

# CONNECT 2 ACES

A QUARTERLY PUBLICATION BY THE ASSOCIATION OF CONSULTING ENGINEERS SINGAPORE



06

ACES 55<sup>TH</sup> ANNIVERSARY  
GALA DINNER  
– 15 JULY 2026



12

ACES DURIAN PARTY  
– 20 AUGUST 2026



25

PROFESSIONAL DEVELOPMENT  
COMMITTEE UPDATES



*Far from reaching a quiet retirement, our Association is entering its prime—reaping the fruits of over five decades of expertise to lead our industry's next digital and sustainable frontiers.*

CONNECT2ACES

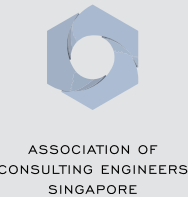
A QUARTERLY PUBLICATION  
BY THE ASSOCIATION OF  
CONSULTING ENGINEERS  
SINGAPORE

SEPTEMBER 2026 ISSUE

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President’s Message

“The road ahead is filled with both challenges—including the transition to CORENET X—and immense opportunities. I invite all member firms, veterans, and young professionals alike to actively participate in our committees and shape the future of built environment consulting.”

Dear Members, Partners, and Friends,

It is with great humility, excitement, and a deep sense of responsibility that I write my inaugural message as your President for the 2026–2027 session. I would like to extend my heartfelt appreciation to our Immediate Past President, Er. Chuck Kho, for his stellar leadership over the last four years, which has built a robust foundation for ACES.

This term is particularly auspicious as we commemorate 55 years of engineering consultancy in Singapore under the theme “Shaping Tomorrow, Celebrating 55 Years”. Far from reaching a quiet retirement, our Association is entering its prime—reaping the fruits of over five decades of expertise to lead our industry’s next digital and sustainable frontiers.

Celebrating our 55th Anniversary Gala Dinner

On 15 July 2026, we held our landmark 55th Anniversary Gala Dinner at the Shangri-La Hotel, graced by our Guest of Honour, Mr. Chee Hong Tat, Minister for National Development. It was an extraordinary evening where 721 industry leaders and friends from across 71 tables gathered to celebrate our collective accomplishments. Highlighting the evening’s festivities was the presentation of the ACES Design Excellence Awards 2026 and the honouring of our 12 Young Consulting Engineers of the Year 2026. These bright young minds represent the very best of our profession’s future. In line with our dedication to community care, we were also proud to present a donation cheque to the Rainbow Centre during the event to support low-resource families and persons with disabilities.

A Milestone in Site Supervision: Remote Site Supervision Guidebook

During his address at the Gala Dinner, Minister Chee Hong Tat

announced the launch of the Remote Site Supervision (RSS) Guidebook. Co-developed by BCA, ACES, IES, and SCAL, this guidebook represents a massive leap forward for site supervision. By setting out clear implementation guidelines for live remote and evidence-based supervision, the RSS framework directly prepares our Qualified Person (QP) teams for the upcoming firm-based site supervision regime.

Spearheading M&E Digital Automation

This quarter also marked the commercial launch of Phase 1 of our M&E Digital Design Automation Platform (DDAP). Built “by engineers for engineers,” this Revit-based tool automates detailed engineering design to maximise resource savings for consultancy firms. Currently, Phase 2 software development is well underway and is targeted for completion by October 2026.

Advocating for Value and Fair Procurement ACES remains relentless in defending the business sustainability of our member firms. We are actively refining our Value Articulation Framework (VAF) with the goal of evolving it into an automated digital tool that generates fee analytics and helps firms transparently project the professional effort required for their services. Simultaneously, we continue our robust feedback loops with statutory boards and procurement entities to challenge unfair contract clauses—such as unlimited liability and fitness-for-purpose terms—to ensure professional services are fairly and adequately rewarded.

A Vibrant Young Professional Wing & Social Camaraderie

Our Young Professionals Connection (YPC), under the new leadership of Mr. Looi Cheng Hui, has hit the ground running. At the Ministerial Dialogue on 22 July 2026, Looi delivered an outstanding pitch on the value proposition of consulting engineering.



