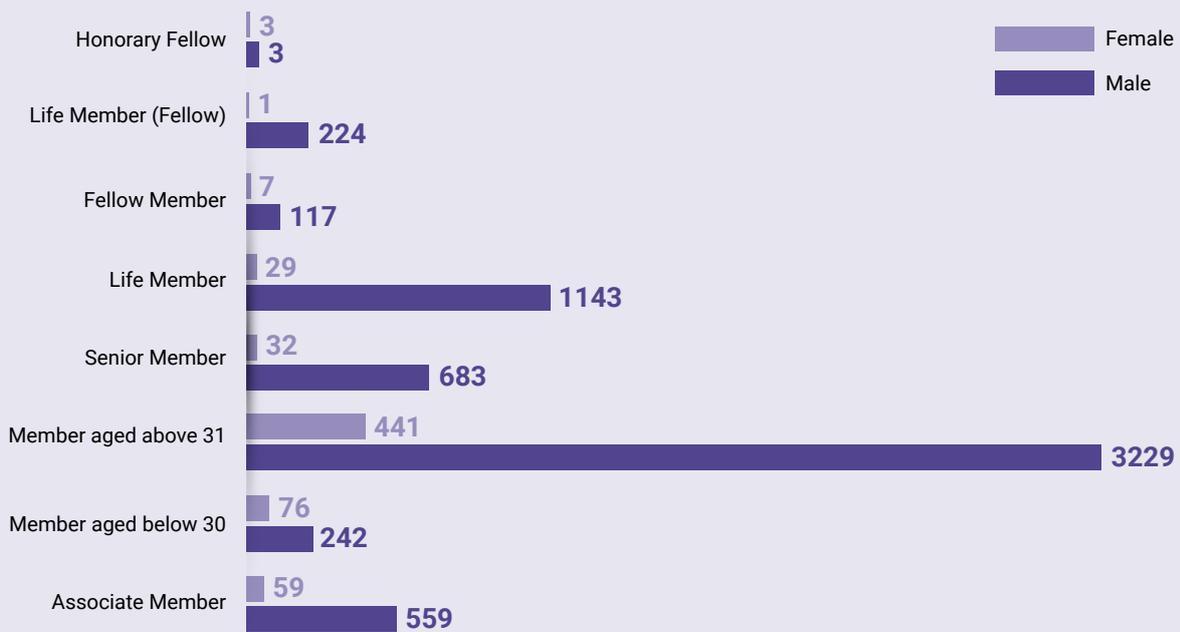
Year	2021	2022	2023
<b>Organisation Membership</b>	<b>12</b>	<b>18</b>	<b>19</b>



# IES MEMBERSHIP

Membership Class	Female	Male
Honorary Fellow	3	38
Life Member (Fellow)	1	224
Fellow Member	7	117
Life Member	29	1143
Senior Member	32	683
Member aged above 31	441	3229
Member aged below 30	76	242
Associate Member	59	559
<b>Total</b>	<b>648</b>	<b>6235</b>
Exclude Organisation Members		

IES Membership by Gender & Class



The provided data offers a detailed breakdown of the membership of The Institution of Engineers, Singapore, by gender across various membership classes, excluding Organisation Members. Here's an analysis and commentary on the gender distribution within the institution:

**Overall Gender Distribution:** The total membership, excluding Organisation Members, shows a significant gender disparity with 6,235 male members compared to 648 female members. This indicates that the engineering profession, within the context of this institution, remains predominantly male. Such a distribution reflects broader trends in the engineering

sector but also highlights areas for potential growth and diversification in gender representation.

**Honorary Fellow:** In this prestigious category, there are 3 female members compared to 38 male members. Although the numbers are small, the gender disparity is noticeable, suggesting that efforts to recognize the contributions of female engineers at the highest levels could be enhanced.

**Life Member (Fellow) and Fellow Member:** These categories also show a significant gender imbalance, with only 1 female Life Member (Fellow) and 7 female Fellow Members against 224 and 117 male members,

respectively. These figures underscore the need for initiatives to support and elevate women in the engineering field to these distinguished statuses.

**Life Member and Senior Member:** The Life Member and Senior Member categories, which represent more substantial portions of the membership, continue to reflect the gender disparity (29 females vs. 1,143 males and 32 females vs. 683 males, respectively). These categories indicate the broader membership base and suggest that while there is female representation, there is considerable room for improvement in achieving gender balance.

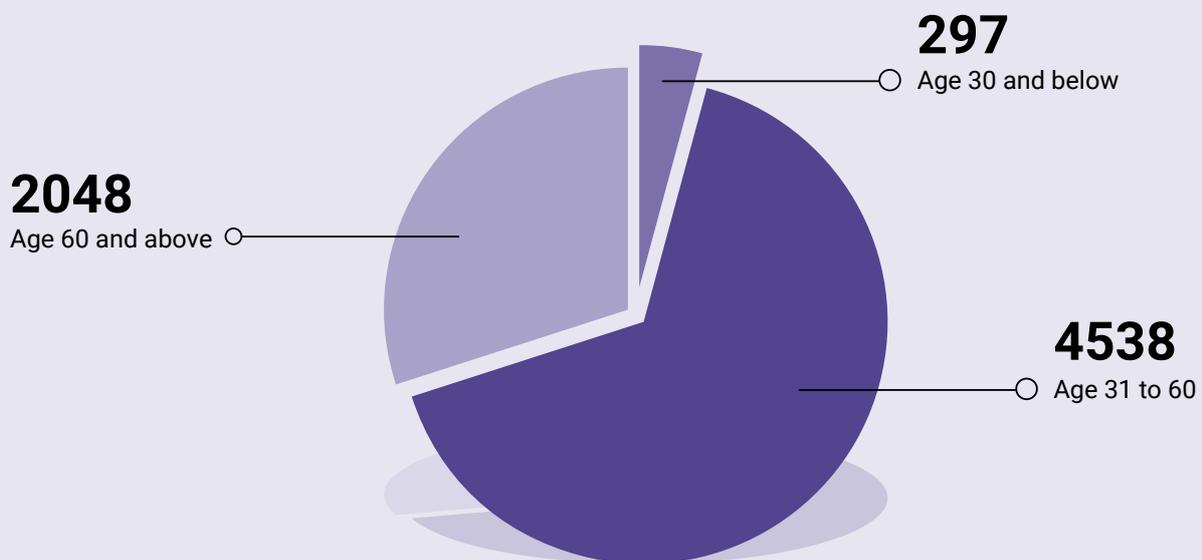
**Member aged above 31 and Member aged below 30:** The gender distribution among members above 31 (441 females vs. 3,229 males) and members below 30 (76 females vs. 242 males) shows that the disparity exists across age groups. However, the relatively higher proportion of female members in the younger age group could signal a positive trend towards greater gender diversity among newer members.

**Associate Member:** This category, which might include individuals in the early stages of their careers or those in related fields, shows a slightly better gender balance (59 females vs. 559 males) compared to other categories. This suggests that there may be more opportunities for female engineers and professionals to engage with the institution at this level.

In conclusion, the gender distribution within The Institution of Engineers, Singapore, highlights a significant gender imbalance across all membership classes, with male members vastly outnumbering female members. This analysis underscores the importance of ongoing efforts to attract, support, and retain female engineers within the profession, aiming for a more inclusive and diverse engineering community in Singapore. Initiatives to mentor young female engineers, celebrate the achievements of women in engineering, and create a more welcoming environment for female professionals could contribute to narrowing the gender gap in the future.

Age Range	Number
Aged 30 and below	297
Aged 31 to 60	4538
Aged 60 and above	2048
<b>Total</b>	<b>6883</b>
Exclude Organisation Members	

IES Membeship by Age



## IES MEMBERSHIP

The age distribution data for The Institution of Engineers, Singapore, excluding Organisation Members, provides a valuable insight into the demographic composition of its membership. This analysis aims to explore the implications of these figures and suggest potential areas for strategic focus. Here's a detailed commentary based on the provided data:

### Age Distribution Overview

**Total Membership:** The total membership, excluding Organisation Members, stands at 6,883 individuals, distributed across three age ranges: aged 30 and below, aged 31 to 60, and aged 60 and above.

### Detailed Analysis by Age Range

**Aged 30 and Below (297 members):** This group represents the youngest segment of the membership, accounting for approximately 4.3% of the total. The relatively small size of this group suggests potential challenges in attracting younger members or the need for more targeted outreach and engagement strategies to appeal to early-career engineers.

**Aged 31 to 60 (4,538 members):** This is the largest age group, comprising about 66% of the total membership. It represents the core demographic of the institution, likely encompassing professionals in the midst of their careers. This group's size underscores its importance to the institution's activities, leadership, and continuity.

**Aged 60 and Above (2,048 members):** Accounting for approximately 29.7% of the total membership, this segment represents senior professionals who have likely contributed significantly to the engineering field

and the institution. The substantial size of this group highlights the institution's appeal among experienced engineers and the potential for leveraging their expertise in mentorship and advisory roles.

### Implications and Recommendations

**Youth Engagement:** The data indicates a need to enhance engagement with younger engineers. Initiatives could include mentorship programs, internships, scholarships, and events designed to attract and retain members aged 30 and below.

**Career Development:** For the largest demographic (aged 31 to 60), offering continued professional development, networking opportunities, and leadership training could be key to maintaining and increasing membership value.

**Leveraging Senior Expertise:** The significant number of members aged 60 and above presents an opportunity to involve these experienced professionals in mentorship, knowledge sharing, and advisory capacities, enriching the institution's community and resources.

**Diversity and Inclusion:** Across all age groups, efforts should be made to ensure diversity and inclusion, fostering an environment where engineers of all ages, genders, and backgrounds feel welcomed and valued.

By addressing these demographic insights, The Institution of Engineers, Singapore, can strengthen its position as a dynamic and inclusive professional body that supports engineers at every stage of their career, contributing to the advancement of the engineering profession in Singapore and beyond.

# SKILLS DEVELOPMENT PARTNER

## Background

Started in April 2023, the Institution of Engineers, Singapore (IES) was appointed as a Skills Development Partner (SDP) by the SkillsFuture Singapore (SSG) to advance the skills development agenda for Engineering professionals and sectors through the development of engineering standards, certification of engineering skills and engaging industry stakeholders to inform on skills and best practices amidst the emerging trends.

## Scope of SDP

The SDP is led by Er. Tan Seng Chuan, Mr Danny Lee and Mr Lew Yii Der. Leveraging IES' close and extensive networks with the industry, sector taskforces consisting of subject matter experts across academia, industry and public sector are formed since the onset of the programme. Each sector taskforce conducts skills-gap analysis, to identify the emerging engineering job roles, technical skills and competencies (TSCs) in specific sectors. After industry validation, these insights are articulated to the engineering community through Jobs-Skills Insights reports published, serving as reference to the engineering professionals on the emerging sectors and TSCs, and engage in relevant training to enhance their capabilities, in the hope of achieving better career prospects.

To promote skills recognition, the insights developed by the sector taskforces will also determine the assessment standards for the IES Engineering Chartership Certification scheme. SDP actively conducts outreach to generate greater awareness of the insights developed by the sector taskforces.

The list of sector taskforces that have been formed / in the process of forming are namely:

1. Electric Vehicle (EV) Maintenance
2. EV Charger and Solar Panel Deployment
3. Sustainability
4. Built Environment

SDP will expand the sector taskforces to include other sectors with time to comprehensively address the needs of the engineering community.



1st Meeting of the EV Maintenance Sector Taskforce on 11 January 2024.



The EV Maintenance Sector Taskforce comprises members from the Land Transport Authority, Singapore Army, Public Transport Operators, Original Equipment Manufacturers, and the Institutes of Higher Learning.

## SKILLS DEVELOPMENT PARTNER

### Major Projects Undertaken

Since its inception in April 2023, SDP has participated in several major projects promoting skills articulation, skills aggregation and skills recognition.

On 18 August 2023, the framework of the IES Chartered Engineer in Sustainability sector certification was launched at the SkillsFuture SME Conference to proactively address the emerging field of sustainability. The framework consists of the Chartership registration requirements, and the list of core modules and elective

modules on sustainability. Through the Ministry of Education (MOE), a Memorandum of Understanding (MOU) was signed on 4 March 2024 between IES and 11 institutes of higher learning (IHLs) to collaborate on training programmes accredited under the Chartered Engineer in Sustainability, in short, CEng (Sustainability) sector certification framework, and other sectors. The Chartership in Sustainability will promote engineers' competencies in Sustainability sector, allowing them to navigate the expanding green sector with confidence.



SkillsFuture SME Conference (18 August 2023) – Launch of the Engineering Chartership Certification framework in Sustainability sector



Charles Rudd Distinguished Global Lectures (4 March 2024) – MOU signed between IES and 11 IHLs (from left: Nanyang Polytechnic, Nanyang Technological University, National University of Singapore, Ngee Ann Polytechnic, Republic Polytechnic, Singapore Polytechnic, witness of MOU-signing ceremony Mdm Rahayu Mazam (Senior Parliamentary Secretary, Ministry of Health and Ministry of Law), IES, Singapore Institute of Technology, Singapore Management University, Singapore University of Social Sciences, Singapore University of Technology and Design; and Temasek Polytechnic.

**Analysis Report of SDP’s Performance**

Aligned with SSG, SDP has a set of quantitative and qualitative key performance indicators (KPIs) to achieve in its first contractual year. Being a pilot project, SDP has experimented with various approaches to improve its outreach. SDP reviewed the various outreach approaches, and noted that it is important to leverage IES events with the relevant target audience. More targeted efforts are required to maximise the outreach opportunities.

Referring to Table 1, SDP has outreached to 80 enterprises to signal priority skills, critical core skills and aggregate skills demand of the sector in its first year of inception. This is done through engagement opportunities via IES’ own platforms, as well as events organized by IES’ partners.

With the commencement of the IHL course modules under the CEng (Sustainability) framework, the number of employees and self-sponsored individuals that were channeled to SSG’s training programmes is expected to increase beyond the current 425 individuals.

Referring to Chart 1, majority of SDP’s engaged enterprises have expressed satisfaction with the Preliminary Jobs-Skills Insights for EV Charger Deployment articulated since November 2023. Most of the enterprises feedback that they gained useful insights knowing that the existing pool of engineers could easily translate their skillsets to deploying EV Chargers, if they wish to expand their scope of operations to include EV Chargers, they could leverage the existing pool of engineering professionals in their companies.

A. Quantitative Measures		Achievements as at 19 March 2024
1	Total number of enterprises outreached to signal priority skills, critical core skills and aggregate skills demand of the sector	80
2	Total number of enterprises committed to engage in job redesign and/or other skills interventions to meet sectoral skills needs	23
3	Total number of enterprises committed to adopt skills recognition referencing skills-based credentialling pathways and/or courses curated by the SDP for talent attraction, management and/or career progression	22
4	Total number of employees and self-sponsored individuals that were channeled to SSG’s training programmes*	425

Table 1: IES SDP’s Achievements (Quantitative) between April 2023 to March 2024

## SKILLS DEVELOPMENT PARTNER

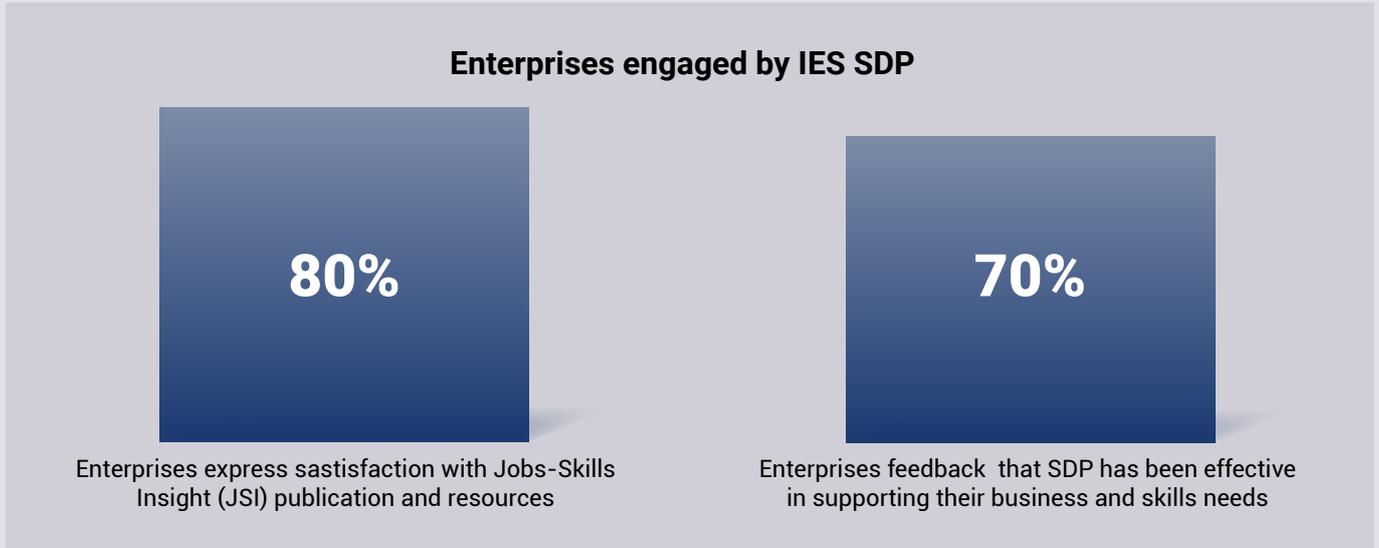


Chart 1: IES SDP's Achievements (Qualitative) between April 2023 to March 2024 – Enterprises Engaged

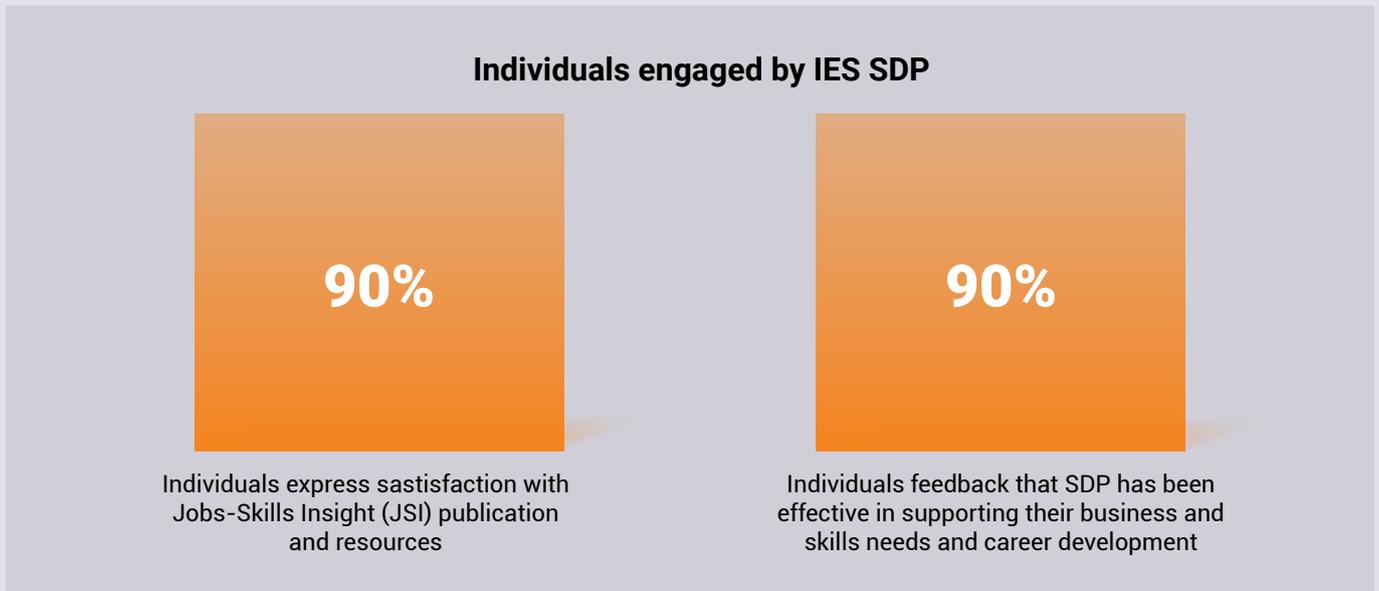


Chart 2: IES SDP's Achievements (Qualitative) between April 2023 to March 2024 – Individuals Engaged

Referring to Chart 2, 90% of the individuals surveyed are satisfied with the Preliminary Jobs-Skills Insights for EV Charger Deployment. They are heartened that their existing engineering skillsets are applicable to the rapidly expanding EV Charger deployment sector in alignment with the Singapore Green Plan 2030. Moving forward, SDP will continue to identify suitable outreach platforms to promote greater awareness of SDP's initiatives. SDP will also work with our partners to reach out to more members of the diverse engineering community, this could be done through conducting 1 to 1 in-depth engagements with enterprises. Starting from the 2nd year of the SDP project, SDP will develop its own website to further enhance its outreach efforts,

SDP's publications including JSI reports will be shared via the website.

### In Conclusion

SDP is a project that requires multi-stakeholder engagement, we aspire to upskill and recognise engineering professionals' competency in the various sectors, ensuring that they are on par with the standards of the international engineering community. More targeted outreach efforts will be rolled out from the second year of the project. IES members may look forward to receiving up-to-date information on the latest skills and training trends in the various sectors.

# STANDARDS DEVELOPMENT ORGANISATION

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.



# STANDARDS DEVELOPMENT ORGANISATION

## 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:

- ISO 16739-1:2018 Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries – Part 1: Data schema
- TR 111 : 2023 TR on Securing the cyber-physical systems for buildings
- 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 has adopted ISO 16739-1:2018 Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries – Data schema as a Singapore Standard.

In March 2023, IES-SDO organised a seminar launch for SS 333: 2022 Specification for fire dampers at Concorde Hotel. About 280 participants attended the seminar to understand on the changes made in the revision of SS 333. Members of the working group spoke on topics such as Fire Code provisions, fire damper installation methods and product testing procedures.



Panel discussion, moderated by Dr Lim Lan Yuan, Chair for Technical Committee on Building Maintenance and Management

### 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 in 2021, 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. From 23 to 27 October 2023, Intelligent Transportation Society Singapore (ITSS), Institute of Engineers Singapore, and Enterprise Singapore (ESG) were pleased to co-host the meeting of ISO Technical Committee 204 for Intelligent Transport Systems (ITS). About 75 industry leaders, policymakers, and experts from various countries converged and deliberated on

the future of ITS standards. The gathering serves as a platform to foster collaboration, exchange insights, and drive forward-thinking strategies that will shape the evolution of transportation systems worldwide.

On 12 March 2024, key stakeholders 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.



Transportation Standards Committee Deputy Chair Mr Lam Wee Shan addressing the members of ISO TC 204 Intelligent Transport Systems



Planning Session for Transportation Standards Committee

# IES AWARDS COMMITTEE

The Prestigious Engineering Achievement Awards are to recognise the outstanding achievements of the engineers. The awards are given to an organisation or individuals responsible for an outstanding engineering project in Singapore.

The basis of the award is engineering achievements that demonstrate outstanding engineering skills, which have made a significant contribution to the engineering progress, and the quality of life in Singapore.

For 2023, IES presented the Prestigious Engineering Achievement Award to 10 projects which were:

## **Maritime Security Unmanned Surface Vessels (MARSEC USV)**

By Defence Science And Technology Agency

## **Phase 2 Project at BCA Braddell Campus**

By ECAS Consultants Pte Ltd

## **Smart Automated Aircraft Visual Inspection System (SAAVIS)**

By Institute for Infocomm Research

## **Crimson S8 - Singapore's 1st Personal Aerial Vehicle (PAV)**

By NEO Aeronautics

## **Rifle Range Nature Park**

By National Parks Board

## **IDentif.AI: Actionable Drug Optimisation for Pandemic Preparedness**

By National University of Singapore

## **Advanced Aerospace Power Conversion System Development**

By Rolls Royce Singapore Pte Ltd

## **A Catalyst Coated Membrane Technology for PEM Fuel Cell**

By Temasek Polytechnic

## **For Young Creators Category**

### **eNutri**

By Temasek Polytechnic

### **Smart IoT Firewatch**

ITE College Central

## **IES Sustainability Awards**

For the first time this year, IES organised the Sustainability Awards.

This inaugural IES Sustainability Awards is dedicated to paying homage to exemplary engineering contributions to sustainable development in Singapore. It is a new initiative conceived as part of the IES Green Plan 2030 launched in January 2023 to create greater impetus amongst engineers to advance Singapore's sustainable development agenda, innovating and designing solutions to protect the world's physical, biological and human systems. The awards comprise three categories: Completed engineering projects with sustainability features and practices, innovative solutions for sustainability, and Promising start-ups for sustainability.

A total of 54 projects were received of which the following were awarded:

## **Phase 2 Intensification Project at BCA Braddell Campus**

By Building and Construction Authority

## **Flint Paper Battery**

By Flint

## **Smart Energy Town**

By Housing and Development Board

## **Indoor Vertical Hydroponics Farming using Nutrient Film Technique (NFT)**

By ITE College West

## **The Accelerated Catalyst Development Platform (ACDP)**

By Institute of Sustainability for Chemicals, Energy and Environment

## **Sustainable Road Paving Solutions for a Greener Future**

By Land Transport Authority

## **Solarisation of Singapore's Industrial Estates**

By JTC Corporation

## **PSA Tuas Maintenance Base**

By PSA Corporation Ltd

## **Sustainable Green Station – Intelligent HVAC with AI-enabled energy optimisation system for Greener MRT Stations**

By SMRT Corporation

## **Customize – 4D-Printed Orthopaedic Casts**

By Temasek Polytechnic

## ASEAN OUTSTANDING ENGINEERING ACHIEVEMENT AWARDS

The following projects also won the ASEAN Outstanding Engineering Achievement Awards:

### **Rifle Range Nature Park**

By National Parks Board

### **IDentif.AI: Actionable Drug Optimisation for Pandemic Preparedness**

By National University of Singapore

### **Advanced Aerospace Power Conversion System Development**

By Rolls Royce Singapore Pte Ltd

### **PSA Tuas Maintenance Base**

By PSA Corporation Ltd

### **The Accelerated Catalyst Development Platform (ACDP)** By Institute of Sustainability for Chemicals, Energy and Environment

### **Customize – 4D-Printed Orthopaedic Casts**

By Temasek Polytechnic

## IES Honorary Fellow

The IES Honorary Fellowship is the second highest honour bestowed by our Institution upon individuals who have made illustrious contributions to the engineering profession and to Singapore.

In recognition of his outstanding contributions in shaping engineering education and developing engineering leaders to support Singapore's future growth, the IES Council proudly confers the title of IES Honorary Fellow on Prof Yeoh Lean Weng."

### **IES Life-time Engineering Achievement Award**

The Lifetime Engineering Achievement Award recognises and honours the dedication of an engineer who spends his or her lifetime career in engineering. The award is conferred upon individuals whose lifetime accomplishments have made profound impact on the engineering industry and community and have brought national or international honors to Singapore

"In recognition of his long-term contribution of expertise, knowledge and insights to the engineering industry and his outstanding accomplishments that have greatly benefitted IES, the engineering community and our nation, the IES Council bestows IES Emeritus President Professor Su Guanng with the Lifetime Engineering Achievement Award 2023."

### **IES – Yayasan Mendaki Scholarships**

The IES-Yayasan MENDAKI Scholarship prize of

\$3,000 and \$2,000 are awarded to two scholars from a local University and Polytechnic respectively. This scholarship aims to provide financial support to the scholars to enable them to pursue their engineering studies.

Natasha Arisqa Putri Shaiful Bahri  
Business Process and Systems Engineering  
Temasek Polytechnic

Arshof Ahamed S/O Ansar Ahamed  
Electrical and Electronic Engineering  
Nanyang Technological University

### **IES Outstanding Partner Award**

The IES Outstanding Partner Award recognises and honours outstanding organisation which has contributed significantly to IES and made profound impact to the practice of engineering in Singapore.

The IES Outstanding Partner Award 2023 is SMRT Corporation Ltd. Receiving the award on behalf of SMRT is Mr Seah Moon Ming, Chairman of SMRT Corporation

### **For 2022**

The following awards were given:

#### **Lifetime Engineering Achievement Award**

Mr Seah Moon Ming, Chairman, SMRT Corporation Ltd

#### **IES Outstanding Partner Award**

National Trades Union Congress (NTUC)

#### **IES Prestigious Engineering Achievement Awards 2022**

##### **Use of Plastic Waste to Construct Durable Asphalt Pavement**

By Samwoh Innovation Centre

##### **A330 Multi-Role Tanker Transport Green Hangar**

By Defence Science and Technology (DSTA)

##### **WaterfrontI&II@Northshore**

By Housing and Development Board

##### **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 Creators**

#### **HapGlove – Wireless Pneumatic Glove for Multimode Haptic Feedback in the Metaverse**

By National University of Singapore

The following 2 projects also won the ASEAN Outstanding Engineering Achievement Awards

#### **Use of Plastic Waste to Construct Durable Asphalt Pavement**

## IES AWARDS COMMITTEE

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 AFEO Award

Last year, AFEO introduced the Young Engineers of AFEO this year at IES Young Engineer Committee

Singapore Polytechnic

Chairman Mr Saafiq Shahul received the award

### Yayasan Mendaki Scholarships

The two scholarships were given to:

Muhammad Nur Hazwan bin Mohamed Haron  
Aircraft Systems Engineering  
Singapore Institute of Technology

Muhammad Raqib Rifai Bin Fadli  
Electrical & Electronic Engineering

## FOR SPRING FESTIVAL AND APPRECIATION AWARDS NIGHT

The awards were announced in 2022 and presented in 2023:

#	Name	IES Committee(s) / IG Nominee is / are serving
1	Professor Seeram Ramakrishna	National Committee of Engineering Organizations Committee / Charles Rudd Distinguished Public Lectures Organising Committee
2	James Bautista	Young Engineers Committee
3	Liu Ziyue	IStructE Singapore Chapter
4	Sharron Ng	IStructE Singapore Chapter
5	Desmond Ng	Asset Management Technical Committee
6	Dr Chandra Segaran	National Engineers Day
7	Winston Ho Boon Chye	Mechanical & Electrical Engineering Technical Committee
8	Leong Cheng Wee	Mechanical & Electrical Engineering Technical Committee
9	Lim Gim Seng, Paul	Mechanical & Electrical Engineering Technical Committee
10	Er. Lucas Ng	Chemical and Process Engineering Technical Committee
11	Dr Ronnie Teo	Electronics & Computer Engineering Technical Committee
13	Lee Long Guang	Civil & Structural Engineering Technical Committee
14	Lily Yeo	Civil & Structural Engineering Technical Committee
15	Sun Jianping	Civil & Structural Engineering Technical Committee

### 1) IES Outstanding Volunteers Award

A total of 14 nominees were selected to receive the IES Outstanding Volunteers Award.

### 2) Friend of IES

The Awards Committee recommended Mr Loh Yew Chiong from CEB for the award as he represents Singapore Polytechnic to sit on the CEB. He has been actively supporting CEB initiatives and nominated SP staff to sit in the AQACs of Water & Environmental, Built Environment, Aerospace, Land Transport (Bus and Railway) and Renewable Energy (Solar). One of his key contributions is the launch of CEB at SP in Jan 2020. He helped to secure SP auditorium and provided the necessary support for the event.

**3) IES Best Student Chapter Award**

Mr Syafiq, Chair of Young Engineers Committee has recommended IES-NTU Student Chapter to be the best student chapter.

STUDENT CHAPTERS	NO OF EVENTS	ENGINEERING NEEDS
IES-NTU STUDENT CHAPTER	15	NO 1, 2, 3

IES-NTU Student Chapter was upgraded to Tier 2 Club by NTU because of the impact the chapter has on the NTU student life. NTU Student Clubs are classified into 4 tiers namely Tier 1, Tier 2, Tier 3 and Tier 4.

**4) Special Recognition**

The Awards Committee recommended the following.

(1) Charles Rudd Distinguished Lectures Organising Committee for organising the lectures in a new and innovative way to attract participation amidst the COVID period. The lectures were broadcast to 43 countries and a record of over three thousand engineers zoomed in to attend the event. It was a huge success and the lectures also gained a surplus of \$6k and

(2) National Engineers Day 2022

The Awards Committee recommended for NED Organising Committee to be awarded the special recognition as IES Outstanding Committee. The committee had relentlessly organised NED in promoting the appreciation of engineers and their contributions to society, inspiring young engineers and raising awareness about engineering career opportunities amongst students.

**5) IES Outstanding Committees Award**

The Committee would like to recommend WES Committee as it had organized WES 2021 successfully during the COVID Period.

**6) IES Outstanding Partner Award**

- NTUC
- SMRT

Two organizations that were worthy of the award due the length, support and partnership to IES: NTUC and SMRT.

- Mr Seah Moon Ming was the Chairman of ST Engineering when was appointed as IES Hon Advisor in 2007
- SMRT hosted the signing of MOU amongst IES, ACES and TUCCs which was not considered to be significant.

**7) IES Lifetime Engineering Achievement Award**

- Mr Seah Moon Ming

The Awards Committee Members selected Mr Seah Moon Ming to receive te award.

**8) IES Hon Fellow Award**

This year, SMS Chee Hong Tat was conferred IES Hon Fellow

**COMMUNITY SERVICES**

**Mid-Autumn Festival**

On the evening of 26 September 2023 (Tuesday), the IES Community Service Committee (CSC) organised a Mooncake Festival Celebration with the residents of The Moral Home for the Aged Sick, led by the Chairman of the new Corporate Social Responsibility Committee Er. Simon Lee and also Chairman of the Community Service Committee, Mr Au Yeong Hoh Wai.

Members of the committee handed out mooncakes and mixed soft fruits to the delightful residents of the Home after dinner. Vice Chairman Er. Loh Weng Whye, gave the welcome address to the Committee. IES President Mr Dalson Chung was also present to spread the warmth to the residents. Among the highlights of the visit were the lively interaction and a light-hearted karaoke session among the Council, Committee members and residents of the Home.

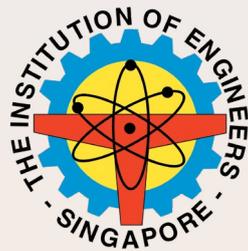
The Moral Home for the Aged Sick appreciated the warm gestures and participation by IES and hopes for more visits in the future.

**Christmas Night Drive**

On 16 December 2023, IES Council Members and Community Service Committee Members celebrated Christmas with the children of Cerebral Palsy Alliance Singapore at Tanglin Club. IES also contributed party gifts for the children. To their delight, Santa visited them and presented the gifts to them. They were given a night drive along Orchard Road to enjoy the Christmas light in vintage cars.

**SOCIAL SERVICES**

The Annual Inter-Professional Games were played by the six professional organisations. The games made a come back this year after a break of 5 years.ons: accountants, architects, doctors, engineers, lawyers, and the surveyors and valuers. IES emerged champion for bowling. IES will be the host for 2024.



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](https://facebook.com/engineerssg)

 [@engineerssg](https://instagram.com/engineerssg)

**LEARNING ENTERPRISE ALLIANCE (LEA) AWARD 2023**

IESA was presented the Learning Enterprise Alliance (LEA) Grant in 2023 by the Institute for Adult Learning (IAL) for its commitment to transform and digitalise its workplace. This grant covers 90% of the expenses for a 100-hour consultancy service by an external consultant assigned to IESA to elevate its work processes in preparation for workflow transformation and digitalization. The LEA initiative is planned to align with IES' broader digitalisation project which is aimed at achieving operational efficiency across its organization.



Learning Enterprise Alliance (LEA) Awards Ceremony 2023. Er. Chong Kee Sen, IESA Chairman (1st from right) received the award from IAL's special guest, Mr Lim Swee Say who is the Chairman of NTUC LearningHub

**OFFICE POD**

In terms of IESA facility, two office pods were acquired to facilitate the administration of virtual courses and meetings post COVID-19 pandemic, given that all IESA staff are currently working in the office at full capacity. IESA is also working with IES Publications & Corporate Communications to leverage the office pod for promotional/advertisement purposes through the display of posters.



2 Office Pods Used by IES Academy



Group Photo of Learning Enterprise Alliance (LEA) Awards Ceremony 2023

# PROFESSIONAL CONFERENCE ORGANISER

Professional Conference Organiser (PCO) endeavours to achieve the specific goals and objectives established by the associations and organisations that have enlisted IES for the provision of the following services, with the aim of ensuring the success of their events:

- Event management (physical and virtual)
- Source conference and social event venues
- 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 2023:

## National Engineers Day

Having initiated National Engineers Day (NED) in 2010, the Institution of Engineers, Singapore (IES) has collaborated with tertiary institutions, government agencies, engineering organisations, and industry experts annually to implement a rewarding program. To adapt to the challenges posed by COVID-19 in 2020, NED embraced a hybrid format since then, integrating both physical and digital elements, facilitating greater involvement from overseas participants.

In its 14th edition, which took place between 15 to 26 August 2023, NED took on “Shaping a Circular Economy through Engineering” as its theme. The circular economy is key to strengthen our future resilience as a nation and it is important to engage students and the public on this journey to reduce waste and drive greater resource productivity in our daily lives.

Similar to previous years, an array of enjoyable and educational activities organised with different engineering organisations and government agencies, e.g. LTA, HDB, NEA, MPA etc. to demonstrate the ingenuity of engineers and the myriad of possibilities of an engineering career.

To broaden the perspective globally, NED also extended invitations to international speakers, from Amazon Web Services and Microsoft, to share with local and regional audiences about how their organisations integrate sustainable practices into their daily work. The responses were well received and overwhelming.



Guided tour – Rolls-Royce Singapore @ Seletar Aerospace Park



Hybrid talk by Mr Amos Foong, partner of BCA, with students at ITE Central



Facilitator sharing with participants on board ferry to visit offshore islands and vessels

## PROFESSIONAL CONFERENCE ORGANISER



EIC participants presenting virtually to the panel of judges



Panel of judges reviewing EIC team presentations via Zoom



Fireside Chat with GOH, DPM Mr Heng Swee Keat, moderated by Mr Syafiq Shahul, NED 2023 Chairman

In conjunction with NED, the Engineering Innovation Challenge (EIC) is a key component that students look forward to annually. EIC provides opportunities for students, both locally and overseas, ranging from Secondary Schools, Junior Colleges, ITE, Polytechnics and Universities to explore the essence of innovation, acquire new technical skills in prototyping and product development, and enhance presentation and collaboration abilities, all guided under the mentorship of experienced engineers. Evaluation of teams was based on the final product and prototype, the

effectiveness of team strategy and collaboration, and the determination exhibited by the students.

This year, the teams were tasked to demonstrate ideas or make innovative improvements which contribute to Resilient City Living in areas such Health Innovation, Clean Water Supply, Food Security and Sustainable Supply Chain.

Winning teams were presented with enticing cash prizes and trophies at the NED-EIC Prize Presentation Ceremony which was held on 26 August 2023 at ITE College Central. The ceremony was graced by Guest-of-Honour, Deputy Prime Minister and Coordination Minister for Economic Policies, Mr Heng Swee Keat who was also invited for a fireside chat with the students during the session.



Scan the QR code to watch the Highlights from National Engineers Day (NED) 2023.

## World Engineers Summit & Conference Dinner 2023

IES initiated the World Engineers Summit (WES) in 2013 as a platform to address crucial issues confronting the world through engineering solutions. WES 2023 was a key event in 2023 for the IES Green Plan 2030, which was unveiled in January 2023 to support Singapore's sustainability journey.

IES hosted WES 2023 in Singapore on 8 – 10 November 2023 at Marina Bay Sands, Singapore. The sixth biennial conference continued to advance engineering-centric discussions on sustainable, climate-resilient, and low carbon urban developments.

Themed "Engineering for a Sustainable Future", WES 2023 facilitated the timely exchange of knowledge, ideas, and solutions amongst engineers to support the world's net-zero transition. The summit was well participated by the engineering community and thought leaders, policymakers, specialists, business leaders and academics from across the globe.

IES was honoured to have invited Mr Teo Chee Hean, Senior Minister and Coordinating Minister for National Security as the Guest-of-Honour to grace the WES Opening Ceremony on 8 November 2023.

# PROFESSIONAL CONFERENCE ORGANISER



GOH, Mr Teo Chee Hean addressing delegates at the WES 2023 Opening Ceremony on 8 November



The inaugural China Engineers Forum at WES 2023 on 9 November



Delegates networking at the exhibition during the lunch break



Delegates had the opportunity to hear from industry leaders such as LTA's Mr Lam Wee Shann



Enthusiastic participants engaged in the track room



Both local and overseas delegates learned more about Danfoss Integrated Technology at their Sustainability Technology Center

This year's WES featured eminent sustainability leaders as plenary speakers. Dr Steve Howard, Vice Chairman, Sustainability, Temasek speaks on "Re-imaginings of our Net Zero Future" and Professor Low Teck Seng, Senior Vice President (Sustainability and Resilience), National University of Singapore (NUS) shared on "Sustainability – Research and Translation for a Resilient Singapore". Mr Lam Wee Shann, Deputy Chief Executive (Technology)/ Chief Technology Officer, Land Transport Authority (LTA) provided insights into "Building a Green Land Transport Ecosystem" while Professor Wang Tianyi, Professor at Hong Kong University of Science and

Technology (Guangzhou), Former Chairman & CEO of China Everbright Environmental Group shared about "Hong Kong's Roadmap to Carbon Neutrality".

The conference facilitated discussions on pressing current issues and new growth opportunities via seven tracks: Sustainable Living through Technology, Building a Resilient Future against Climate Change, Future of Industry Sustainability, Smart and Sustainable Urban Mobility, A Greener and Renewable Built Environment, Pedagogy and Education Technology in Engineering Education, and the 7th track on the China Engineers Forum.

This year, for the very first time, IES and China Society of Engineers, strategic partner of WES 2023 jointly hosted the China Engineers Forum, where key learnings from the implementation of notable sustainable development projects in China were shared with a special focus on technology application.

The forum was graced by Mr Zhu Jing, Charge d'Affaires from the Embassy of the People's Republic of China in the Republic of Singapore. Delegates were able to hear from various experts on harnessing power from the sea in Guangzhou, developing sustainable space solutions in Hong Kong, nuclear power technology development and excellence in engineering education in China.

WES 2023 concluded with Technical Site Visits on Day 3 for delegates to witness outstanding sustainable practices in action to maximise learning experience. The visits were the Sustainability Technology Center (STC) at Danfoss Singapore, the Emerson Digital Plant, the Sembcorp Tengeh Floating Solar Farm and Gardens by the Bay.



Scan the QR code to watch the Highlights from World Engineers Summit (WES) 2023.

The WES 2023 Conference Dinner and IES 57th Annual Dinner was held at the Sands Grand Ballroom, Marina Bay Sands Singapore on 9 November 2023. The dinner celebrated the successful conclusion of WES 2023 and underscored the institution's commitment to advancing Singapore's sustainable development.

Mr Chee Hong Tat, Acting Minister for Transport graced the event as the Guest-of-Honour, presented the inaugural IES Sustainability Awards and other engineering awards to winning teams and individuals.

Event highlights included:

- Conferment of IES Honorary Fellow
- Presentation of IES Outstanding Partner
- Presentation of IES Prestigious Engineering Achievement Awards
- Presentation of the first IES Sustainability Awards to 10 engineering teams that emerged as winners out of 54 submissions across three categories: Completed Engineering Projects, Innovation Projects / Solutions for Sustainability, and Promising Start-ups for Sustainability



GOH, Mr Chee Hong Tat delivering his speech at the WES 2023 Conference Dinner & IES 57th Annual Dinner



Prof Su Guanng, President Emeritus, Nanyang Technological University was the recipient of the IES Lifetime Engineering Achievement Award



Building and Construction Authority, one of the 10 IES Sustainability Award winners

### Other events in 2023

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

#### IES-Standards Development Organisation (SDO) Launches

- Seminar Launch on SS 333:2022 Specification for Fire Dampers on 21 March 2023
- Webinar Launch of NEW Technical References in railway - TR 94:2021, TR 98:2021 and TR 107:2022 on 14 July 2023

#### Ad-hoc Events

- IES Spring Festival and Appreciation Awards Night 2023 on 2 February 2023
- IES Away Day 2023 from 28 to 29 April 2023
- IES 57th Annual General Meeting on 27 May 2023

# TECHNICAL COMMITTEES

The Technical Committees have been organising activities that specifically address and focus on sustainable engineering practices. The activities involved organising conference and seminars which involved experts in the field to share their knowledge and best practices with the engineering community. The activities also provided hand-on training and opportunities for the engineering community to learn about new sustainable technologies and solutions.

## INFRASTRUCTURE CLUSTER

The Technical Committees have been organising webinars since 2020 and the Technical Committees started to organise physical seminars in 2022.

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

The 4 Technical Committees under 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: Er. Ms Ng Beow Suan

### 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

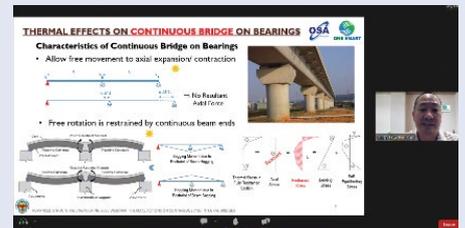
## Some of the highlights taken during the webinars/seminars



Attended by 80 participants on Risk Mitigation for Slope Design, Construction & Maintenance held on 10 January 2023 at One Farrer Hotel



Attended by 200 participants on Understanding the Requirement for Development Interfacing with Rail Infrastructure held on 12 July 2023 at One Farrer Hotel



Attended by 180 participants on IES Webinar on Advanced Structural Projects held on 13 October 2022 via webinar



Attended by 120 Ashrare-IES Distinguished Lectures - Decarbonization and Sustainable Singapore 2023 held on 18 April 2023 at e2i



Attended by 80 participants on "IES-NEA-PUB Joint Seminar" held on 22 Sep 2023 at e2i.



Attended by 50 participants on "Schneider Electric Innovation Talk: Partnership for Sustainable Future" held on 9 Feb 2023 at Mandarin Oriental



Attended by 30 participants on "Site Visit to Marina East Desalination Plant" held on 20 Nov 2023



Attended by 120 participants on "Technical Seminar on Sustainable and Safe Approaches for Deep Excavation and Tunnelling in Singapore's Urban Development" held on 10 October 2023 at One Farrer Hotel



Attended by 60 participants on "Digital Twin Seminar" held on 26 January 2023 at Conrad Centennial

## MANUFACTURING CLUSTER

The Technical Committees have been organising webinars and physical events in 2023.

Led by Mr Soh Tiam Chwee (Chairman) and Mr Dennis Tan (Chairman) and Ms Wan Siew Ping (Deputy Chairman), the 3 Technical Committees had organised 3 events in 2023.

The 3 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

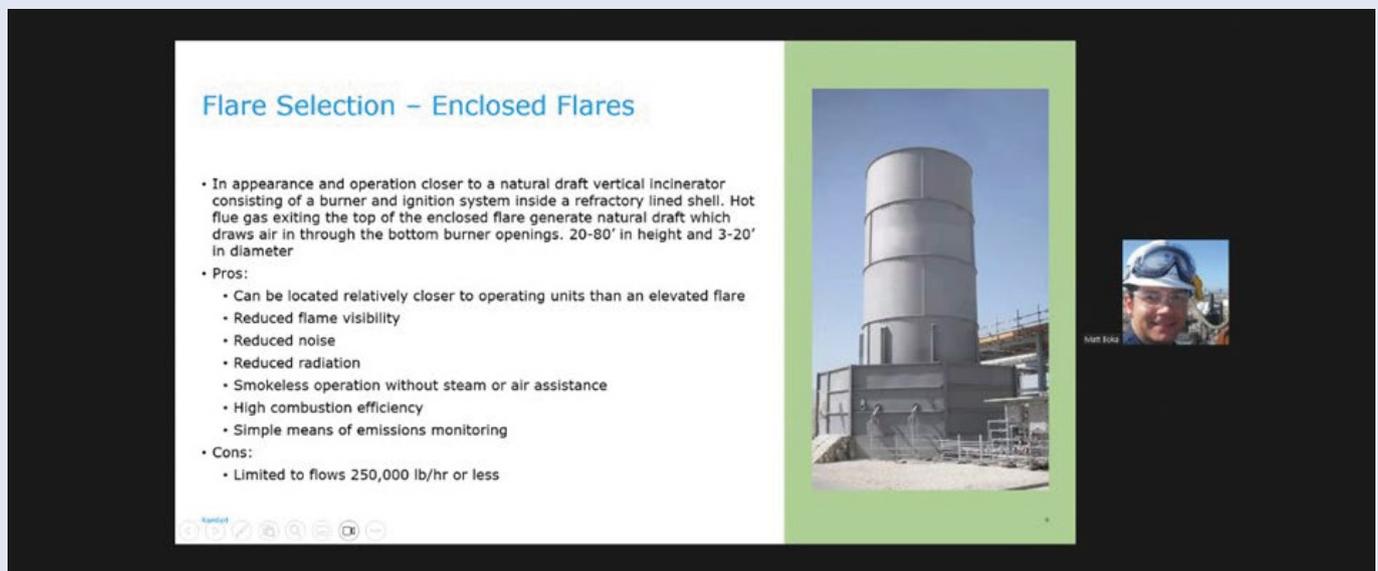
Chairman: Mr Soh Tiam Chwee

Deputy Chairman: Ms Ng Mee Lin

### Intelligent Manufacturing Technical Committee

Chairman: Ms Wan Siew Ping

## Some of the highlights taken during the webinars/seminars



Attended by 70 participants on Flare Design, Types, and Selection held on 15 March 2023 via webinar



Attended by 150 participants on Combustible Dust Explosion Symposium held on 8 September 2023 at One Farrer Hotel



Attended by 10 participants on New Sustainability Technology Developments For Carbon Legislations held on 30 November 2023 at The Institution of Engineers, Singapore

## TECHNICAL COMMITTEES

### SUSTAINABILITY CLUSTER

The Technical Committees have been organising webinars and physical events in 2023.

Led by Dr Victor Sim (Chairman) and Prof Seeram Ramakrishna (Deputy Chairman), the 4 Technical Committee had organised 2 events.

The 4 Technical Committees under the Sustainability Cluster are:

#### Climate Change Technical Committee

Chairman: Dr Li Yuzhu, Pearl

#### Energy Technical Committee

Chairman: Mr Norman Lee

#### Environment & Water Engineering Technical Committee

Chairman: Ms Jasmine Foo

Deputy Chairman: Dr Ang Keng Been

#### Infocomm Technology Technical Committee

Chairman: Mr Chang Sau Sheong

### Some of the highlights taken during the webinars/seminars



Attended by 40 participants on Site Visit to TuasOne Waste To Energy (WTE) Plant held on 6 April 2023 at TuasOne Waste To Energy Plant



Attended by 130 participants on Sharing Seminar on Earth Control Measures for Qualified Erosion Control Professional held on 4 August 2023 at e2i West, Devan Nair Institute for Employment and Employability

## TRANSPORTATION CLUSTER

The Technical Committees have been organising webinars and physical events in 2023.

Led by Mr Lew Yii Der (Chairman) and Associate Prof Zhou Yi (Deputy Chairman), the four Technical Committees had organised 4 events in 2023.

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 / Mr Quek Gim Chuah

### Systems Engineering Technical Committee

Chairman: Mr Tan Yang How

Deputy Chairman: Mr Koh Eng Wah Bernard & Associate Prof Yee Fook Cheong

### Maritime Engineering Technical Committee

Chairman: Mr Eugene Khoo

## Some of the highlights taken during the webinars/seminars



Attended by 80 participants on Sustainable Energy for Sustainable Transportation held on 12 May 2023 at SIT@Dover



Attended by 120 participants on IES & IRSE Railway Innovation Seminar 2023 held on 12 September 2023 at National University of Singapore, Shaw Foundation Alumni House



Attended by 30 participants on IES & IRSE Railway Technical Visit 2023 held on 13 September 2023 at Integrated Train Testing Centre and Kim Chuan Depot



Attended by 15 participants on Innovations for Sustainability held on 10 November 2023 at IES Academy

# PROFESSIONAL REGISTRIES

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

### Monitoring Committee

Chairman: Er. Tan Seng Chuan (IES)

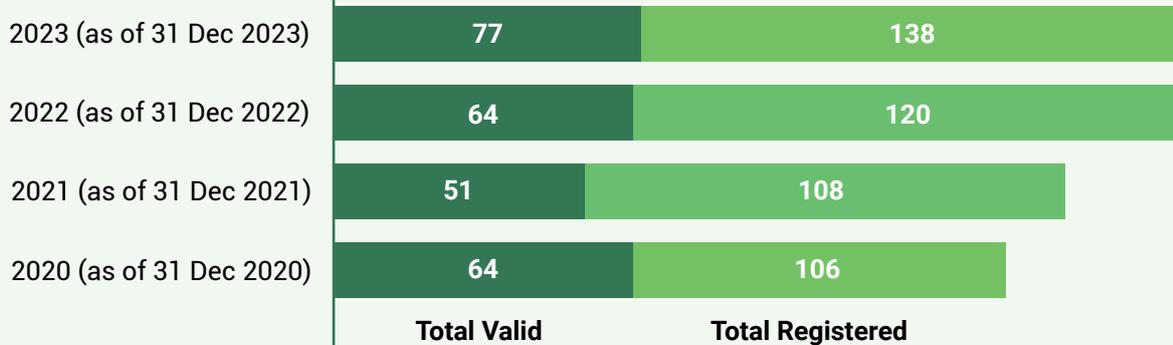
Co-Chairman: Mr Tan Nguan Sen (PUB)

### Programme Committee

Chairman: Er. Sim Mui Leng (IES)

Co-Chairman: Mrs Ong Geok Suat (PUB)

### ABCWP registration at IES



### Total ABCWP registration at IES, SIA and SILA

ABCWP	IES	SIA	SILA	Total
Total Registered	138	20	53	211
Total Valid	77	7	44	128

There is a total number of 128 valid ABCWPs practising their profession to oversee ABC Waters projects.

ABCWP monitoring committee has endorsed the requirement for ABC WP (LA) to be co-signatory of DC submission for developments of area exceeding 0.4 hectares. There is also an initiative to include Biodiversity in EU3 and Riverbank protection in EU4 slope design engineering.

ABCWP Seminar and Networking Nights were held in Mar 2023 and Jan 2024 respectively at PUB RC. There will be another seminar to be held in June 2024 in conjunction with Singapore International Water Week (SIWW) at Sands Expo & Convention Centre, Marina Bay Sands.

### Singapore Certified Energy Manager (SCEM) Registry

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

#### EEO Assessor – SCEM Monitoring Committee Structure

**Chairman**

Mr Norman Lee

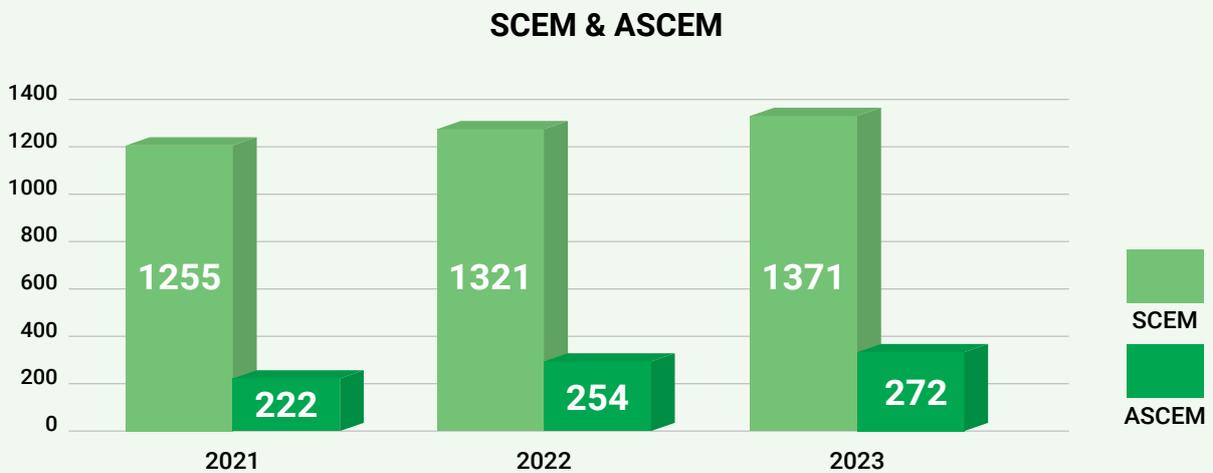
**Members**

Dr Sharmilal Jayamaha

Er. Goh Chee Tiong

Mr Tan Guan Qun

#### Total Certified SCEMs



**Comments:**

As at 31st December 2023, SCEM registry has registered 1371 SCEM members and 272 ASCEM members. This is a healthy trend with increased in Certified SCEM and ASCEM respectively compare to 2022.

In term of programs awarded with SCEM-PDU for 2023, we have a good 153 in our record.

#### Total Certified EEOA



**Comments:**

As at 31st December 2023, EEOA registry has registered 86 EEOAs. This is about 3.61% increase over year 2022. As an EEOA applicant, you are also given the opportunity to be accessed during the interview to be a CEng under the Energy sector. As a result, this brings up the overall image and add value to an EEOA.

## PROFESSIONAL REGISTRIES

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

#### C&S Joint Accreditation Committee Structure

##### Co-Chairs

Er. Chan Ewe Jin (IES)  
 Er. Chuck Kho (ACES)  
 Er. Kwa Chin Soon (BCA)

##### Members

Er. Liao Wai Kun (IES)  
 Er. Low Kam Fook (IES)  
 Er. Victor Tay Lian Peng (BCA)  
 Er. Sivakumaran Murugesu (ACES)  
 Er. Chua Tong Seng (ACES)

Total Registered	RE	RTO
2023 (as of 31 Dec 2023)	4673	7761
2022 (as of 31 Dec 2022)	4415	7617
2021 (as of 31 Dec 2021)	4224	7484

Total Valid	RE	RTO
2023 (as of 31 Dec 2023)	2086	4151
2022 (as of 31 Dec 2022)	1999	4129
2021 (as of 31 Dec 2021)	2041	4260

#### Comments:

We have observed a steady growth in total RE/RTOs in term of total registered & total valid. This is a clear indicator that the economy has begun to pick up in the construction industry where more RE/RTOs had registered and renewed their certification with IES.

#### C&S RE/RTO Award Night 2023

The C&S RE/RTO Award Night 2023 was hosted by IES/ACES and held at JTC Summit on 8th December 2023. Closed to 300 RE/RTOs and invited guests attended the event, where the Guest of Honour was Er. Thanabal (Group Director, Building Resilience Group, Commissioner of Building Control).

Exemplary Site Supervisor Awards were given out to a total of six REs and RTOs nominated by Professional Engineers in recognition of their outstanding and exceptional contribution as site supervisor.

Talks by Professor Goh Yang Miang, Director of the Centre for Project and Facilities Management, NUS Department of the Built Environment (DBE) followed by Er. Chong Chee Hoe, Senior Engineer, BCA and lastly, Talks by Er. Yow Cheong Hoe, Commercial Engineering Director, Chye Joo Construction were some key highlights for the night.

We look forward to organising an even larger event in the year 2024.



The recipients of the Exemplary Site Supervisor Awards in a group photo with Er. Thanabal and Co-Chairs of JAC

**IES/ACES Facade Inspector (FI) Registry**

**FI Joint Accreditation Committee (JAC) Structure:**

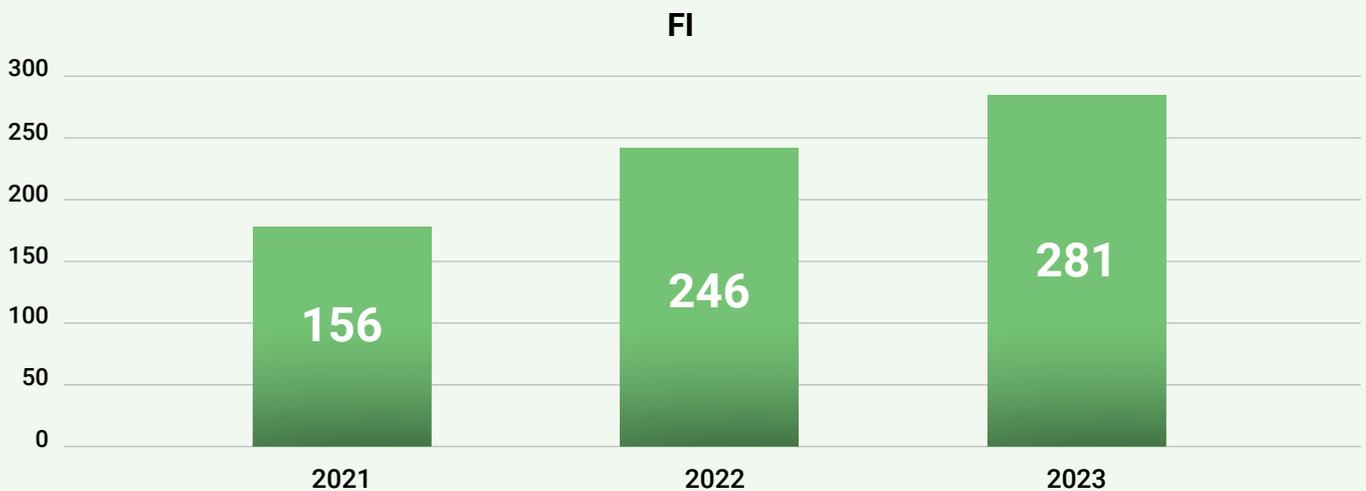
**Co-Chairs**

- 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
2023 (as of 31 Dec 2023)	281
2022 (as of 31 Dec 2022)	246
2021 (as of 31 Dec 2021)	156



**Comments:**

FI registry started registration in 2020 with 37 new registrants. Over a 2-year period, the number of registrations has increased >6 times. The pre-requisite for FI includes a mandatory Certificate in Façade Inspection course held in IESA/BCAA. The Committee is creating an awareness to the Façade industry as we expect to see higher registration rate with higher demand for FI.

As of this year, we have implemented STU (FI) points for those Façade Inspectors who are renewing their certification. There are 6 courses currently with STU (FI) points and we are in discussion to implement more façade-related courses with variation of topics.

## PROFESSIONAL REGISTRIES

### 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 Registered	RE	RTO
2023 (as of 31 Dec 2023)	43	505
2022 (as of 31 Dec 2022)	39	484
2021 (as of 31 Dec 2021)	38	462

Total Valid	RE	RTO
2023 (as of 31 Dec 2023)	33	390
2022 (as of 31 Dec 2022)	30	388
2021 (as of 31 Dec 2021)	34	376

#### M&E RE/RTO Interviews

Total number of interviews conducted: 20

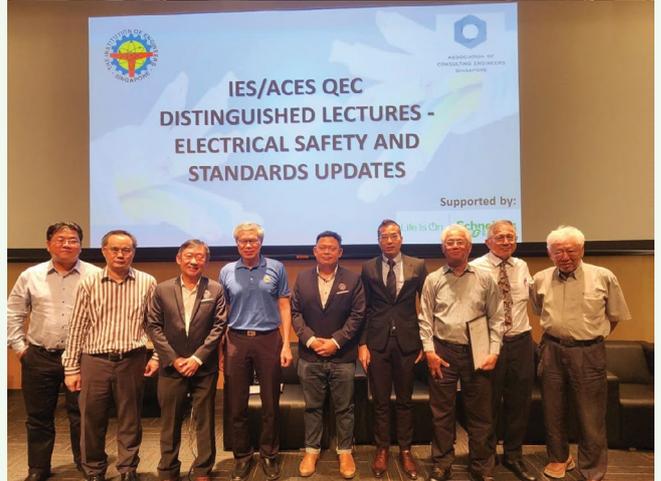
##### Comments:

As of end year 2023, the number of valid RE and RTO remained consistent. The total number of interviews conducted was maintained at 20 in the year 2023.

For the past years, we had a bi-yearly combined seminar with the Qualified Electrical Contractors (QEC) Registry. This year, the QEC Networking Nights were held on the 25th May 2023 at Lifelong Learning Institute and on 27th October 2023 at NUSS Guild House Suntec.

Both events were full house with a strong crowd of 270 and 160 participants including invited guests respectively.

We are planning to hold our very first annual M&E Networking Night. It will be happening in the second half of the year 2024. Do lookout for the event and lend us your full support.



25th May 2023 - QEC Networking Night



27th October 2023 - QEC Networking Night

**IES/ACES EARTH CONTROL MEASURES OFFICER (ECMO) REGISTRY**

**IES/ACES QUALIFIED EROSION CONTROL PROFESSIONAL (QECP) REGISTRY**

**ECM Registry Committee Structure**

**Chairman:** Er. Teo Ee Huat (IES)

**Co-Chairman:** Er. Leong Sow Hon (ACES)

**Registrar:** Er. Teo Yen Pai (IES)

**Members:**

Dr Chew Soon Hoe (Tertiary Institution Representative)

Er. Sim Mui Leng (ACES)

Er. Chan Ewe Jin (IES)

Ms. Sherlyn Lee (PUB)

Mr Rajandran Veerappan (PUB)

Mr Lee Cai Jie (PUB)

Mr Koh Jit Ming (HDB)

Mr Loo Hong En (LTA)

**QECP Registry**

	Total Registered	Total Valid
2023 (as of 31 Dec 2023)	1907	1523
2022 (as of 31 Dec 2022)	1734	1071
2021 (as of 31 Dec 2021)	1568	682

**Comments:**

Good trend on total registered and total valid rate observed for the ECMO Registry. The registry had increased steadily in the last three years. The lower valid ECMO may not reflect the true as renewal is done every 2 years and number of expected renewals vary accordingly.

Go Green! In place of ECMO card, from October 2023 onwards, E-certificate (certificate in softcopy) was issued via email. This way, the E-certificate will reach the ECMOs more efficiently while saving the earth by reduction of plastics and papers. For ease of verification of the validity of the ECMOs, a QR code was printed on the E-certificate.

**ECMO Registry**

	Total Registered	Total Valid
2023 (as of 31 Dec 2023)	386	193
2022 (as of 31 Dec 2022)	360	197
2021 (as of 31 Dec 2021)	342	195

**Comments:**

The QECP Registry also saw an increased in the number of new QECPs while the number of valid QECPs remains with a steady number. This is the usual trend as some QECPs do not renew until they need to do ECM Plan Submission. For ease of verification of the validity of the QECPs, a QR code was printed on the E-certificate.

**ECM Night 2023 – Celebrating Clear Waterway**

The annual ECM Night was held on 17 November 2023 at HDB Hub Convention Centre. We saw a strong crowd of 300 participants comprising of QECPs and ECMOs as well as invited guests. The event was graced by Guest of Honour, Mr Dalson Chung, President of IES, who also announced the Outstanding ECM Achievement (Project) Award which will be presented in the ECM Night 2024.

A total of 16 Exemplary ECMO Awards were given to top ECMOs to recognize those who had been outstanding working with the Qualified Erosion Control Professionals (QECP) and leading the implementation, operation and maintenance of Earth Control Measures at the construction sites, to prevent causing silty discharge to the waterways.

We would also like to thank the following companies who supported the ECM Night 2023:

- Flexi Systems (Singapore) Pte. Ltd.
- Scotts Vickers Pte Ltd
- Wall Tag Pte Ltd
- Witco Environtech Pte Ltd
- red horn Engineering Pte. Ltd.

## PROFESSIONAL REGISTRIES

### Chartered Engineering Board (CEB)

**Chairman:** Er. Tan Seng Chuan

**Deputy Chairmen:** Mr Lew Yii Der and Mr Danny Lee

Sector	Sector Chair
Aerospace	Mr Mervyn Sirisena
Built Environment	Er. Chan Ewe Jin
Chemical & Energy	Mr Soh Tiam Chwee
Engineering Project Management	Er. Vince Goh Chee Siong
Environment & Water	Mr Dalson Chung
Infrastructure	Er. Teo Tiong Yong
Railway & Transportation	Mr Yee Boon Cheow
Renewable Energy	Mr Chen MingJin
Sustainability	Prof Yeoh Lean Weng
Systems	Mr Tan Yang How

Total number of Chartered Engineers (CEng), Chartered Technologists (CETg) and Chartered Technicians (CETn) as of 31 Dec 2023

Chartered Engineers	Chartered Technologists	Chartered Technicians	Total
686	90	83	859

The inaugural meeting of Chartered Engineering Board was held on 21 Mar 2023. The restructured Chartered Engineering Board (CEB) is the merger of the IES' Chartered Engineer Board and IES' Chartered Engineering Technologist and Technician Accreditation Board. The merger is to strengthen and streamline the operation and management of IES chartership certification schemes, paving the way for a more holistic, tiered career progression pathway for the engineering community. The new chartership scheme will offer better opportunities for career development and progression as it supports certification from both the academy and non-academy pathways, in line with SSG SkillsFuture Framework and fostering lifelong learning culture. To ensure the smooth running and successful implementation of CEB matters and initiatives, Chartered Engineering Advisory Panel consists of various stakeholders including public sectors, industry, institutes of higher learning, trade associations etc. was formed and the inaugural meeting was held on 26 June 2023.

There are 3 new sectors formed in this new restructured Chartered Engineering Board, namely Sustainability, Built Environment and Renewable Energy sectors. New Sector Committees were formed with members from industries with in-depth knowledge, contribute to benchmark industry standard and aimed to meet the demand of the industry.

Moving towards 2024, training modules for Renewable Energy sector will be identified. More activities and update information will be provided for both Built Environment and Renewable Energy sectors as well. For Sustainability sector :

- It would adopt examination systems to qualify for the Chartered Engineers and focus on academic route to start with.
- IES has signed MOUs with 11 IHLs to collaborate on upskilling programmes developing Engineers' competencies in Sustainability and other relevant sectors.
- Training modules tailored for this sector have been identified and the accreditation process for training providers is currently underway.
- The registration for Chartership would commence from September 2024.

IES has signed MOU with China Association of Science and Technology including Mutual Recognition Agreement with CAST-China Society of Engineers. Senior Chartered Engineer was introduced to be in line with industry's needs. To ensure alignment with international benchmark standards, the interview criteria were updated and mapped to the revised Graduate Attributes and Professional Competencies set forth by the International Engineering Alliance (IEA) in 2023. These updated standards have been integrated into the Assessors' Training material. The first training session for assessors were conducted by CEB's Chairman, Er. Tan to align and harmonise peer review mechanism.

#### Training session for Assessors on 26 Aug 2023



In Dec 2023, IES' CEB obtained endorsement from Central Procural Panel (CPP) on Chartership Engineering Scheme for both Infrastructure and Built Environment sectors. This represents a significant milestone in the recognition of Chartership, thereby enhancing its value proposition. CEB is also striving to secure endorsement from CPP for Engineering Project Management (EPM) sector. This is a commendable initiative that demonstrates a commitment to excellence and adherence to industry standards.

The CEB has arranged several outreach initiatives aimed at specific target audiences to disseminate information and increase awareness of the Chartered Engineering Scheme, with the goal of encouraging greater adoption of Chartership within the engineering community.

**Outreach to promote Chartership during inaugural Army Engineers Day on 23 Feb 2024**



**Outreach to promote Chartership during HDB Event on 18 Aug 2023**



**Outreach to promote Chartership at AECOM Singapore Pte Ltd on 27 Oct 2023**



**Accredited Assessment Centre**

Assessment Centre	Sector	Date
Singapore Bus Academy (SGBA)	Railway & Transportation (Automotive)	21 Jan 2021 – 20 Jan 2026
Singapore Rail Academy (SGRA)	Railway & Transportation (Rail)	15 Dec 2021 – 14 Dec 2026

Assessment centres for both Infrastructure and Built Environment sectors will be established in 2024 to support Chartership registration via non-academic route. Moving into 2024, more assessment centre for other sectors will be established to support non-academic route as well as academic route to Chartership Accreditation Scheme.

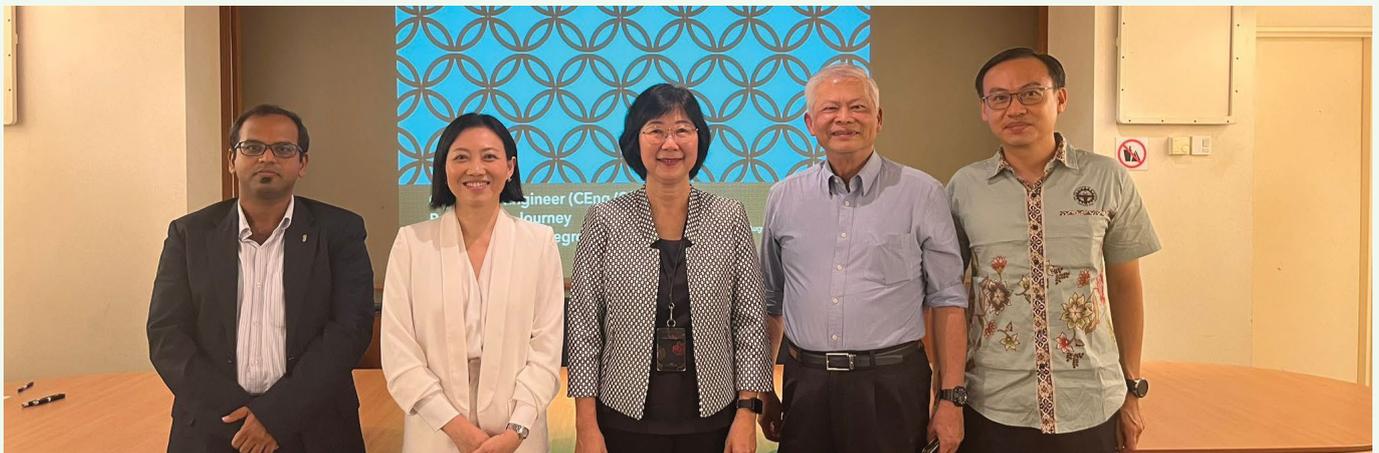


Image courtesy of the Housing & Development Board

# PROFESSIONAL REGISTRIES

## 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)

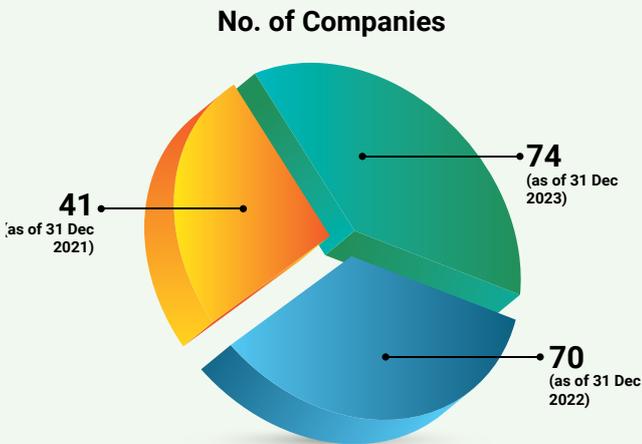
Mr Ivan Liew (IES)

Mr Kenett Low (ACES)

Dr Jiang Fan

Mr Eddie Lee

Total Registered	No. of Companies
2023 (as of 31 Dec 2023)	74
2022 (as of 31 Dec 2022)	70
2021 (as of 31 Dec 2021)	41



#### Comments:

As of end year 2023, there was a slight increase in the number of companies remaining in the QEC Registry. Renewal is every 3 years and most of the companies opted to renew for 3 years instead of 1 year.

We were glad that we had resumed the QEC Networking Night which were held on the 25th May 2023 at Lifelong Learning Institute and on the 27th October 2023 at NUSS Guild House Suntec.

Both events were full house with a strong crowd of 270 and 160 participants including invited guests respectively.

Electrical experts Er. Teo Chor Kok, Er. Lee Wai Meng, Mr Michael Teh, Mr Ong Peck Seng and Mr Francis Wong were among the speakers.

We would like to thank Schneider Electric and Tai Sin Electric Limited for supporting the Networking Night.



25th May 2023 - QEC Networking Night



27th October 2023 - QEC Networking Night

**IES/ACES LIFT & ESCALATOR INSPECTOR (LEI) REGISTRY**

**IES/ACES LEI Joint Accreditation Committee (JAC) Structure**

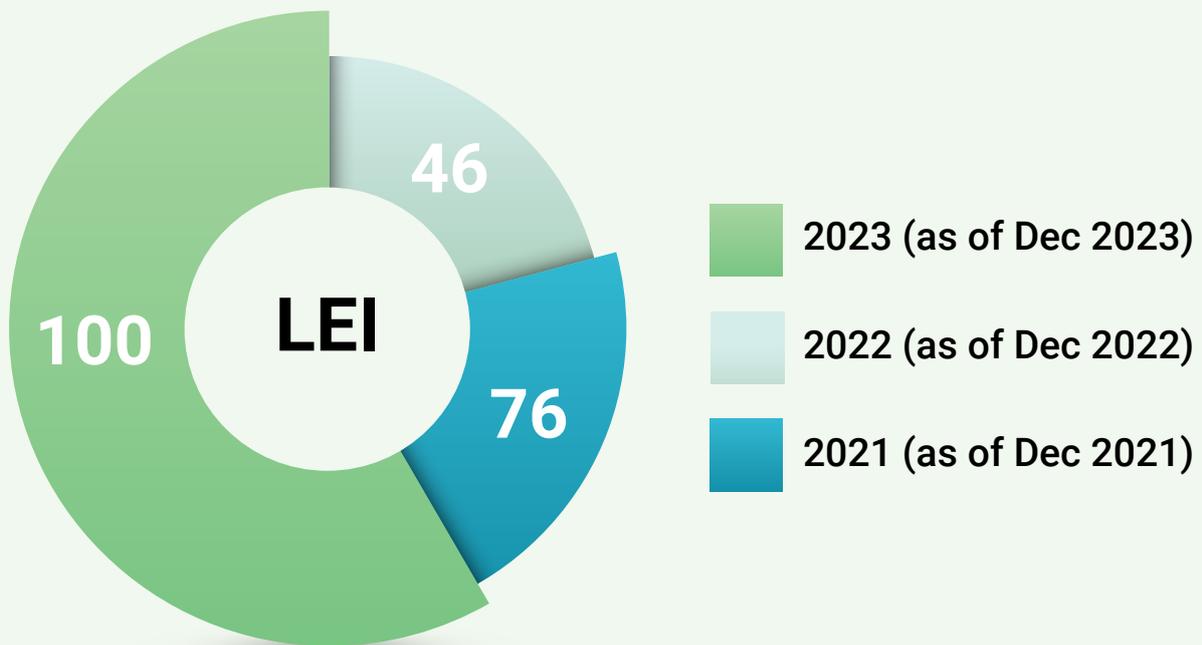
**Co-Chairs**

- 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
2023 (as of 31 Dec 2023)	100
2022 (as of 31 Dec 2022)	76
2021 (as of 31 Dec 2021)	46



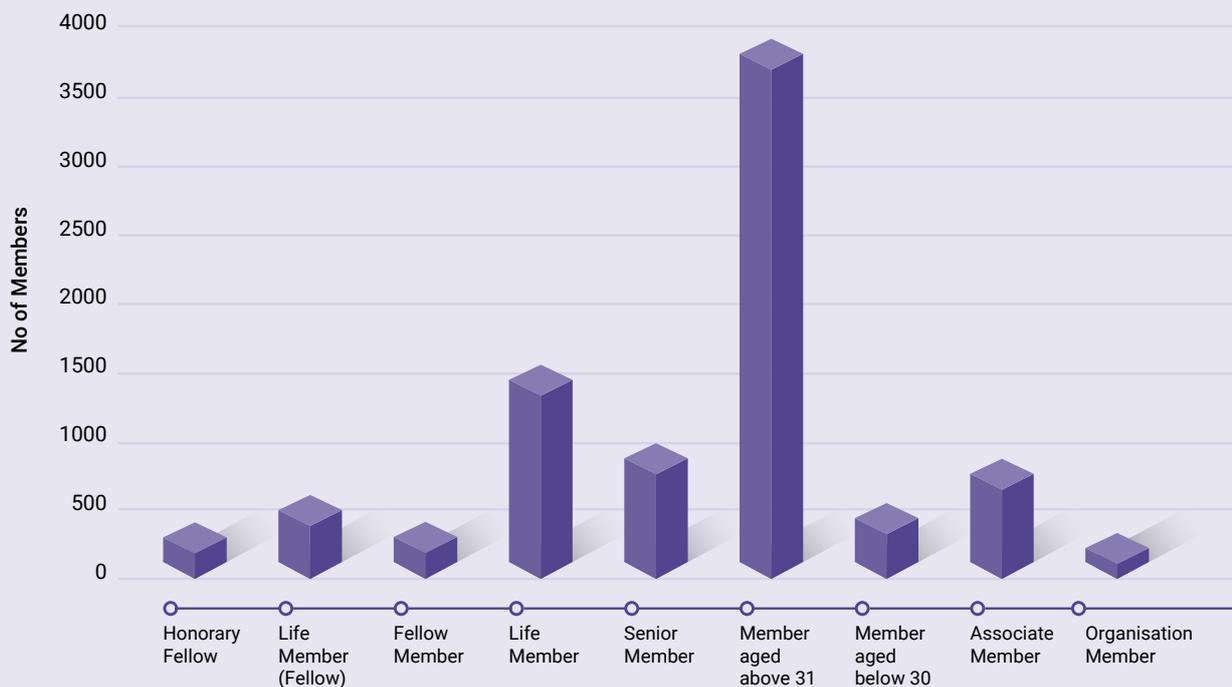
**Comments:**

LEI started registration in the year 2020 with 7 members. Over one year, the number of registrations had increased >6 times. The pre-requisite for LEI includes an Interview Examination after the mandatory LEI course held in IESA/BCAA. As the requirement is stringent, passing rate remains low and only qualified and competent applicants had successfully obtained the LEI certifications under IES.

# IES MEMBERSHIP

Membership Class	Number
Honorary Fellow	41
Life Member (Fellow)	225
Fellow Member	124
Life Member	1172
Senior Member	715
Member aged above 31	3670
Member aged below 30	318
Associate Member	618
Organisation Member	19
<b>Total</b>	<b>6902</b>

IES Membeship Class



The membership statistics of The Institution of Engineers, Singapore (IES) reveal a diverse and substantial membership base, reflecting the institution's broad appeal and significant role within the engineering community in Singapore. Here's a detailed commentary on the membership distribution:

**Honorary Fellow (41 members):** This exclusive category is reserved for individuals who have made exceptional contributions to the engineering profession or to

the institution itself. The small number of Honorary Fellows underscores the prestige and selectivity of this recognition, highlighting the institution's commitment to excellence and leadership in the engineering field.

**Life Member (Fellow) (225 members) and Fellow Member (124 members):** These categories represent a significant achievement within the IES, indicating members who have not only demonstrated a sustained commitment to the profession but have also been

recognized for their contributions and leadership. The distinction between Life Members (Fellow) and Fellow Members may relate to the length of membership or specific contributions, but both categories underscore the depth of professional experience and leadership within the institution.

**Life Member (1172 members):** As one of the largest categories, Life Members represent a core group of engineers who have committed to a lifelong affiliation with IES. This reflects a strong base of support and engagement within the engineering community, indicating a high level of satisfaction and loyalty among members.

**Senior Member (715 members):** This category likely represents experienced engineers who have demonstrated a significant level of professional development and contribution to the field. The substantial number of Senior Members suggests that IES successfully retains and engages engineers as they advance in their careers.

**Member aged above 31 (3670 members):** This is the largest membership category, indicating that IES has a strong appeal among established engineers. This demographic is crucial for the institution's activities and leadership, providing a broad base of expertise and experience.

**Member aged below 30 (318 members):** While smaller in number, this category is essential for the institution's future growth and vitality. Attracting and engaging younger engineers is critical for fostering the next generation of leaders and innovators in the engineering field.

**Associate Member (618 members):** This category likely includes individuals in the early stages of their engineering careers or those in related fields. The significant number of Associate Members suggests that IES is accessible and appealing to those seeking professional development and networking opportunities.

**Organisation Member (19 members):** Although the smallest category, organizational members play a vital role in supporting the institution through partnerships, sponsorships, and collaboration on initiatives that advance the engineering profession.

Overall, the membership statistics of The Institution of Engineers, Singapore, reflect a vibrant and engaged community of engineers at various stages of their

careers. The institution's ability to attract and retain members across a wide range of categories speaks to its relevance, value, and impact within the engineering profession in Singapore. As IES continues to support its members through professional development, advocacy, and networking opportunities, it remains a pivotal force in advancing engineering excellence and innovation in Singapore and beyond.

Year	2021	2022	2023
<b>Membership Size</b>	<b>6848</b>	<b>7220</b>	<b>6902</b>



Membership Size in Year 2023: 6,902, after delisting 625 members whose annual subscriptions arrear between 2018 and 2020

The membership size of The Institution of Engineers, Singapore increased from 2021 to 2022, going from 6,848 to 7,220 members, which indicates growth.

In year 2023, there was a delisting of 625 members who arrears in fee payment from year 2018 to 2020. There were conscious repeated efforts to contact these members but eventually there was no payment received.

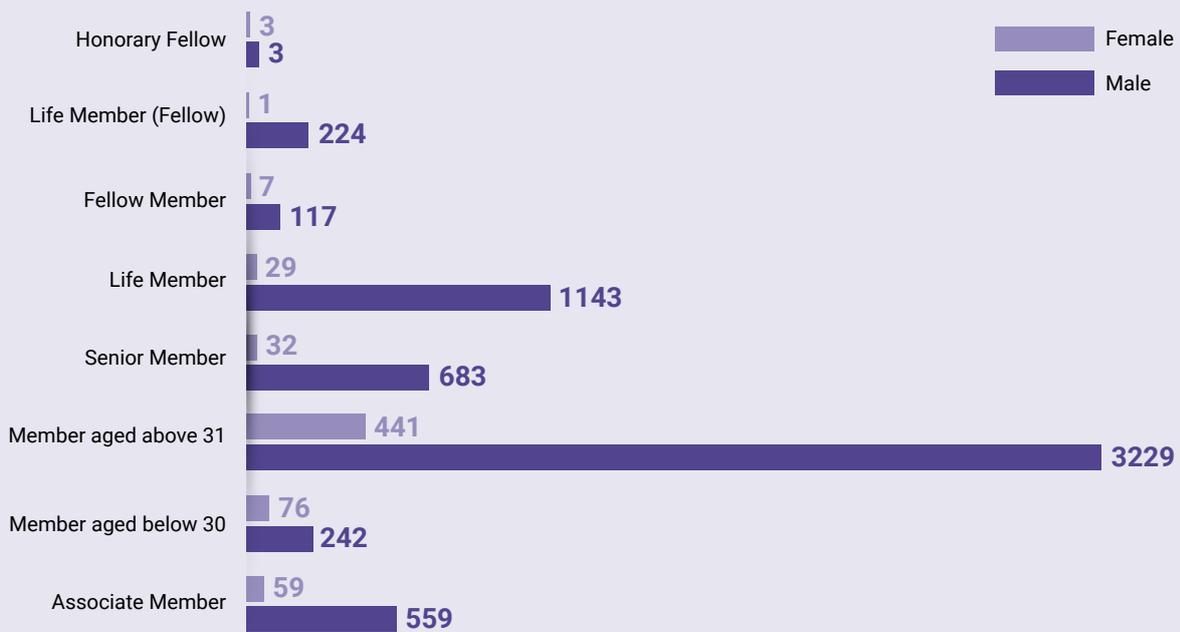
Year	2021	2022	2023
<b>Organisation Membership</b>	<b>12</b>	<b>18</b>	<b>19</b>



# IES MEMBERSHIP

Membership Class	Female	Male
Honorary Fellow	3	38
Life Member (Fellow)	1	224
Fellow Member	7	117
Life Member	29	1143
Senior Member	32	683
Member aged above 31	441	3229
Member aged below 30	76	242
Associate Member	59	559
<b>Total</b>	<b>648</b>	<b>6235</b>
Exclude Organisation Members		

IES Membership by Gender & Class



The provided data offers a detailed breakdown of the membership of The Institution of Engineers, Singapore, by gender across various membership classes, excluding Organisation Members. Here's an analysis and commentary on the gender distribution within the institution:

**Overall Gender Distribution:** The total membership, excluding Organisation Members, shows a significant gender disparity with 6,235 male members compared to 648 female members. This indicates that the engineering profession, within the context of this institution, remains predominantly male. Such a distribution reflects broader trends in the engineering

sector but also highlights areas for potential growth and diversification in gender representation.

**Honorary Fellow:** In this prestigious category, there are 3 female members compared to 38 male members. Although the numbers are small, the gender disparity is noticeable, suggesting that efforts to recognize the contributions of female engineers at the highest levels could be enhanced.

**Life Member (Fellow) and Fellow Member:** These categories also show a significant gender imbalance, with only 1 female Life Member (Fellow) and 7 female Fellow Members against 224 and 117 male members,

respectively. These figures underscore the need for initiatives to support and elevate women in the engineering field to these distinguished statuses.

**Life Member and Senior Member:** The Life Member and Senior Member categories, which represent more substantial portions of the membership, continue to reflect the gender disparity (29 females vs. 1,143 males and 32 females vs. 683 males, respectively). These categories indicate the broader membership base and suggest that while there is female representation, there is considerable room for improvement in achieving gender balance.

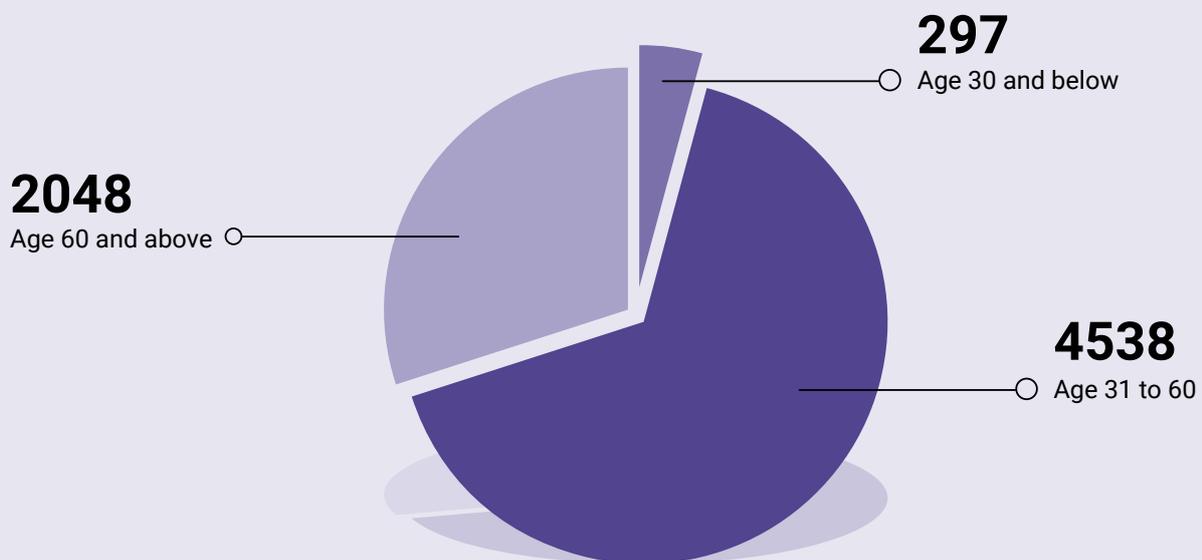
**Member aged above 31 and Member aged below 30:** The gender distribution among members above 31 (441 females vs. 3,229 males) and members below 30 (76 females vs. 242 males) shows that the disparity exists across age groups. However, the relatively higher proportion of female members in the younger age group could signal a positive trend towards greater gender diversity among newer members.

**Associate Member:** This category, which might include individuals in the early stages of their careers or those in related fields, shows a slightly better gender balance (59 females vs. 559 males) compared to other categories. This suggests that there may be more opportunities for female engineers and professionals to engage with the institution at this level.

In conclusion, the gender distribution within The Institution of Engineers, Singapore, highlights a significant gender imbalance across all membership classes, with male members vastly outnumbering female members. This analysis underscores the importance of ongoing efforts to attract, support, and retain female engineers within the profession, aiming for a more inclusive and diverse engineering community in Singapore. Initiatives to mentor young female engineers, celebrate the achievements of women in engineering, and create a more welcoming environment for female professionals could contribute to narrowing the gender gap in the future.

Age Range	Number
Aged 30 and below	297
Aged 31 to 60	4538
Aged 60 and above	2048
<b>Total</b>	<b>6883</b>
Exclude Organisation Members	

IES Membeship by Age



## IES MEMBERSHIP

The age distribution data for The Institution of Engineers, Singapore, excluding Organisation Members, provides a valuable insight into the demographic composition of its membership. This analysis aims to explore the implications of these figures and suggest potential areas for strategic focus. Here's a detailed commentary based on the provided data:

### Age Distribution Overview

**Total Membership:** The total membership, excluding Organisation Members, stands at 6,883 individuals, distributed across three age ranges: aged 30 and below, aged 31 to 60, and aged 60 and above.

### Detailed Analysis by Age Range

**Aged 30 and Below (297 members):** This group represents the youngest segment of the membership, accounting for approximately 4.3% of the total. The relatively small size of this group suggests potential challenges in attracting younger members or the need for more targeted outreach and engagement strategies to appeal to early-career engineers.

**Aged 31 to 60 (4,538 members):** This is the largest age group, comprising about 66% of the total membership. It represents the core demographic of the institution, likely encompassing professionals in the midst of their careers. This group's size underscores its importance to the institution's activities, leadership, and continuity.

**Aged 60 and Above (2,048 members):** Accounting for approximately 29.7% of the total membership, this segment represents senior professionals who have likely contributed significantly to the engineering field

and the institution. The substantial size of this group highlights the institution's appeal among experienced engineers and the potential for leveraging their expertise in mentorship and advisory roles.

### Implications and Recommendations

**Youth Engagement:** The data indicates a need to enhance engagement with younger engineers. Initiatives could include mentorship programs, internships, scholarships, and events designed to attract and retain members aged 30 and below.

**Career Development:** For the largest demographic (aged 31 to 60), offering continued professional development, networking opportunities, and leadership training could be key to maintaining and increasing membership value.

**Leveraging Senior Expertise:** The significant number of members aged 60 and above presents an opportunity to involve these experienced professionals in mentorship, knowledge sharing, and advisory capacities, enriching the institution's community and resources.

**Diversity and Inclusion:** Across all age groups, efforts should be made to ensure diversity and inclusion, fostering an environment where engineers of all ages, genders, and backgrounds feel welcomed and valued.

By addressing these demographic insights, The Institution of Engineers, Singapore, can strengthen its position as a dynamic and inclusive professional body that supports engineers at every stage of their career, contributing to the advancement of the engineering profession in Singapore and beyond.

# SKILLS DEVELOPMENT PARTNER

## Background

Started in April 2023, the Institution of Engineers, Singapore (IES) was appointed as a Skills Development Partner (SDP) by the SkillsFuture Singapore (SSG) to advance the skills development agenda for Engineering professionals and sectors through the development of engineering standards, certification of engineering skills and engaging industry stakeholders to inform on skills and best practices amidst the emerging trends.

## Scope of SDP

The SDP is led by Er. Tan Seng Chuan, Mr Danny Lee and Mr Lew Yii Der. Leveraging IES' close and extensive networks with the industry, sector taskforces consisting of subject matter experts across academia, industry and public sector are formed since the onset of the programme. Each sector taskforce conducts skills-gap analysis, to identify the emerging engineering job roles, technical skills and competencies (TSCs) in specific sectors. After industry validation, these insights are articulated to the engineering community through Jobs-Skills Insights reports published, serving as reference to the engineering professionals on the emerging sectors and TSCs, and engage in relevant training to enhance their capabilities, in the hope of achieving better career prospects.

To promote skills recognition, the insights developed by the sector taskforces will also determine the assessment standards for the IES Engineering Chartership Certification scheme. SDP actively conducts outreach to generate greater awareness of the insights developed by the sector taskforces.

The list of sector taskforces that have been formed / in the process of forming are namely:

1. Electric Vehicle (EV) Maintenance
2. EV Charger and Solar Panel Deployment
3. Sustainability
4. Built Environment

SDP will expand the sector taskforces to include other sectors with time to comprehensively address the needs of the engineering community.



1st Meeting of the EV Maintenance Sector Taskforce on 11 January 2024.



The EV Maintenance Sector Taskforce comprises members from the Land Transport Authority, Singapore Army, Public Transport Operators, Original Equipment Manufacturers, and the Institutes of Higher Learning.

## SKILLS DEVELOPMENT PARTNER

### Major Projects Undertaken

Since its inception in April 2023, SDP has participated in several major projects promoting skills articulation, skills aggregation and skills recognition.

On 18 August 2023, the framework of the IES Chartered Engineer in Sustainability sector certification was launched at the SkillsFuture SME Conference to proactively address the emerging field of sustainability. The framework consists of the Chartership registration requirements, and the list of core modules and elective

modules on sustainability. Through the Ministry of Education (MOE), a Memorandum of Understanding (MOU) was signed on 4 March 2024 between IES and 11 institutes of higher learning (IHLs) to collaborate on training programmes accredited under the Chartered Engineer in Sustainability, in short, CEng (Sustainability) sector certification framework, and other sectors. The Chartership in Sustainability will promote engineers' competencies in Sustainability sector, allowing them to navigate the expanding green sector with confidence.



SkillsFuture SME Conference (18 August 2023) – Launch of the Engineering Chartership Certification framework in Sustainability sector



Charles Rudd Distinguished Global Lectures (4 March 2024) – MOU signed between IES and 11 IHLs (from left: Nanyang Polytechnic, Nanyang Technological University, National University of Singapore, Ngee Ann Polytechnic, Republic Polytechnic, Singapore Polytechnic, witness of MOU-signing ceremony Mdm Rahayu Mazam (Senior Parliamentary Secretary, Ministry of Health and Ministry of Law), IES, Singapore Institute of Technology, Singapore Management University, Singapore University of Social Sciences, Singapore University of Technology and Design; and Temasek Polytechnic.

**Analysis Report of SDP’s Performance**

Aligned with SSG, SDP has a set of quantitative and qualitative key performance indicators (KPIs) to achieve in its first contractual year. Being a pilot project, SDP has experimented with various approaches to improve its outreach. SDP reviewed the various outreach approaches, and noted that it is important to leverage IES events with the relevant target audience. More targeted efforts are required to maximise the outreach opportunities.

Referring to Table 1, SDP has outreached to 80 enterprises to signal priority skills, critical core skills and aggregate skills demand of the sector in its first year of inception. This is done through engagement opportunities via IES’ own platforms, as well as events organized by IES’ partners.

With the commencement of the IHL course modules under the CEng (Sustainability) framework, the number of employees and self-sponsored individuals that were channeled to SSG’s training programmes is expected to increase beyond the current 425 individuals.

Referring to Chart 1, majority of SDP’s engaged enterprises have expressed satisfaction with the Preliminary Jobs-Skills Insights for EV Charger Deployment articulated since November 2023. Most of the enterprises feedback that they gained useful insights knowing that the existing pool of engineers could easily translate their skillsets to deploying EV Chargers, if they wish to expand their scope of operations to include EV Chargers, they could leverage the existing pool of engineering professionals in their companies.

A. Quantitative Measures		Achievements as at 19 March 2024
1	Total number of enterprises outreached to signal priority skills, critical core skills and aggregate skills demand of the sector	80
2	Total number of enterprises committed to engage in job redesign and/or other skills interventions to meet sectoral skills needs	23
3	Total number of enterprises committed to adopt skills recognition referencing skills-based credentialling pathways and/or courses curated by the SDP for talent attraction, management and/or career progression	22
4	Total number of employees and self-sponsored individuals that were channeled to SSG’s training programmes*	425

Table 1: IES SDP’s Achievements (Quantitative) between April 2023 to March 2024

## SKILLS DEVELOPMENT PARTNER

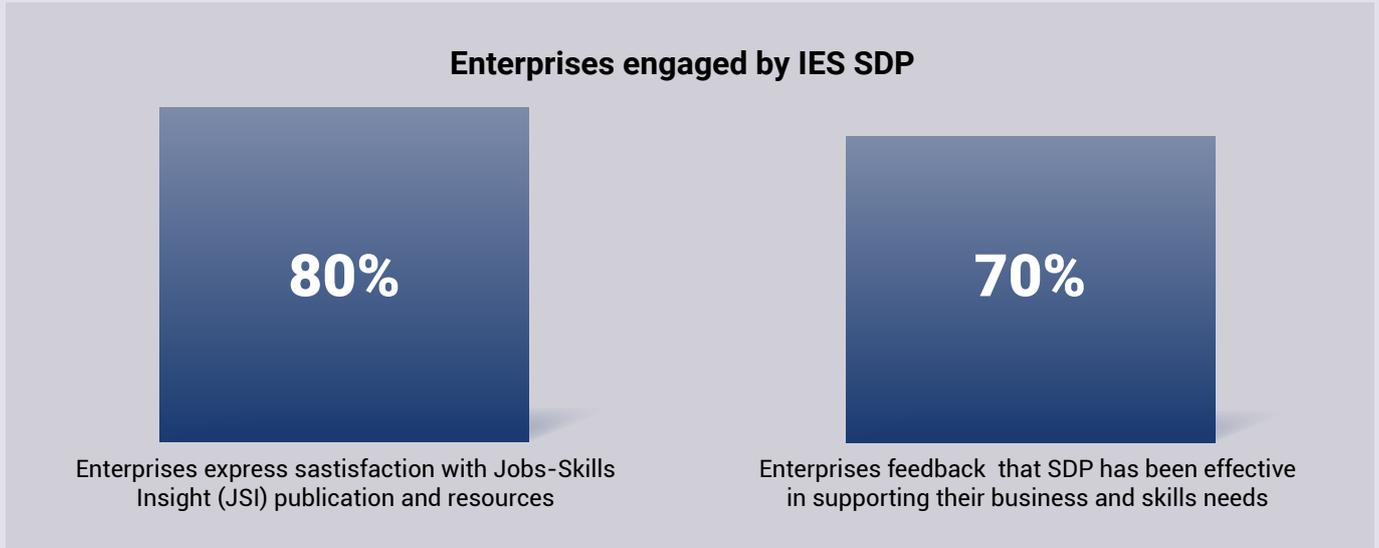


Chart 1: IES SDP's Achievements (Qualitative) between April 2023 to March 2024 – Enterprises Engaged

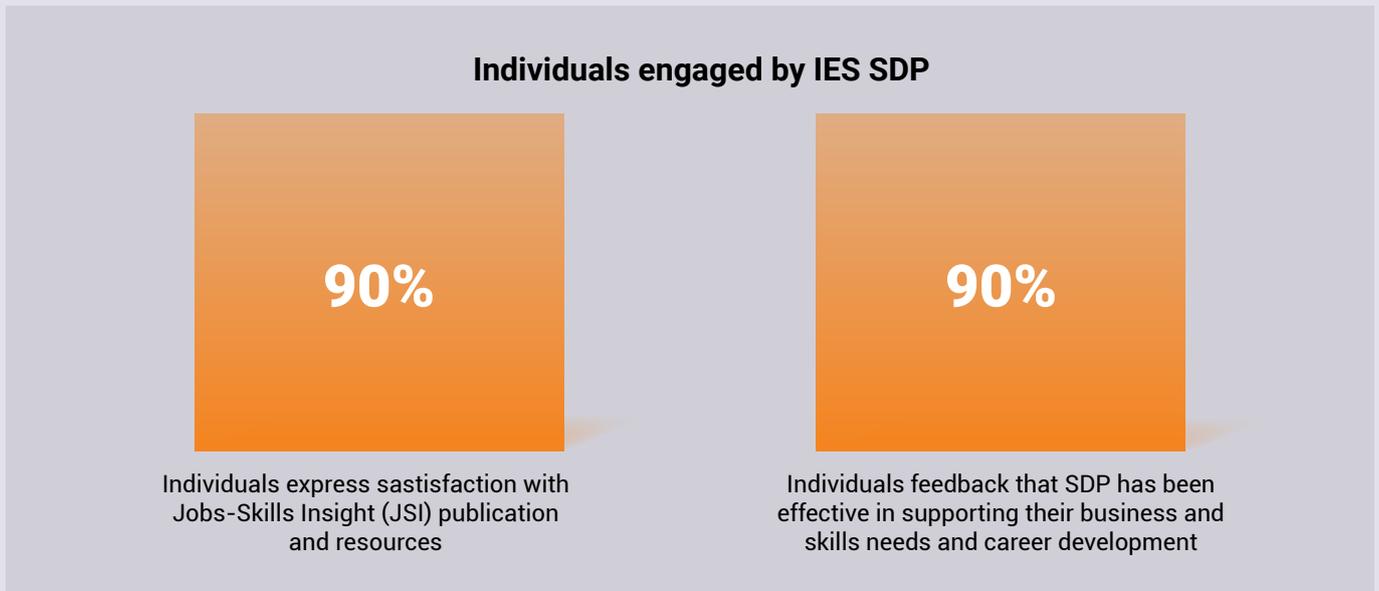


Chart 2: IES SDP's Achievements (Qualitative) between April 2023 to March 2024 – Individuals Engaged

Referring to Chart 2, 90% of the individuals surveyed are satisfied with the Preliminary Jobs-Skills Insights for EV Charger Deployment. They are heartened that their existing engineering skillsets are applicable to the rapidly expanding EV Charger deployment sector in alignment with the Singapore Green Plan 2030. Moving forward, SDP will continue to identify suitable outreach platforms to promote greater awareness of SDP's initiatives. SDP will also work with our partners to reach out to more members of the diverse engineering community, this could be done through conducting 1 to 1 in-depth engagements with enterprises. Starting from the 2nd year of the SDP project, SDP will develop its own website to further enhance its outreach efforts,

SDP's publications including JSI reports will be shared via the website.

### In Conclusion

SDP is a project that requires multi-stakeholder engagement, we aspire to upskill and recognise engineering professionals' competency in the various sectors, ensuring that they are on par with the standards of the international engineering community. More targeted outreach efforts will be rolled out from the second year of the project. IES members may look forward to receiving up-to-date information on the latest skills and training trends in the various sectors.

# STANDARDS DEVELOPMENT ORGANISATION

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.



# STANDARDS DEVELOPMENT ORGANISATION

## 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:

- ISO 16739-1:2018 Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries – Part 1: Data schema
- TR 111 : 2023 TR on Securing the cyber-physical systems for buildings
- 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 has adopted ISO 16739-1:2018 Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries – Data schema as a Singapore Standard.

In March 2023, IES-SDO organised a seminar launch for SS 333: 2022 Specification for fire dampers at Concorde Hotel. About 280 participants attended the seminar to understand on the changes made in the revision of SS 333. Members of the working group spoke on topics such as Fire Code provisions, fire damper installation methods and product testing procedures.



Panel discussion, moderated by Dr Lim Lan Yuan, Chair for Technical Committee on Building Maintenance and Management

### 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 in 2021, 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. From 23 to 27 October 2023, Intelligent Transportation Society Singapore (ITSS), Institute of Engineers Singapore, and Enterprise Singapore (ESG) were pleased to co-host the meeting of ISO Technical Committee 204 for Intelligent Transport Systems (ITS). About 75 industry leaders, policymakers, and experts from various countries converged and deliberated on

the future of ITS standards. The gathering serves as a platform to foster collaboration, exchange insights, and drive forward-thinking strategies that will shape the evolution of transportation systems worldwide.

On 12 March 2024, key stakeholders 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.



Transportation Standards Committee Deputy Chair Mr Lam Wee Shan addressing the members of ISO TC 204 Intelligent Transport Systems



Planning Session for Transportation Standards Committee

# IES AWARDS COMMITTEE

The Prestigious Engineering Achievement Awards are to recognise the outstanding achievements of the engineers. The awards are given to an organisation or individuals responsible for an outstanding engineering project in Singapore.

The basis of the award is engineering achievements that demonstrate outstanding engineering skills, which have made a significant contribution to the engineering progress, and the quality of life in Singapore.

For 2023, IES presented the Prestigious Engineering Achievement Award to 10 projects which were:

## **Maritime Security Unmanned Surface Vessels (MARSEC USV)**

By Defence Science And Technology Agency

## **Phase 2 Project at BCA Braddell Campus**

By ECAS Consultants Pte Ltd

## **Smart Automated Aircraft Visual Inspection System (SAAVIS)**

By Institute for Infocomm Research

## **Crimson S8 - Singapore's 1st Personal Aerial Vehicle (PAV)**

By NEO Aeronautics

## **Rifle Range Nature Park**

By National Parks Board

## **IDentif.AI: Actionable Drug Optimisation for Pandemic Preparedness**

By National University of Singapore

## **Advanced Aerospace Power Conversion System Development**

By Rolls Royce Singapore Pte Ltd

## **A Catalyst Coated Membrane Technology for PEM Fuel Cell**

By Temasek Polytechnic

## **For Young Creators Category**

### **eNutri**

By Temasek Polytechnic

### **Smart IoT Firewatch**

ITE College Central

## **IES Sustainability Awards**

For the first time this year, IES organised the Sustainability Awards.

This inaugural IES Sustainability Awards is dedicated to paying homage to exemplary engineering contributions to sustainable development in Singapore. It is a new initiative conceived as part of the IES Green Plan 2030 launched in January 2023 to create greater impetus amongst engineers to advance Singapore's sustainable development agenda, innovating and designing solutions to protect the world's physical, biological and human systems. The awards comprise three categories: Completed engineering projects with sustainability features and practices, innovative solutions for sustainability, and Promising start-ups for sustainability.

A total of 54 projects were received of which the following were awarded:

## **Phase 2 Intensification Project at BCA Braddell Campus**

By Building and Construction Authority

## **Flint Paper Battery**

By Flint

## **Smart Energy Town**

By Housing and Development Board

## **Indoor Vertical Hydroponics Farming using Nutrient Film Technique (NFT)**

By ITE College West

## **The Accelerated Catalyst Development Platform (ACDP)**

By Institute of Sustainability for Chemicals, Energy and Environment

## **Sustainable Road Paving Solutions for a Greener Future**

By Land Transport Authority

## **Solarisation of Singapore's Industrial Estates**

By JTC Corporation

## **PSA Tuas Maintenance Base**

By PSA Corporation Ltd

## **Sustainable Green Station – Intelligent HVAC with AI-enabled energy optimisation system for Greener MRT Stations**

By SMRT Corporation

## **Customize – 4D-Printed Orthopaedic Casts**

By Temasek Polytechnic

## ASEAN OUTSTANDING ENGINEERING ACHIEVEMENT AWARDS

The following projects also won the ASEAN Outstanding Engineering Achievement Awards:

### **Rifle Range Nature Park**

By National Parks Board

### **IDentif.AI: Actionable Drug Optimisation for Pandemic Preparedness**

By National University of Singapore

### **Advanced Aerospace Power Conversion System Development**

By Rolls Royce Singapore Pte Ltd

### **PSA Tuas Maintenance Base**

By PSA Corporation Ltd

### **The Accelerated Catalyst Development Platform (ACDP)** By Institute of Sustainability for Chemicals, Energy and Environment

### **Customize – 4D-Printed Orthopaedic Casts**

By Temasek Polytechnic

## IES Honorary Fellow

The IES Honorary Fellowship is the second highest honour bestowed by our Institution upon individuals who have made illustrious contributions to the engineering profession and to Singapore.

In recognition of his outstanding contributions in shaping engineering education and developing engineering leaders to support Singapore's future growth, the IES Council proudly confers the title of IES Honorary Fellow on Prof Yeoh Lean Weng."

### **IES Life-time Engineering Achievement Award**

The Lifetime Engineering Achievement Award recognises and honours the dedication of an engineer who spends his or her lifetime career in engineering. The award is conferred upon individuals whose lifetime accomplishments have made profound impact on the engineering industry and community and have brought national or international honors to Singapore

"In recognition of his long-term contribution of expertise, knowledge and insights to the engineering industry and his outstanding accomplishments that have greatly benefitted IES, the engineering community and our nation, the IES Council bestows IES Emeritus President Professor Su Guanng with the Lifetime Engineering Achievement Award 2023."

### **IES – Yayasan Mendaki Scholarships**

The IES-Yayasan MENDAKI Scholarship prize of

\$3,000 and \$2,000 are awarded to two scholars from a local University and Polytechnic respectively. This scholarship aims to provide financial support to the scholars to enable them to pursue their engineering studies.

Natasha Arisqa Putri Shaiful Bahri  
Business Process and Systems Engineering  
Temasek Polytechnic

Arshof Ahamed S/O Ansar Ahamed  
Electrical and Electronic Engineering  
Nanyang Technological University

### **IES Outstanding Partner Award**

The IES Outstanding Partner Award recognises and honours outstanding organisation which has contributed significantly to IES and made profound impact to the practice of engineering in Singapore.

The IES Outstanding Partner Award 2023 is SMRT Corporation Ltd. Receiving the award on behalf of SMRT is Mr Seah Moon Ming, Chairman of SMRT Corporation

### **For 2022**

The following awards were given:

#### **Lifetime Engineering Achievement Award**

Mr Seah Moon Ming, Chairman, SMRT Corporation Ltd

#### **IES Outstanding Partner Award**

National Trades Union Congress (NTUC)

#### **IES Prestigious Engineering Achievement Awards 2022**

##### **Use of Plastic Waste to Construct Durable Asphalt Pavement**

By Samwoh Innovation Centre

##### **A330 Multi-Role Tanker Transport Green Hangar**

By Defence Science and Technology (DSTA)

##### **WaterfrontI&II@Northshore**

By Housing and Development Board

##### **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 Creators**

#### **HapGlove – Wireless Pneumatic Glove for Multimode Haptic Feedback in the Metaverse**

By National University of Singapore

The following 2 projects also won the ASEAN Outstanding Engineering Achievement Awards

#### **Use of Plastic Waste to Construct Durable Asphalt Pavement**

## IES AWARDS COMMITTEE

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 AFEO Award

Last year, AFEO introduced the Young Engineers of AFEO this year at IES Young Engineer Committee

Singapore Polytechnic

Chairman Mr Saafiq Shahul received the award

### Yayasan Mendaki Scholarships

The two scholarships were given to:

Muhammad Nur Hazwan bin Mohamed Haron  
Aircraft Systems Engineering  
Singapore Institute of Technology

Muhammad Raqib Rifai Bin Fadli  
Electrical & Electronic Engineering

## FOR SPRING FESTIVAL AND APPRECIATION AWARDS NIGHT

The awards were announced in 2022 and presented in 2023:

#	Name	IES Committee(s) / IG Nominee is / are serving
1	Professor Seeram Ramakrishna	National Committee of Engineering Organizations Committee / Charles Rudd Distinguished Public Lectures Organising Committee
2	James Bautista	Young Engineers Committee
3	Liu Ziyue	IStructE Singapore Chapter
4	Sharron Ng	IStructE Singapore Chapter
5	Desmond Ng	Asset Management Technical Committee
6	Dr Chandra Segaran	National Engineers Day
7	Winston Ho Boon Chye	Mechanical & Electrical Engineering Technical Committee
8	Leong Cheng Wee	Mechanical & Electrical Engineering Technical Committee
9	Lim Gim Seng, Paul	Mechanical & Electrical Engineering Technical Committee
10	Er. Lucas Ng	Chemical and Process Engineering Technical Committee
11	Dr Ronnie Teo	Electronics & Computer Engineering Technical Committee
13	Lee Long Guang	Civil & Structural Engineering Technical Committee
14	Lily Yeo	Civil & Structural Engineering Technical Committee
15	Sun Jianping	Civil & Structural Engineering Technical Committee

### 1) IES Outstanding Volunteers Award

A total of 14 nominees were selected to receive the IES Outstanding Volunteers Award.

### 2) Friend of IES

The Awards Committee recommended Mr Loh Yew Chiong from CEB for the award as he represents Singapore Polytechnic to sit on the CEB. He has been actively supporting CEB initiatives and nominated SP staff to sit in the AQACs of Water & Environmental, Built Environment, Aerospace, Land Transport (Bus and Railway) and Renewable Energy (Solar). One of his key contributions is the launch of CEB at SP in Jan 2020. He helped to secure SP auditorium and provided the necessary support for the event.

**3) IES Best Student Chapter Award**

Mr Syafiq, Chair of Young Engineers Committee has recommended IES-NTU Student Chapter to be the best student chapter.

STUDENT CHAPTERS	NO OF EVENTS	ENGINEERING NEEDS
IES-NTU STUDENT CHAPTER	15	NO 1, 2, 3

IES-NTU Student Chapter was upgraded to Tier 2 Club by NTU because of the impact the chapter has on the NTU student life. NTU Student Clubs are classified into 4 tiers namely Tier 1, Tier 2, Tier 3 and Tier 4.

**4) Special Recognition**

The Awards Committee recommended the following.

(1) Charles Rudd Distinguished Lectures Organising Committee for organising the lectures in a new and innovative way to attract participation amidst the COVID period. The lectures were broadcast to 43 countries and a record of over three thousand engineers zoomed in to attend the event. It was a huge success and the lectures also gained a surplus of \$6k and

(2) National Engineers Day 2022

The Awards Committee recommended for NED Organising Committee to be awarded the special recognition as IES Outstanding Committee. The committee had relentlessly organised NED in promoting the appreciation of engineers and their contributions to society, inspiring young engineers and raising awareness about engineering career opportunities amongst students.

**5) IES Outstanding Committees Award**

The Committee would like to recommend WES Committee as it had organized WES 2021 successfully during the COVID Period.

**6) IES Outstanding Partner Award**

- NTUC
- SMRT

Two organizations that were worthy of the award due the length, support and partnership to IES: NTUC and SMRT.

- Mr Seah Moon Ming was the Chairman of ST Engineering when was appointed as IES Hon Advisor in 2007
- SMRT hosted the signing of MOU amongst IES, ACES and TUCCs which was not considered to be significant.

**7) IES Lifetime Engineering Achievement Award**

- Mr Seah Moon Ming

The Awards Committee Members selected Mr Seah Moon Ming to receive te award.

**8) IES Hon Fellow Award**

This year, SMS Chee Hong Tat was conferred IES Hon Fellow

**COMMUNITY SERVICES**

**Mid-Autumn Festival**

On the evening of 26 September 2023 (Tuesday), the IES Community Service Committee (CSC) organised a Mooncake Festival Celebration with the residents of The Moral Home for the Aged Sick, led by the Chairman of the new Corporate Social Responsibility Committee Er. Simon Lee and also Chairman of the Community Service Committee, Mr Au Yeong Hoh Wai.

Members of the committee handed out mooncakes and mixed soft fruits to the delightful residents of the Home after dinner. Vice Chairman Er. Loh Weng Whye, gave the welcome address to the Committee. IES President Mr Dalson Chung was also present to spread the warmth to the residents. Among the highlights of the visit were the lively interaction and a light-hearted karaoke session among the Council, Committee members and residents of the Home.

The Moral Home for the Aged Sick appreciated the warm gestures and participation by IES and hopes for more visits in the future.

**Christmas Night Drive**

On 16 December 2023, IES Council Members and Community Service Committee Members celebrated Christmas with the children of Cerebral Palsy Alliance Singapore at Tanglin Club. IES also contributed party gifts for the children. To their delight, Santa visited them and presented the gifts to them. They were given a night drive along Orchard Road to enjoy the Christmas light in vintage cars.

**SOCIAL SERVICES**

The Annual Inter-Professional Games were played by the six professional organisations. The games made a come back this year after a break of 5 years.ons: accountants, architects, doctors, engineers, lawyers, and the surveyors and valuers. IES emerged champion for bowling. IES will be the host for 2024.



**THE INSTITUTION OF ENGINEERS SINGAPORE  
AND ITS SUBSIDIARIES  
(REGISTERED UNDER SOCIETIES ACT 1966)**

**UEN NO: S66SS0041B**

**FINANCIAL YEAR ENDED 31 DECEMBER 2023**

**STATUTORY REPORTS**

*Unlocking Value, Unleashing Growth*

**THE INSTITUTION OF ENGINEERS SINGAPORE  
(REGISTERED UNDER THE SOCIETIES ACT 1966)  
(UEN No. S66SS0041B)**

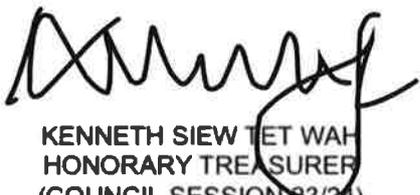
**STATEMENT BY THE COUNCIL**

In our opinion, the accompanying financial statements and consolidated financial statements, together with the notes thereon are drawn up so as to present fairly, in all material respects, the financial position of the Group and of the Institution as at 31 December 2023 and of the financial performance, changes in equity of the Group and the Institution and the cash flows of the Group for the year then ended.

ON BEHALF OF THE COUNCIL

  
DALSON CHUNG  
PRESIDENT  
(COUNCIL SESSION 23/24)

  
DAVID NG CHIEW CHIAT  
HONORARY SECRETARY  
(COUNCIL SESSION 23/24)

  
KENNETH SIEW TET WAH  
HONORARY TREASURER  
(COUNCIL SESSION 23/24)

Singapore, 31 October 2024

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF  
THE INSTITUTION OF ENGINEERS SINGAPORE  
(REGISTERED UNDER THE SOCIETIES ACT 1966)**

**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 2023, and the statements of comprehensive income, statements of changes in equity of the Group and the Institution, and the statement of cash flows of the Group for the financial year then ended, and notes to the financial statements, including material accounting policy information.

In our opinion, the accompanying consolidated financial statements of the Group and the statement of financial position and statement of comprehensive income of the Institution are properly drawn up in accordance with the provisions of the Societies Act 1966 (the Societies 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 2023, and the financial performance, changes in equity of the Group and the Institution, and the 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 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 Matters**

The financial statements of the Group and Institution for the financial year ended 31 December 2022 were audited by another auditor who expressed an unmodified opinion on those financial statements on 18 May 2023.

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF  
THE INSTITUTION OF ENGINEERS SINGAPORE  
(REGISTERED UNDER SOCIETIES ACT 1966)**

**(CONTINUED)**

**Other Information**

The Council is responsible for the other information. The other information comprises the Statement by the Council.

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 Council for the Financial Statements**

The Council is responsible for the preparation and fair presentation of the financial statements in accordance with the provisions of the Societies Act and FRSs, and for devising and maintaining a system of internal accounting controls as the Council determines it 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 Council either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Council's responsibilities include overseeing the Group's financial reporting process.

**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.

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF  
THE INSTITUTION OF ENGINEERS SINGAPORE  
(REGISTERED UNDER SOCIETIES ACT 1966)**

**(CONTINUED)**

**Auditor's Responsibilities for the Audit of the Financial Statements (continued)**

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 the directors 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.

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF  
THE INSTITUTION OF ENGINEERS SINGAPORE  
(REGISTERED UNDER SOCIETIES ACT 1966)**

**(CONTINUED)**

**REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS**

In our opinion,

- a) the accounting and other records required to be kept by the Institution in accordance with the Societies Regulations enacted under the Societies Act, and have been properly kept in accordance with those Regulations;
- b) the fund-raising appeals held during the year ended 31 December 2023 have been carried out in accordance with Regulation 6 of the Societies Regulations issued under the Societies Act and proper accounts and other records of the fund-raising appeals have been kept; and
- c) for those subsidiaries incorporated in Singapore of which we are the auditors, the accounting and other records required by Companies Act 1967 to be kept by the subsidiaries have been properly kept in accordance with the provisions of Companies Act 1967.



CYPRESS SINGAPORE PAC  
Public Accountants and  
Chartered Accountants  
Singapore

Date, 31 October 2024

**THE INSTITUTION OF ENGINEERS SINGAPORE AND ITS SUBSIDIARIES  
(REGISTERED UNDER THE SOCIETIES ACT 1966)**

**STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2023**

	Note	GROUP			INSTITUTION		
		2023 SGD	2022 SGD (Restated)	1.1.2022 SGD (Restated)	2023 SGD	2022 SGD (Restated)	1.1.2022 SGD (Restated)
<b>EQUITY</b>							
Asset capitalisation reserve	17	5,090,207	5,311,942	5,533,677	5,090,207	5,311,942	5,533,677
Capital reserve	18	1,453,041	1,453,041	1,453,041	1,453,041	1,453,041	1,453,041
Sinking fund	19	693,041	693,041	693,041	693,041	693,041	693,041
Scholarship fund	20	389,408	1,024,552	1,000,000	389,408	1,024,552	1,000,000
Accumulated fund		7,564,092	7,025,025	6,754,085	2,561,059	2,578,375	2,517,279
		<u>15,189,789</u>	<u>15,507,601</u>	<u>15,433,844</u>	<u>10,186,756</u>	<u>11,060,951</u>	<u>11,197,038</u>
Represented by:							
<b>NON CURRENT ASSETS</b>							
Property, plant and equipment	3	5,783,634	6,080,726	6,425,885	5,765,752	6,057,733	6,369,656
Right of use asset	8a	100,994	211,170	321,345	-	-	-
Investment in subsidiaries	5	-	-	-	4	4	4
Investment in an associate	6	-	-	-	-	-	-
Investment in a joint venture	7	-	-	-	-	-	-
Other investment		7,219	-	-	-	-	-
<b>CURRENT ASSETS</b>							
Trade and other receivables	4	1,649,899	1,611,303	1,222,706	2,003,722	1,236,125	1,189,451
Cash at banks and on hand	16	10,261,830	11,046,248	10,232,586	4,421,574	6,091,906	5,765,256
		<u>11,911,729</u>	<u>12,657,551</u>	<u>11,455,292</u>	<u>6,425,296</u>	<u>7,328,031</u>	<u>6,954,707</u>
Less:							
<b>CURRENT LIABILITIES</b>							
Trade and other payables	9	1,945,877	2,198,383	1,751,179	1,735,912	1,863,831	1,800,233
Contract liabilities	10	340,872	693,819	434,535	203,383	395,985	214,931
Provision for taxation	15b	149,674	261,983	190,389	8,801	8,801	55,965
Lease liability	8b	106,818	110,556	104,914	-	-	-
		<u>2,543,241</u>	<u>3,264,741</u>	<u>2,481,017</u>	<u>1,948,096</u>	<u>2,268,617</u>	<u>2,071,129</u>
<b>NET CURRENT ASSETS</b>		<u>9,368,488</u>	<u>9,392,810</u>	<u>8,974,275</u>	<u>4,477,200</u>	<u>5,059,414</u>	<u>4,883,578</u>
		<u>15,260,335</u>	<u>15,684,706</u>	<u>15,721,505</u>	<u>10,242,956</u>	<u>11,117,151</u>	<u>11,253,238</u>
Less: <b>NON-CURRENT LIABILITIES</b>							
Lease liability	8b	-	106,559	217,115	-	-	-
Deferred tax liabilities	11	70,546	70,546	70,546	56,200	56,200	56,200
		<u>15,189,789</u>	<u>15,507,601</u>	<u>15,433,844</u>	<u>10,186,756</u>	<u>11,060,951</u>	<u>11,197,038</u>

The accompanying notes from an integral part of the financial statements.

**THE INSTITUTION OF ENGINEERS SINGAPORE AND ITS SUBSIDIARIES  
(REGISTERED UNDER THE SOCIETIES ACT 1966)**

**STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2023**

	Note	GROUP		INSTITUTION	
		2023 SGD	2022 SGD (Restated)	2023 SGD	2022 SGD (Restated)
REVENUE	12				
Conferences, seminars and events		5,899,381	3,531,907	696,375	200,003
Members' annual fees		949,760	933,998	799,118	824,445
Publication registry listings		234,858	165,962	-	-
Others		191,931	7,486	142,039	7,486
		<u>7,275,930</u>	<u>4,639,353</u>	<u>1,637,532</u>	<u>1,031,934</u>
Rental income		380,086	382,160	380,086	382,160
SDO corporate support fee		247,851	235,740	247,851	235,740
Administrative charges received		294,000	295,100	530,248	407,717
Government grants		17,257	193,889	17,257	177,553
Interest income		47,302	514	46,975	-
Others		48,530	16,867	11,313	9,821
		<u>8,310,956</u>	<u>5,763,623</u>	<u>2,871,262</u>	<u>2,244,925</u>
LESS: OPERATING EXPENSES					
Expenditure for accreditation		(112,374)	(96,740)	(112,374)	(96,740)
Expenditure for conferences, seminars and events		(2,788,678)	(1,109,341)	(219,795)	(90,647)
Expenditure for publication registry listings		(111,195)	(91,675)	-	-
Interest expense on lease liability		(8,503)	(13,886)	-	-
Employee benefits expenses	13	(3,173,481)	(2,592,241)	(1,548,504)	(1,169,957)
Other operating expenses	14	(1,802,159)	(1,728,895)	(1,229,640)	(1,037,831)
		<u>(7,996,390)</u>	<u>(5,632,778)</u>	<u>(3,110,313)</u>	<u>(2,395,175)</u>
Share of surplus from a joint venture		<u>164,459</u>	<u>31,593</u>	<u>-</u>	<u>-</u>
SURPLUS/ (DEFICIT) BEFORE TAXATION		479,025	162,438	(239,051)	(150,250)
TAXATION	15	(161,693)	(113,233)	-	(10,389)
NET SURPLUS/ (DEFICIT) FOR THE YEAR		<u>317,332</u>	<u>49,205</u>	<u>(239,051)</u>	<u>(160,639)</u>
OTHER COMPREHENSIVE INCOME					
Items that may be reclassified subsequently to profit or loss		-	-	-	-
Items that will not be reclassified subsequently to profit or loss		-	-	-	-
Other comprehensive income, net of tax		<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		<u><u>317,332</u></u>	<u><u>49,205</u></u>	<u><u>(239,051)</u></u>	<u><u>(160,639)</u></u>

The accompanying notes from an integral part of the financial statements.

**THE INSTITUTION OF ENGINEERS SINGAPORE AND ITS SUBSIDIARIES  
(REGISTERED UNDER THE SOCIETIES ACT 1966)**

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2023**

	Note	Accumulated Fund SGD (Restated)	Asset Capitalisation Reserve (Note 17) SGD (Restated)	Capital Reserve (Note 18) SGD	Sinking Fund (Note 19) SGD	Scholarship Fund (Note 20) SGD	Total SGD (Restated)
<b>GROUP</b>							
BALANCE AS AT 1 JANUARY 2022		6,754,085	5,533,677	1,453,041	693,041	1,000,000	15,433,844
Awarding of scholarships		-	-	-	-	24,552	24,552
Total comprehensive income for the year							
As previously stated		106,205	-	-	-	-	106,205
Correction of error		(57,000)	-	-	-	-	(57,000)
As restated	26(ii)	49,205	-	-	-	-	49,205
Transfer of reserve for depreciation for property, plant and equipment	26(i)	221,735	(221,735)	-	-	-	-
BALANCE AS AT 31 DECEMBER 2022	26	7,025,025	5,311,942	1,453,041	693,041	1,024,552	15,507,601
Awarding of scholarships		-	-	-	-	(635,144)	(635,144)
Total comprehensive income for the year		317,332	-	-	-	-	317,332
Transfer of reserve for depreciation for property, plant and equipment		221,735	(221,735)	-	-	-	-
BALANCE AS AT 31 DECEMBER 2023		7,564,092	5,090,207	1,453,041	693,041	389,408	15,189,789

The accompanying notes from an integral part of the financial statements.

**THE INSTITUTION OF ENGINEERS SINGAPORE AND ITS SUBSIDIARIES  
(REGISTERED UNDER THE SOCIETIES ACT 1966)**

**STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2023**

	Note	Accumulated Fund SGD (Restated)	Asset Capitalisation Reserve (Note 17) SGD (Restated)	Capital Reserve (Note 18) SGD	Sinking Fund (Note 19) SGD	Scholarship Fund (Note 20) SGD	Total SGD
<u>INSTITUTION</u>							
BALANCE AS AT 1 JANUARY 2022		2,517,279	5,533,677	1,453,041	693,041	1,000,000	11,197,038
Awarding of scholarships		-	-	-	-	24,552	24,552
Total comprehensive income for the year		(160,639)	-	-	-	-	(160,639)
Transfer of reserve for depreciation for property, plant and equipment	26(i)	221,735	(221,735)	-	-	-	-
BALANCE AS AT 31 DECEMBER 2022	26	<u>2,578,375</u>	<u>5,311,942</u>	<u>1,453,041</u>	<u>693,041</u>	<u>1,024,552</u>	<u>11,060,951</u>
Awarding of scholarships		-	-	-	-	(635,144)	(635,144)
Total comprehensive income for the year		(239,051)	-	-	-	-	(239,051)
Transfer of reserve for depreciation for property, plant and equipment		221,735	(221,735)	-	-	-	-
BALANCE AS AT 31 DECEMBER 2023		<u><u>2,561,059</u></u>	<u><u>5,090,207</u></u>	<u><u>1,453,041</u></u>	<u><u>693,041</u></u>	<u><u>389,408</u></u>	<u><u>10,186,756</u></u>

The accompanying notes from an integral part of the financial statements.

**THE INSTITUTION OF ENGINEERS SINGAPORE AND ITS SUBSIDIARIES  
(REGISTERED UNDER THE SOCIETIES ACT 1966)**

**CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE  
YEAR ENDED 31 DECEMBER 2023**

		<u>GROUP</u>	
	Note	2023 SGD	2022 SGD (Restated)
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Surplus before taxation		479,025	162,438
Adjustments for:			
Interest expense on lease liability		8,503	13,886
Interest income		(47,302)	-
Depreciation of property, plant and equipment		342,732	356,769
Depreciation of right-of-use assets		110,176	110,175
Fair value gain on other investment		(7,218)	-
Allowance for expected credit losses		19,251	78,431
		<u>426,142</u>	<u>559,261</u>
		905,167	721,699
Changes in working capital:			
Contract liabilities		(352,947)	259,284
Trade and other receivables		(52,505)	(467,028)
Trade and other payables		(257,849)	447,204
		<u>(663,301)</u>	<u>239,460</u>
Cash effect of operating activities		241,866	961,159
Income tax paid		(274,002)	(41,639)
<b>NET CASH EFFECT OF OPERATING ACTIVITIES</b>		<u>(32,136)</u>	<u>919,520</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Purchase of property, plant and equipment		(45,640)	(11,610)
Interest received		47,302	-
Withdrawal/ (placement) of fixed deposits		1,102,720	(18,372)
<b>NET CASH EFFECT OF INVESTING ACTIVITIES</b>		<u>1,104,382</u>	<u>(29,982)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Repayment of lease liability		(110,297)	(104,914)
Interest paid on lease liability		(8,503)	(13,886)
(Disbursement)/ receipt of scholarship fund		(635,144)	24,552
<b>NET CASH EFFECT OF FINANCING ACTIVITIES</b>		<u>(753,944)</u>	<u>(94,248)</u>
<b>NET CHANGE IN CASH AND CASH EQUIVALENTS</b>		318,302	795,290
CASH AND CASH EQUIVALENTS AS AT 1 JANUARY	16	7,904,397	7,109,107
CASH AND CASH EQUIVALENTS AS AT 31 DECEMBER	16	<u>8,222,699</u>	<u>7,904,397</u>

The accompanying notes from an integral part of the financial statements.

# THE INSTITUTION OF ENGINEERS SINGAPORE AND ITS SUBSIDIARIES (REGISTERED UNDER SOCIETIES ACT 1966)

## NOTES TO THE FINANCIAL STATEMENTS - 31 DECEMBER 2023

### 1. GENERAL INFORMATION

The Institution is registered in Singapore under Societies Act 1966 and is domiciled in Singapore.

The principal activities of the Institution are to promote and advance the science, art and the profession of engineering.

The principal activities of the subsidiaries are disclosed in Note 5 to the financial statements.

The corporation's registered address and the principal place of business is at 70 Bukit Tinggi Road, Singapore 289758.

### 2. MATERIAL ACCOUNTING POLICY INFORMATION

#### 2.1 Basis of accounting

The financial statements and consolidated financial statements are prepared in compliance with Singapore Financial Reporting Standards (FRSs) issued by Accounting and Corporate Regulatory Authority (ACRA).

The financial statements and consolidated financial statements are presented in Singapore dollars.

The financial statements and consolidated financial statements are prepared in accordance with the historical cost convention except as disclosed in the accounting policies below.

The financial statements and consolidated financial statements for the financial year ended 31 December 2023 are authorised to be issued on the date of the Statement by Council.

#### 2.2 Adoption of new and revised Financial Reporting Standards

The accounting policies adopted in the financial year are consistent with those used in the previous financial year except for the adoption of certain new and revised Financial Reporting Standards effective for the financial year beginning 1 January 2023. These new and revised Financial Reporting Standards have no significant effects on the Institution's accounting policies used except for:

##### Amendments to FRS 1 and FRS Practice Statement 2: Disclosure of Accounting Policies

The amendment changes the requirements regarding disclosure of accounting policies. It replaces all term 'significant accounting policies' with 'material accounting policy information'. Accounting policy information is material if, when considered together with other information included in the entity's financial statements, it can reasonably be expected to influence the primary users of the financial statements.

## 2. MATERIAL ACCOUNTING POLICY INFORMATION

### 2.2 Adoption of new and revised Financial Reporting Standards (continued)

#### Amendments to FRS 1 and FRS Practice Statement 2: Disclosure of Accounting Policies (continued)

The amendment clarified that the accounting policy information that relates to immaterial transactions, other events or conditions is immaterial and need not be disclosed. Accounting policy information may be material because of the nature of the related transactions, other events or conditions, even if the amounts are immaterial. However, not all accounting policy information relating to material transactions, other events or conditions itself is material.

#### Amendments FRS 8: Definition of Accounting Estimates

The amendments replaced 'the definition of a change in accounting estimates' with a new definition of 'accounting estimates'. Under the new definition, accounting estimates are monetary amounts in financial statements that are subjected to measurement uncertainty.

The effects on any accounting estimate of a change in an input or a change in a measurement technique used to develop an accounting estimate are changes in accounting estimates unless they result from the correction of prior period errors. A change in accounting estimate that results from new information or new developments is not the correction of an error.

### 2.3 Issued but not yet effective Financial Reporting Standards

As at the date of this report, no relevant new or revised Financial Reporting Standards that have been issued but not yet come into effect have been applied. These relevant new and revised standards upon adoption will not have a significant impact on the financial statements and the consolidated financial statements except for:-

#### Amendments to FRS 1: Classification of Liabilities as Current or Non-Current

The amendment affected only on the presentation of liabilities as current or non-current in the statement of financial position and not the amount or timing of recognition of any asset, liability, income or expenses, or the information disclosed about those items.

The amendment clarified that the classification of liabilities as current or non-current is based on rights that are in existence at the end of the reporting period, specify that classification is unaffected by expectations about whether the entity will exercise its right to defer settlement of a liability, explain that rights are in existence if covenants are complied with at the end of the reporting period.

The amendment introduced the definition of 'settlement' to make clear that settlement refers to the transfer to the counterparty of cash, equity instruments, other assets or services.

### 2.4 Significant judgments by the Council in applying accounting policies

In the process of applying the Group's and the Institution's accounting policies, the Council did not make any significant judgements, apart from those involving estimations, that have significant effect on the amounts recognised in the financial statements.

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.5 Key sources of estimation uncertainty

The preparation of financial statements in conformity with Singapore Financial Reporting Standards requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as at the date of the financial statements and consolidated financial statements, and the reported amounts of income and expenses during the financial year. Although these estimates are based on the Council's best knowledge of current event and actions, actual results may differ from those estimates.

There were no significant key assumptions concerning the future, nor other key sources of estimation uncertainty at the year end that would have significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year except for:-

#### (i) *Depreciation of property, plant and equipment*

The estimates for the residual values, useful lives and related depreciation charges for the property, plant and equipment are based on commercial and production factors which could change significantly as a result of technical innovations and competitors' actions in response to the market conditions.

The residual value of the Group's and the Institution's leasehold land and property are derived based on the Council's best estimate. In the event that there is a significant change in the residual value the depreciation charge to the statement of comprehensive income will be significantly affected.

Changes in the expected level of usage and technological development could impact the economic useful lives and the residual values of these assets, therefore future depreciation charges could be revised. The carrying amounts of the Group's furniture, fixtures and equipment and right-of-use assets as at 31 December 2023 were approximately SGD5,783,634 (2022: SGD6,080,726) and SGD211,170 (2022: SGD100,994) respectively. The key assumptions are disclosed in Notes 3 and 8.

#### (ii) *Income taxes*

There are certain transactions and computations for which the ultimate tax determination may be different from the initial estimate. The institution recognises tax liabilities based on its understanding of the prevailing tax laws and estimates of whether such taxes will be due in the ordinary course of business. Where the final outcome of these matters is different from the amounts that were initially recognised, such difference will impact the income tax and deferred tax provisions in the period in which such determination is made.

*This section is intentionally left blank.*

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.5 Key sources of estimation uncertainty (continued)

#### (iii) Expected credit losses (ECL) on trade receivables

The carrying amount of receivables impaired by measuring expected credit losses. Expected credit losses is measured in a way that reflects an unbiased and probability-weighted amount that is determined by evaluating a range of outcomes, time value of money and reasonable and supportable information that is available without undue cost for effort at the year end about past events, current conditions and forecasts of future economic conditions.

Where the expectation is different from the original estimate, such difference will impact the carrying value of receivables.

### 2.6 Property, plant and equipment and depreciation

Property, plant and equipment are initially stated at cost. Subsequent to initial recognition, property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment losses.

Depreciation of an asset commences when the asset is available for use. Depreciation is provided on gross carrying amounts less residual value in equal annual instalments over the estimated lives of the assets. The estimated useful lives are as follows:-

	<u>No. of years</u>
Leasehold land and property	30 – 50 years
Building renovation	50 years
Car park	50 years
Computers and computerised equipment	1 – 5 years
Office equipment	10 years
Office furniture	3 – 10 years

The residual value and the estimated useful lives of asset are reviewed at each year end, and if expectations are different from previous estimate, changes are made to the depreciation charge for the remaining undepreciated amount.

Fully depreciated assets are retained in the financial statements and consolidated financial statements until they are no longer in use or disposed and no further charges for depreciation is made in respect of these assets. Any gain or loss arising from the derecognition of the asset is recognised in the statement of comprehensive income.

When events or changes in circumstances indicate that the carrying amount of an asset is not recoverable, impairment loss is recognised in the statement of comprehensive income.

*This section is intentionally left blank.*

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.7 Investment in subsidiaries

A subsidiary is an entity in which the Institution has full control and ownership of the subsidiary and the Council has the rights at any time to change the composition and membership of the subsidiary.

In the institution's financial statements, investment in a subsidiary is stated at cost less impairment losses.

### 2.8 Investment in an associate

An associate is an entity in which the Institution has significant influence, which usually coincides with the Institution holding an equity interest between 20% and 50% or that the Group has representation in the Council of the associate.

The investment in an associate is accounted for using the equity method. The Group's share of results of the associate is included in the statement of comprehensive income, and the Group's share of post-acquisition retained profits and reserves is added to the cost of the investments in the statement of financial position. Where there has been a change recognised directly in the equity of the associate, the Group recognises its share of such changes.

At each year end, the Institution evaluates its net investment in the associate to determine if any impairment loss is to be recognised.

The associate is equity accounted from the date the Group exercise significant influence until such significant influence ceases.

Dividend income is recognised when the right to receive payment is established.

Goodwill arising from the acquisition of the associate is included in the carrying amount of the investment. Gain from bargain purchase is excluded from the carrying amount of the investment and is recognised as income in the determination of the institution's share of associate's profit or loss in the year in which the associate is acquired.

The Group does not recognise losses exceeding its interest in the associate, unless it has incurred obligations on behalf of the associate.

The most recent audited financial statements of the associate are used for equity accounting. If the financial year end of the associate is not coterminous with that of the Institution, the share of results is arrived at based on the latest audited financial statements and unaudited financial statements made up to the end of the Institution's financial year.

Accounting policies consistent with the Institution are applied in the associate's financial statements.

### 2.9 Investment in a joint venture

A joint venture is an entity over which the Group has joint control as a result of contractual agreements, and rights to the net assets of the entity.

Investment in a joint venture is accounted for in the consolidated financial statements using the equity method of accounting less impairment losses, if any. Under the equity method of accounting, the investment is initially recognised at cost and adjusted thereafter to recognise Group's share of its joint venture's post-acquisition surplus or deficit of the investee.

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.10 Basis of consolidation

The consolidated financial statements include the financial statements of the Institution and its subsidiary as at year end. A subsidiary is an entity which the Group has the power to govern the financial and operating policies so as to obtain benefits from its activities. The Group generally has such power when it directly or indirectly holds more than 50% of the issued share capital, or controls more than half of the voting power, or controls the composition of the board of directors. The financial statements of the subsidiary are prepared for the same reporting date as the Institution. The financial statements of the subsidiary used for consolidation purpose adopt accounting policies that are consistent with that of the Institution.

Inter-company transactions are eliminated on consolidation and consolidated financial statements reflect external transactions only.

Subsidiary is fully consolidated from the date of acquisition, being the date on which the Group controls the subsidiary company. Consolidation ceases from the date the Group no longer controls the subsidiary.

### 2.11 Financial assets

Financial assets are classified as fair value through profit or loss, amortised costs, or fair value through other comprehensive income financial assets. Financial assets are recognised in the statement of financial position when the Institution becomes a party to the contractual provisions of the financial assets.

All financial assets are initially recognised at fair value plus any directly attributable transactional costs, except for trade receivables at their transaction price if the trade receivables do not contain a significant financing component in accordance with FRS 115.

The classification of financial assets, after initial recognition, is re-evaluated and reclassified where allowed and appropriate.

All financial assets are measured at fair value through profit or loss unless they are measured at amortised cost or at fair value through other comprehensive income.

An equity instrument not held for trading may, on initial recognition, elect to classify the investment as fair value through other comprehensive income financial asset. This classification is irrevocable and any change in fair value, including foreign exchange difference, will be recognised in other comprehensive income. The cumulative gains or losses recognised in other comprehensive income will not be reclassified to profit or loss following the de-recognition of the financial asset.

A contract to buy or sell a non-financial item that can be settled net in cash or another financial instrument, or by exchanging financial instruments, as if the contract was a financial instrument, may be irrevocably designated as measured at fair value through profit or loss even if it was entered into for the purpose of the receipt or delivery of a non-financial item in accordance with the entity's expected purchase, sale or usage requirements. This designation is available only at inception of the contract and only if it eliminates or significantly reduces a recognition inconsistency.

### 2.12 Trade and other receivables

Trade and other receivables are classified and accounted for as amortised cost financial assets as the contractual cash flows of the asset comprises solely principal and interest payments and financial asset is held by the entity with the objective to collect contractual cash flows. These assets are carried at amortised cost using the effective interest method except trade receivable carried at transaction price as it does not contain a significant financing component in accordance with FRS 115.

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.12 Trade and other receivables (continued)

The carrying amount of receivables is impaired by measuring expected credit losses. Expected credit losses is measured in a way that reflects an unbiased and probability-weighted amount that is determined by evaluating a range of outcomes, time value of money and reasonable and supportable information that is available without undue cost or effort at the year end about past events, current conditions and forecasts of future economic conditions.

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

Gains or losses are recognised in the statement of comprehensive income when these amortised cost financial assets are derecognised or impaired, as well as through the amortisation process.

### 2.13 Impairment of non-financial assets

As at each year end, non-financial assets other than inventories, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Whenever the carrying amount of an asset exceeds its recoverable amount, an impairment loss is recognised in the statement of comprehensive income unless it reverses a previous revaluation credited to reserve. The recoverable amount is the higher of an asset's net selling price and value in use. The net selling price is the amount realisable from the sale of the asset in an arm's length transaction. Value in use is the present value of estimated future cash flows expected to arise from the continuing use of the asset and from its disposal at the end of its useful life. Recoverable amounts are estimated for individual assets or, if impossible to be estimated individually, for the cash-generating unit in which the asset is deployed.

Reversal of an impairment loss previously recognised is recorded to the extent the impairment loss had previously been recognised. A reversal of an impairment loss on a revalued asset is credited directly to reserve, unless the impairment loss on the same revalued asset was previously expensed in the statement of comprehensive income, in which case it is recognised as income.

As at each year end, non-financial assets other than inventories, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Whenever the carrying amount of an asset exceeds its recoverable amount, an impairment loss is recognised in the statement of comprehensive income unless it reverses a previous revaluation credited to reserve. The recoverable amount is the higher of an asset's net selling price and value in use. The net selling price is the amount realisable from the sale of the asset in an arm's length transaction.

Value in use is the present value of estimated future cash flows expected to arise from the continuing use of the asset and from its disposal at the end of its useful life. Recoverable amounts are estimated for individual assets or, if impossible to be estimated individually, for the cash-generating unit in which the asset is deployed.

### 2.14 Cash and cash equivalents

Cash and cash equivalents included in the statement of cash flows comprise cash on hand and non restricted bank balances. Only fixed deposits more than 3 months are excluded from cash and cash equivalents.

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.15 Trade and other payables

These liabilities which are normally settled on 30 – 90 day terms are financial liabilities. Financial liabilities are recognised on the statement of financial position when, and only when, the entity becomes a party to the contractual provisions of the financial instrument. Financial liabilities are initially recognised at fair value of consideration received less directly attributable transaction costs and subsequently measured at amortised cost using the effective interest method.

Gains and losses are recognised in the statement of comprehensive income when the liabilities are derecognised as well as through the amortisation process. The liabilities are derecognised when the obligation under the liability is discharged or cancelled or expired.

### 2.16 Provisions

Provisions are recognised when the Group and the Institution have a present obligation as a result of a past event which is probable and will result in an outflow of economic benefits that can be reliably estimated.

### 2.17 Lease liabilities

Lease liabilities are initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate of similar asset. Generally, the Group uses its incremental borrowing rate as the discount rate.

Lease payments included in the measurement of lease liabilities comprise the following:

- Fixed payments, including in-substance fixed payments;
- Variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- Amounts expected to be payable under a residual value guarantee; and
- The exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

Lease liabilities are measured at amortised cost using the effective interest method. They are remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, or if the Group changes its assessment of whether it will exercise a purchase, extension or termination option. A lessee shall use an unchanged discount rate, unless the change in lease payments results from a change in floating interest rates.

When a lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

### 2.18 Revenue from contracts with customers

The Group and the Institution recognise revenue when enforceable performance obligations are satisfied and they are identifiable separately from other premises in the contract. Performance obligation involves transfer control of distinct goods and services to a customer where customer can benefit from the good or services on its own or together with readily available resources in the market.

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.18 Revenue from contracts with customers (continued)

The Group and the Institution allocate transaction price to each performance obligation on the basis of the stand-alone selling prices of each distinct good or services promised in the contract. The Group and the Institution use estimated price when stand-alone price is not observable. Discount, rebates and consideration that are generated through the synergy of the contract as a whole should be allocated to one or more, but not all performance obligations.

For performance obligations satisfied over time, the Group and the Institution recognise revenue over time by selecting an appropriate method for measuring the progress towards completing of that performance obligation.

#### Income from members' annual fees

Revenue from members' annual fees is recognised over the period of the membership. Members, customers or partners are invoiced once every year and these invoices are payable in advance before the start of the membership. 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, seminars and events are recognised at the point when the events had ended. A contract liability is recognised for payments received in excess of the value of performance obligations fulfilled.

#### Income from publication registry listings

Income from publication registry listings is 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.

### 2.19 Government grants

Grants from the government are recognised as a receivable at their fair value when there is reasonable assurance that the grant will be received and the Group and the Institution 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 expenses are shown separately as other income.

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

### 2.20 Employee benefits

Employee benefits, which include base pay, cash bonuses, contribution to defined contribution plans such as the Central Provident Fund and other staff-related allowances, are recognised in the statement of comprehensive income when incurred. For defined contribution plans, contributions are made to publicly or privately administered funds on a mandatory, contractual or voluntary basis. Once the contributions have been paid, there will be no further payment obligations.

Employee entitlement to annual and other leave is recognise when they accrue to employees. A provision is made for the estimated liability for annual leave as a result of services rendered by employees up to the year ended.

## 2. MATERIAL ACCOUNTING POLICY INFORMATION (CONTINUED)

### 2.21 Operating lease

The Group and the Institution apply the lease of low-value assets recognition exemption to leases of office equipment that are considered to be low value. Lease payments on short term leases and leases of low value assets are recognised as expense on a straight-line basis over the lease term.

### 2.22 Taxation

The charge of current tax is based on the results for the year as adjusted for items which are non-assessable or disallowed.

Deferred tax is provided in full, using the liability method, on all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements.

Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, carry forward of unused tax assets and losses can be utilised.

The carrying amount of deferred tax assets is reviewed at each year end and is reduced to the extent that it is no longer probable to be utilised against future taxable profits.

Deferred tax assets and liabilities are offset when they relate to income taxes levied by the same tax authority and the Institution intends to settle its tax assets and liabilities on a net basis.

The tax rates used to determine deferred tax are based on tax rates and tax laws that have been enacted at the year end.

### 2.23 Functional currency

Functional currency is the currency of the primary economic environment in which the entity operates. The financial statements and consolidated financial statements are prepared using Singapore dollar as the functional currency.

### 2.24 Foreign currency transaction

Foreign currency transactions are recorded, on initial recognition in the functional currency, by applying to the foreign currency amount to the spot exchange rate between the functional currency and the foreign currency at the date of the transaction.

All transactions in currencies other than the functional currency are treated as transactions in foreign currencies.

At each year end, foreign currency monetary assets and liabilities are converted into the functional currency at the spot rate on the year end. Exchange differences are taken to the statement of comprehensive income.

### 2.25 Offsetting financial instruments

Certain financial assets and liabilities offset each other and the net amount is reported in the statement of financial position when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle them on a net basis, or realise the asset and settle the liability simultaneously.

### 3. PROPERTY, PLANT AND EQUIPMENT

#### GROUP

	Leasehold land and building SGD	Building renovation SGD	Car park SGD	Computers and computerised equipment SGD	Office equipment SGD	Office furniture SGD	Total SGD
<u>Cost</u>							
As at 1 January 2022	8,376,455	1,426,487	41,800	314,321	130,083	674,297	10,963,443
Additions	-	-	-	5,250	6,360	-	11,610
As at 31 December 2022	8,376,455	1,426,487	41,800	319,571	136,443	674,297	10,975,053
Additions	-	-	-	31,140	-	14,500	45,640
As at 31 December 2023	8,376,455	1,426,487	41,800	350,711	136,443	688,797	11,020,693
<u>Accumulated depreciation</u>							
As at 1 January 2022	2,956,196	667,375	14,808	244,450	110,544	544,185	4,537,558
Depreciation for the year	242,891	29,149	840	45,827	5,836	32,226	356,769
As at 31 December 2022	3,199,087	696,524	15,648	290,277	116,380	576,411	4,894,327
Depreciation for the year	242,891	29,150	840	32,177	3,853	33,821	342,732
As at 31 December 2023	3,441,978	725,674	16,488	322,454	120,233	610,232	5,237,059
<u>Carrying amount</u>							
As at 31 December 2023	4,934,477	700,813	25,312	28,257	16,210	78,565	5,783,634
As at 31 December 2022	5,177,368	729,963	26,152	29,294	20,063	97,886	6,080,726

Leasehold land has a land size of 6,803 square meters located at 70 Bukit Tinggi Road, Singapore 289758. The land is under 100 years leasehold agreement which expires in the year 2081. The building has a build-up area of 3,439 square meters.

### 3. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

#### INSTITUTION

	Leasehold land and building SGD	Building renovation SGD	Car park SGD	Computers and computerised equipment SGD	Office equipment SGD	Office furniture SGD	Total SGD
<u>Cost</u>							
As at 1 January 2022	8,376,455	1,426,487	41,800	119,512	130,082	451,535	10,545,871
Additions	-	-	-	5,250	-	-	5,250
As at 31 December 2022	8,376,455	1,426,487	41,800	124,762	130,082	451,535	10,551,121
Additions	-	-	-	29,640	-	-	29,640
As at 31 December 2023	8,376,455	1,426,487	41,800	154,402	130,082	451,535	10,580,761
<u>Accumulated depreciation</u>							
As at 1 January 2022	2,956,196	667,375	14,808	105,871	110,544	321,421	4,176,215
Depreciation for the year	242,891	29,150	840	7,963	4,103	32,226	317,173
As at 31 December 2022	3,199,087	696,525	15,648	113,834	114,647	353,647	4,493,388
Depreciation for the year	242,891	29,150	840	12,677	3,853	32,210	321,621
As at 31 December 2023	3,441,978	725,675	16,488	126,511	118,500	385,857	4,815,009
<u>Carrying amount</u>							
As at 31 December 2023	4,934,477	700,812	25,312	27,891	11,582	65,678	5,765,752
As at 31 December 2022	5,177,368	729,962	26,152	10,928	15,435	97,888	6,057,733

#### 4. TRADE AND OTHER RECEIVABLES

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Trade receivables:				
- Third parties	1,010,399	1,298,632	289,744	342,699
- Subsidiaries	-	-	-	119,323
	<u>1,010,399</u>	<u>1,298,632</u>	<u>289,744</u>	<u>462,022</u>
Less: Allowance for expected credit losses	(269,920)	(230,613)	(76,389)	(75,517)
Total trade receivables	<u>740,479</u>	<u>1,068,019</u>	<u>213,355</u>	<u>386,505</u>
Other receivables:				
- Loan to an associate	445,485	445,485	170,000	170,000
- Non-trade receivables from subsidiaries	-	-	1,160,463	367,759
- Non-trade receivables from a joint venture	135,941	-	-	-
- Deposits and prepayments	64,576	65,793	9,617	4,390
- Grant receivables	178,549	-	95,933	-
- Non-trade receivables from SDO	511,088	459,311	511,088	459,311
- Other receivables	44,216	43,130	38,216	43,110
	<u>1,379,855</u>	<u>1,013,719</u>	<u>1,985,317</u>	<u>1,044,570</u>
Less: Allowance for expected credit losses	(470,435)	(470,435)	(194,950)	(194,950)
Total other receivables	<u>909,420</u>	<u>543,284</u>	<u>1,790,367</u>	<u>849,620</u>
	<u><u>1,649,899</u></u>	<u><u>1,611,303</u></u>	<u><u>2,003,722</u></u>	<u><u>1,236,125</u></u>

Loan to an associate and subsidiaries and trade receivables due from subsidiaries are unsecured, interest free and repayable on demand. There is no movement of allowance for expected credit losses for loan to an associate.

The movements of allowance for expected credit losses are as follows:

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
As at 1 January	230,613	152,252	75,517	68,461
Allowance for expected credit losses	<u>39,307</u>	<u>78,361</u>	<u>872</u>	<u>7,056</u>
As at 31 December	<u><u>269,920</u></u>	<u><u>230,613</u></u>	<u><u>76,389</u></u>	<u><u>75,517</u></u>

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
As at 1 January	470,435	470,365	194,950	194,950
Allowance for expected credit losses	-	70	-	-
As at 31 December	<u><u>470,435</u></u>	<u><u>470,435</u></u>	<u><u>194,950</u></u>	<u><u>194,950</u></u>

## 5. INVESTMENT IN SUBSIDIARIES

	<u>Institution</u>	
	2023 SGD	2022 SGD
Unquoted equity shares, at cost	<u>4</u>	<u>4</u>

The Group has the following subsidiaries:

Name	Place of business/ incorporation	Principal activities	Effective of equity held by the Institution		Cost of equity	
			2023 %	2022 %	2023 SGD	2022 SGD
<i><u>Subsidiary held by the Institution</u></i>						
Engineers Singapore Pte. Ltd.	Singapore	Providing training and professional development courses	100	100	4	4
					<u>4</u>	<u>4</u>
<i><u>Subsidiaries held by Engineers Singapore Pte. Ltd.</u></i>						
IES-INCA Pte. Ltd.	Singapore	Management consultancy services	100	100	200,003	200,003
IES Academy Pte. Ltd.	Singapore	Providing engineering education, seminars and courses	100	100	8	8
					<u>200,011</u>	<u>200,011</u>

## 6. INVESTMENT IN AN ASSOCIATE

	<u>Group</u>	
	2023 SGD	2022 SGD
Unquoted equity shares, at cost	20,000	20,000
Less: Allowance for impairment	<u>(20,000)</u>	<u>(20,000)</u>
	<u>-</u>	<u>-</u>

Name of the associate	Place of business/ incorporation	Principal activity	Effective of equity held by the		Cost of equity	
			2023 %	2022 %	2023 SGD	2022 SGD
iNPQS Pte. Ltd.	Singapore	Providing other information service activities to the construction industry	33.33	33.33	20,000	20,000
					<u>20,000</u>	<u>20,000</u>

## 7. INVESTMENT IN A JOINT VENTURE

The joint venture, known as IES/ACES Joint Professional Membership Registry, is formed by virtue of an arrangement known as "Agreement Between Engineers Singapore Pte. Ltd. and Acesing Pte. Ltd. For The Mutual Exchange And Promotion The Engineering Profession Through Joint Collaboration In Professional Registration And Continuing Education" dated 15 July 2022. The joint venture operating in Singapore, is to promote and upgrade the quality and standards of a skill sets of the engineering professions in the construction industry. The Group has a 50% equity interest in the joint venture. The Group account for the joint venture using the equity method for its interest in a joint venture. The joint venture had no contingent liabilities and capital commitments as at end of the reporting period.

## 8. LEASE

In relation to this lease under FRS 116, the Group depreciates these right-of-use asset and recognised interest on lease liability during the year information about lease for which the Group is a lease is summarised as follows:-

### a) Right-of-use asset

<u>GROUP</u>	Office premise SGD
<u>Cost</u>	
As at 1 January 2022	330,526
Addition	-
As at 31 December 2022	<u>330,526</u>
Addition	-
As at 31 December 2023	<u>330,526</u>
<u>Accumulated depreciation</u>	
As at 1 January 2022	9,181
Depreciation for the year	110,175
As at 31 December 2022	<u>119,356</u>
Depreciation for the year	110,176
As at 31 December 2023	<u>229,532</u>
<u>Carrying amount</u>	
As at 31 December 2023	<u>100,994</u>
As at 31 December 2022	<u>211,170</u>

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## 8. LEASE (CONTINUED)

### b) Lease liability

	<u>GROUP</u>	
	2023 SGD	2022 SGD
As at 1 January 2022	217,115	322,029
Interest expenses on lease liability	8,503	13,886
Payment of lease liability	<u>(118,800)</u>	<u>(118,800)</u>
As at 31 December 2023	<u><u>106,818</u></u>	<u><u>217,115</u></u>

The total cash outflow for lease in 2023 is SGD118,800 (2022: SGD118,800) which includes redemption of principal and interest payments.

Maturity of lease liability is analysed as follows:-

	<u>GROUP</u>	
	2023 SGD	2022 SGD
Within 1 year	106,818	110,556
Between 2 to 5 years	<u>-</u>	<u>106,559</u>
	<u><u>106,818</u></u>	<u><u>217,115</u></u>

## 9. TRADE AND OTHER PAYABLES

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Trade payables:				
- Third parties	176,800	293,363	116,393	178,335
- GST payables	<u>107,025</u>	<u>77,746</u>	<u>13,452</u>	<u>14,452</u>
Total trade payables	283,825	371,109	129,845	192,787
Other payables:				
- Non-trade payables to subsidiaries	-	-	294,844	716,430
- Non-trade payables to an associate	2,996	3,347	2,996	3,347
- Non-trade payables to a joint venture	683,382	378,088	663,590	16
- Deferred grant	14,426	14,426	14,426	14,426
- IES Bursary Fund	60,000	60,000	-	-
- Deposit received	84,000	84,000	84,000	84,000
- Sundry creditors	34,147	516,869	23,308	393,308
- Provision for bonus	251,808	290,652	251,808	290,652
- Accrued operating expenses	531,293	479,892	271,095	168,865
Total other payables	<u>1,662,052</u>	<u>1,827,274</u>	<u>1,606,067</u>	<u>1,671,044</u>
	<u><u>1,945,877</u></u>	<u><u>2,198,383</u></u>	<u><u>1,735,912</u></u>	<u><u>1,863,831</u></u>

## 10. CONTRACT LIABILITIES

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Membership/registry fees received in advance	286,343	266,288	203,383	245,985
Income received in advance	54,529	277,531	-	-
Deferred income	-	150,000	-	150,000
	<u>340,872</u>	<u>693,819</u>	<u>203,383</u>	<u>395,985</u>

## 11. DEFERRED TAX LIABILITIES

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
As at 1 January and 31 December	<u>70,546</u>	<u>70,546</u>	<u>56,200</u>	<u>56,200</u>

## 12. REVENUE

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
<i>Timing of transfer of services</i>				
At a point in time	6,276,278	3,705,355	838,414	207,489
Over time	999,652	933,998	799,118	824,445
	<u>7,275,930</u>	<u>4,639,353</u>	<u>1,637,532</u>	<u>1,031,934</u>
Conferences, seminars and events	5,899,381	3,531,907	696,375	200,003
Members' annual fees	949,760	933,998	799,118	824,445
Publication registry listings	234,858	165,962	-	-
Others	191,931	7,486	142,039	7,486
	<u>7,275,930</u>	<u>4,639,353</u>	<u>1,637,532</u>	<u>1,031,934</u>

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### 13. EMPLOYEE BENEFITS EXPENSES

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Salaries, allowances and bonuses	2,777,798	2,273,728	1,345,618	1,034,338
Employer's CPF and other contributions	395,683	318,513	202,886	135,619
	<u>3,173,481</u>	<u>2,592,241</u>	<u>1,548,504</u>	<u>1,169,957</u>

There is no remuneration received by the Council in year 2023 and 2022.

### 14. OTHER OPERATING EXPENSES

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Bank charges	29,958	28,147	1,947	1,738
Committee expenses	154,037	92,931	154,037	92,391
Depreciation of property, plant and equipment	342,732	356,769	321,621	317,173
Depreciation of right of use asset	110,176	110,175	-	-
Expected credit losses	39,307	78,361	872	7,056
Legal & professional fees	161,470	240,079	96,151	124,364
Loss on foreign exchange	14,102	-	-	-
Office expenses	20,154	16,245	9,348	2,238
Profit sharing with third parties	186,907	141,219	-	-
Postage, printing and stationery	6,186	3,667	5,928	3,549
Publication fee	147,481	112,272	147,481	112,272
Processing fee	25,364	29,179	25,364	29,179
Property tax	94,000	94,000	94,000	94,000
Repair and maintenance	220,402	113,160	220,402	113,160
Short-term lease of equipment	3,480	3,480	3,480	3,480
Telephone, internet & TV	8,770	9,554	8,770	9,554
Transportation	55,029	46,102	54,548	45,904
Water and electricity	22,754	20,200	22,754	20,200
Others	159,850	233,355	62,937	61,573
	<u>1,802,159</u>	<u>1,728,895</u>	<u>1,229,640</u>	<u>1,037,831</u>

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## 15a. TAXATION

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Tax expense attributable to surplus is made up of:				
- Current income tax	141,071	127,823	-	11,542
Under/ (over) provision in prior financial years:				
- Current income tax	20,622	(14,590)	-	(1,153)
	<u>161,693</u>	<u>113,233</u>	<u>-</u>	<u>10,389</u>

The income tax expense on the results of the financial year varies from the amount of income tax determined by applying the Singapore standard rate of income tax to surplus/ (deficit) before taxation due to the following factors:

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Surplus/ (deficit) before taxation	<u>479,025</u>	<u>162,438</u>	<u>(239,051)</u>	<u>(150,250)</u>
Tax calculated at 17%	81,434	27,614	(40,639)	(25,543)
Non deductible expenses	54,417	20,095	50,239	52,842
Tax exemption	(21,986)	(31,626)	(4,561)	(10,376)
Income not subject to tax	(1,019)	(8,847)	(5,039)	(8,847)
Deferred tax asset not recognised during the year	28,225	119,240	-	-
Under/ (over) provision of income tax in prior year	20,622	(14,590)	-	(1,153)
Others	-	1,347	-	3,466
	<u>161,693</u>	<u>113,233</u>	<u>-</u>	<u>10,389</u>

At the balance sheet date, the Group has unutilised tax losses of approximately SGD818,792 (2022: SGD652,731) available to offset against future taxable income, subject to agreement by the Singapore Comptroller of Income Tax and provisions of the Income Tax Act.

## 15b. PROVISION FOR TAXATION

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
As at 1 January	261,983	190,389	8,801	55,965
Tax expense	141,071	127,823	-	11,542
Under/ (over) provision in prior financial year	20,622	(14,590)	-	(1,153)
Income tax paid	(274,002)	(41,639)	-	(57,553)
As at 31 December	<u>149,674</u>	<u>261,983</u>	<u>8,801</u>	<u>8,801</u>

**16. CASH AT BANKS AND ON HAND**

Cash and cash equivalents stated in the consolidated statement of cash flows comprised the following:

	<u>GROUP</u>	
	2023 SGD	2022 SGD
Cash at banks and on hand	8,222,699	7,904,397
Fixed deposits	<u>2,039,131</u>	<u>3,141,851</u>
	10,261,830	11,046,248
Less:		
Fixed deposits with maturity of more than 3 months	<u>(2,039,131)</u>	<u>(3,141,851)</u>
	<u><u>8,222,699</u></u>	<u><u>7,904,397</u></u>

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% (2022: 0.05% to 2.95%) per annum with an original maturity from 3 - 12 months (2022: 3 - 12 months).

**17. ASSET CAPITALISATION RESERVE**

This reserve is represented by property, plant, and equipment purchased using the building fund. An amount equivalent to the acquired property, plant and equipment were transferred from the building fund to the Asset Capitalisation Reserve. Annually, the depreciation of the property of the Group and the Institution is transferred from Equity to the Asset Capitalisation Reserve. This reserve is restricted in purpose.

**18. CAPITAL RESERVE**

This represents net proceeds arising from the disposal of leasehold property at International Plaza in prior years. The said leasehold property was previously purchased using the building fund and is restricted in purpose.

**19. SINKING FUND**

The sinking fund is designated to meet the cost of major repairs and maintenance of the building.

**20. SCHOLARSHIP FUND**

Scholarship fund refers to a fund designated for scholarships awardable by the Institution.

## 21. COMMITMENTS

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

	<u>GROUP</u>	
	2023 SGD	2022 SGD
Within 1 year	336,000	336,000
Between 2 to 5 years	-	224,000
	<u>336,000</u>	<u>560,000</u>

## 22. SIGNIFICANT RELATED PARTY TRANSACTIONS

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Administrative service fee expense paid by subsidiaries to the Institution	-	-	525,148	398,917
Administrative service fee income from a joint venture	288,000	288,000	-	-
Recharge of payroll costs by the Institution to subsidiaries	-	-	1,583,005	1,422,064
	<u>-</u>	<u>-</u>	<u>1,583,005</u>	<u>1,422,064</u>

## 23. FINANCIAL RISK MANAGEMENT

The Group and the Institution are exposed to the following risks through its normal operations. There are no changes on the Group's and the Institution's objectives, policies or processes relating to the Council of the Group's and the Institution's financial risk during the year.

### a) Market risk

#### i) Foreign exchange risk

The Group and the Institution have no significant exposure to foreign currency risk as most of its transactions are in Singapore dollar.

#### ii) Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of financial instrument will fluctuate because of changes in market interest rates.

## 23. FINANCIAL RISK MANAGEMENT (CONTINUED)

### a) Market risk (continued)

#### ii) Interest rate risk (continued)

The Group and the Institution are exposed to interest rate risk through the impact of changes on its fixed deposits.

Changes in market interest rates of 1% (2022: 1%) on interest bearing financial assets and financial liabilities as at year end will have effect on the financial statements as follows:

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Surplus before taxation	20,391	31,419	20,391	26,273
Equity	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

The above analysis assumes all other variables are held constant.

### b) Credit risk

Credit risk is the risk that other parties to financial instruments will fail to discharge their obligations to the Institution. Credit risk is management through the application of reminders and on-going monitoring procedures.

At the year end, there is concentration of credit risk on trade receivables as follows:-

	2023 SGD	2022 SGD
Top 1 customer	26,019	118,937
Top 2 customer	25,538	37,330
Top 3 customer	<u>23,863</u>	<u>22,034</u>

The maximum exposure to credit risk is represented by the carrying amount of financial assets which are mainly trade and other receivables and bank balances.

Cash is placed with credit worthy financial institutions.

Bank deposits, are mainly transacted with banks of high credit ratings assigned by international credit rating agencies.

#### *Impairment of financial assets*

The Group and the Institution have applied the simplified approach by using the provision matrix to measure the lifetime expected credit losses on its trade receivables.

To measure the expected credit losses, these receivables have been grouped based on shared credit risk characteristics and days past due. In calculation the expected credit loss rates, the Institution considers historical loss rates for each category of customers and adjusts for forward-looking macroeconomic data.

Receivables are written off when there is no reasonable expectation of recovery, such as debtor failing to engage in a repayment plan with the Institution.

## 23. FINANCIAL RISK MANAGEMENT (CONTINUED)

### b) Credit risk (continued)

#### *Financial assets that are neither past due nor impaired*

Trade receivables that are neither past due nor impaired are substantially entities with good collection track record or that the recoverability is not in doubt. Bank deposits, are mainly transacted with banks of high credit ratings assigned by international credit rating agencies.

#### *Financial assets that are past due and/or impaired*

There is no other class of financial assets that is past due and/or impaired except for trade receivables.

The age analysis of trade and other receivables past due and/or impaired is as follows:-

#### GROUP

	Current SGD	Within 30 days SGD	Past due			Total SGD
			30 to 60 days SGD	61 to 90 days SGD	More than 90 days SGD	
31 December 2023						
Trade receivables	4,000	198,347	180,097	134,317	493,638	1,010,399
Expected loss allowances	-	(10,221)	(20,021)	(25,940)	(213,738)	(269,920)
31 December 2022						
Trade receivables	-	565,783	110,836	118,860	503,153	1,298,632
Expected loss allowances	-	(9,921)	(8,749)	(16,614)	(195,329)	(230,613)

#### INSTITUTION

	Current SGD	Within 30 days SGD	Past due			Total SGD
			30 to 60 days SGD	61 to 90 days SGD	More than 90 days SGD	
31 December 2023						
Trade receivables	-	23,502	7,885	32,139	226,218	289,744
Expected loss allowances	-	(138)	(3,172)	(10,778)	(62,301)	(76,389)
31 December 2022						
Trade receivables	-	239,331	34,008	16,043	172,640	462,022
Expected loss allowances	-	(3,750)	(3,750)	(6,597)	(61,420)	(75,517)

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## 23. FINANCIAL RISK MANAGEMENT (CONTINUED)

### c) Liquidity risk

The Group and the Institution manages its liquidity risk by monitoring and maintaining a level of cash and bank balances deemed adequate by the Council to finance the Institution's operations and mitigate the effects of fluctuations in cash flows.

The table below analyses the maturity profile of the financial liabilities of the Group based on contractual undiscounted cash flows.

	Less than 1 year SGD	Between 2 and 5 years SGD	Total SGD
<u>GROUP</u>			
As at 31 December 2023			
Lease liability	<u>108,900</u>	<u>-</u>	<u>108,900</u>
As at 31 December 2022			
Lease liability	<u>118,800</u>	<u>108,900</u>	<u>227,700</u>

### d) Fair value risk

The fair value of the Group and the Institution's financial assets and financial liabilities reported in the statement of financial position approximates their carrying value.

### e) Derivative financial instruments

The Group and the Institution do not utilise any derivative instruments.

The responsibility for managing the above risks is vested in the Council.

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## 24. FINANCIAL INSTRUMENTS

### Classification of financial instruments

Financial assets and financial liabilities are measured on an ongoing basis either at fair value or at amortised cost. The material accounting policy information in Note 2 describe how the classes of financial instruments are measured, and how income and expenses, including fair value gains and losses, are recognised. The following table analyses the financial assets and financial liabilities in the statement of financial position by the class of financial instrument to which they are assigned, and therefore by the measurement basis:

	Financial assets at fair value SGD	Financial assets at amortised cost SGD	Financial liabilities at amortised cost SGD	Total SGD
<b>GROUP</b>				
As at 31 December 2023				
<u>Assets</u>				
Trade and other receivables	-	1,649,899	-	1,649,899
Other investment	7,219	-	-	7,219
Cash at banks and on hand	-	10,261,830	-	10,261,830
Total financial assets	<u>7,219</u>	<u>11,911,729</u>	<u>-</u>	<u>11,918,948</u>
Total non-financial assets				5,884,628
Total assets				<u>17,803,576</u>
<u>Liabilities</u>				
Trade and other payables	-	-	(1,838,852)	(1,838,852)
Lease liability	-	-	(106,818)	(106,818)
Total financial liabilities	<u>-</u>	<u>-</u>	<u>(1,945,670)</u>	<u>(1,945,670)</u>
Total non-financial liabilities				(668,117)
Total liabilities				<u>(2,613,787)</u>

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## 24. FINANCIAL INSTRUMENTS (CONTINUED)

### Classification of financial instruments (continued)

	Financial assets at amortised cost SGD	Financial liabilities at amortised cost SGD	Total SGD
<b>GROUP</b>			
As at 31 December 2022			
<u>Assets</u>			
Trade and other receivables	1,611,303	-	1,611,303
Cash at banks and on hand	11,046,248	-	11,046,248
Total financial assets	<u>12,657,551</u>	<u>-</u>	<u>12,657,551</u>
Total non-financial assets			6,291,896
Total assets			<u><u>18,949,447</u></u>
<u>Liabilities</u>			
Trade and other payables	-	(2,120,637)	(2,120,637)
Lease liability	-	(217,115)	(217,115)
Total financial liabilities	<u>-</u>	<u>(2,337,752)</u>	<u>(2,337,752)</u>
Total non-financial liabilities			(1,104,094)
Total liabilities			<u><u>(3,441,846)</u></u>
<b>INSTITUTION</b>			
As at 31 December 2023			
<u>Assets</u>			
Trade and other receivables	2,003,722	-	2,003,722
Cash at banks and on hand	4,421,574	-	4,421,574
Total financial assets	<u>6,425,296</u>	<u>-</u>	<u>6,425,296</u>
Total non-financial assets			5,765,756
Total assets			<u><u>12,191,052</u></u>
<u>Liability</u>			
Trade and other payables	-	(1,722,460)	(1,722,460)
Total financial liabilities	<u>-</u>	<u>(1,722,460)</u>	<u>(1,722,460)</u>
Total non-financial liabilities			(281,836)
Total liabilities			<u><u>(2,004,296)</u></u>

*This section is intentionally left blank.*

## 24. FINANCIAL INSTRUMENTS (CONTINUED)

Classification of financial instruments (continued)

	Financial assets at amortised cost SGD	Financial liabilities at amortised cost SGD	Total SGD
<b>INSTITUTION</b>			
As at 31 December 2022			
<u>Assets</u>			
Trade and other receivables	1,236,125	-	1,236,125
Cash at banks and on hand	6,091,906	-	6,091,906
Total financial assets	<u>7,328,031</u>	<u>-</u>	<u>7,328,031</u>
Total non-financial assets			6,057,737
Total assets			<u>13,385,768</u>
<u>Liabilities</u>			
Trade and other payables	-	(1,849,379)	(1,849,379)
Total financial liabilities	<u>-</u>	<u>(1,849,379)</u>	<u>(1,849,379)</u>
Total non-financial liabilities			(475,438)
Total liabilities			<u>(2,324,817)</u>

## 25. FUND RISK MANAGEMENT

The Group's and the Institution's objectives when managing funds is to safeguard the Group's and the Institution's ability to continue as a going concern in order to accomplish the Group's and the Institution's objectives. The Council regularly reviews and monitors its fund position to ensure that the society activities and growth are prudently funded. The Group and the Institution seek to maintain a positive net current asset position and fund surplus positions.

	<u>GROUP</u>		<u>INSTITUTION</u>	
	2023 SGD	2022 SGD	2023 SGD	2022 SGD
Current assets	11,911,729	12,657,551	6,425,296	7,328,031
Current liabilities	<u>(2,543,241)</u>	<u>(3,264,741)</u>	<u>(1,948,096)</u>	<u>(2,268,617)</u>
Net current assets	<u>9,368,488</u>	<u>9,392,810</u>	<u>4,477,200</u>	<u>5,059,414</u>
Total assets	17,803,576	18,949,447	12,191,052	13,385,768
Total liabilities	<u>(2,613,787)</u>	<u>(3,441,846)</u>	<u>(2,004,296)</u>	<u>(2,324,817)</u>
Fund surplus	<u>15,189,789</u>	<u>15,507,601</u>	<u>10,186,756</u>	<u>11,060,951</u>

26. **CORRECTION OF ERRORS**

- (i) It was identified that the depreciation expenses for property, plant and equipment were incorrectly expensed off in the Asset Capitalisation Reserve directly instead of being recorded in the Statement of Comprehensive Income.
- (ii) Surplus of the Joint Venture was overstated by SGD57,000 in FY2022 due to over recognition of revenue in the Joint Venture in year 2022 instead of being recognised in year 2023.

	<u>GROUP</u>		<u>INSTITUTION</u>	
	As previously stated SGD	As restated SGD	As previously stated SGD	As restated SGD
<b>STATEMENT OF FINANCIAL POSITION</b>				
<u>Equity</u>				
Accumulated fund	<u>7,082,025</u>	<u>7,025,025</u>	<u>2,578,375</u>	<u>2,578,375</u>
<u>Current liabilities</u>				
Trade and other payables	<u>2,255,383</u>	<u>2,198,383</u>	<u>-</u>	<u>-</u>
<b>STATEMENT OF COMPREHENSIVE INCOME</b>				
Other operating expenses	(1,507,160)	(1,728,895)	(816,096)	(1,037,831)
Share of surplus from investment in a joint venture	88,593	31,593	-	-
Net surplus/ (deficit) for the year	<u>327,940</u>	<u>49,205</u>	<u>61,096</u>	<u>(160,639)</u>
<b>STATEMENT OF CHANGES IN EQUITY</b>				
Accumulated fund	<u>7,082,025</u>	<u>7,025,025</u>	<u>-</u>	<u>-</u>
<b>STATEMENT OF CASH FLOWS</b>				
Trade and other payables	390,204	447,204	-	-
Surplus before taxation	441,173	162,438	-	-
Asset capitalisation reserve	<u>(221,735)</u>	<u>-</u>	<u>-</u>	<u>-</u>

27. **SUBSEQUENT EVENT**

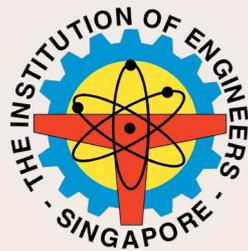
After the year end, there is a legal dispute that has risen and resolved before the date of this report with no significant impact on the financial statements.

**THE INSTITUTION OF ENGINEERS SINGAPORE  
(REGISTERED UNDER THE SOCIETIES ACT 1966)**

**STATEMENT OF EXPENSES FOR THE YEAR ENDED 31 DECEMBER 2023**

	2023 SGD	2022 SGD
Bank charges	1,947	1,738
Committee expenses	154,037	92,391
Depreciation of property, plant and equipment	321,621	317,173
Employer's CPF and other contributions	202,886	135,619
Expected credit losses	872	7,056
Expenditure for accreditation	112,374	96,740
Expenditure for conferences, seminars and events	219,795	90,647
General expenses	9,067	24,762
Green plan expenses	37,184	13,251
Insurance	15,710	18,448
Legal & professional fees	96,151	124,364
Office expenses	9,348	2,238
Postage, printing and stationery	5,928	3,549
Publication fee	147,481	112,272
Processing fee	25,364	29,179
Property tax	94,000	94,000
Refreshment	823	856
Repair and maintenance	220,402	113,160
Staff salaries, allowances and bonuses	1,345,618	1,034,338
Staff training & development	153	4,256
Short-term lease of equipment	3,480	3,480
Telephone, internet & TV	8,770	9,554
Transportation	54,548	45,904
Water and electricity	22,754	20,200
	<u>3,110,313</u>	<u>2,395,175</u>

This statement does not form an integral part of the financial statements.



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