The YPC has also launched a social media campaign to showcase our ICE winners and their projects to help make engineering a “career of choice”.

On the social front, we stepped away from our Revit models and formal gala wear on 7 August 2026 to gather for our highly popular ACES Durian Party at Sims Place. It was a wonderful evening of informal networking, laughter, and spectacular durians that reinforced the tight-knit camaraderie of our engineering community.

Moving Forward Together

The road ahead is filled with both challenges—including the transition to CORENET X—and immense opportunities. I invite all member firms, veterans, and young professionals alike to actively participate in our committees and shape the future of built environment consulting. Thank you for your trust, and let us shape tomorrow, together.

Er. Choong Choon Guan  
President, ACES

# ACES 55th AGM – 26 June 2026

BY ER. ADELINE KOH

The 55th ACES Annual General Meeting (AGM) was successfully held on 26 June 2026 at Mercury III, Level 5, Furama Riverfront, 405 Havelock Road, Singapore 169633.

The meeting was called to order at 7.30 pm after the required quorum was confirmed.



During the AGM, ACES President, Er. Chuck Kho, together with the respective Sub-Committee Chairmen, presented a comprehensive review of the Association's key initiatives, achievements, and activities undertaken during the Council Session 2025–2026. Members were updated on the progress of various committees, industry collaborations, professional development programmes, and strategic initiatives that continued to advance the consulting engineering profession.

Honorary Treasurer, Er. Lim Kuan Pow, presented the audited financial statements of the ACES Group for the Financial Year ended 31 March 2026, providing members with an overview of the Association's financial performance and position.



The AGM also included the election of Council Members for the incoming Council Session. With nine (9) Council vacancies to be filled and ten (10) valid nominations received by the stipulated deadline of at least three working days before the AGM, an electronic balloting process was conducted.

Following the election, the following nine (9) members were successfully elected to the ACES Council:

|   |                        |            |
|---|------------------------|------------|
| 1 | Er. Adeline Koh        | Electrical |
| 2 | Er. Lim Kuan Pow       | Civil      |
| 3 | Er. Yong Fen Leong     | Civil      |
| 4 | Er. Gwee Siong Mong    | Civil      |
| 5 | Er. Mak Swee Chiang    | Civil      |
| 6 | Er. Tan Bok Leng Jason | Civil      |
| 7 | Er. Ho See Fong        | Electrical |
| 8 | Er. Sanky Oei          | Mechanical |
| 9 | Er. Jee Yi Yng         | Civil      |



Following the AGM, the new Council convened its first meeting on 7 July 2026, during which the President and Executive Committee (EXCO) were elected. Below is the ACES Council line-up for the 2026–2027 session:

## ACES Council for Session 2026–2027

### Executive Committee

**Er. Choong Choon Guan**  
President



**Er. Yong Fen Leong**  
Vice-President  
Co-Chair C&S Practice



**Er. Chuck Kho**  
Immediate Past President  
Co-Chair BPP



**Er. Adeline Koh**  
Honorary Secretary  
Publications / Co-Chair BPP



**Er. Jason Tan**  
Honorary Treasurer



### Council Members

**Er. Lim Kuan Pow**  
Chair Social & Membership Development



**Er. Ng Han Siong**  
Chair M&E Practice



**Er. Gwee Siong Mong**  
Chair C&S Practice



**Er. Jee Yi Yng**  
Chair Business & Professional Practice (BPP)



**Er. Mak Swee Chiang**  
Chair Digital Delivery



**Er. Yeo Ser Chong**  
Chair Professional Dev.



**Er. Jonathan Hew**  
Co-Chair Digital Delivery



**Er. Teo Yann**  
Past President DDAP/YPC Advisor



**Er. Sanky Oei**  
Chair Social & Membership Development



**Er. Ho See Fong**  
Co-Chair M&E Practice



**Er. Tan Eng Hong**  
Co-Chair Professional Dev.



# ACES Social Events Reporting

BY ER. LIM KUAN POW AND ER. SANKY OEI

## ACES 55th Anniversary Gala Dinner – 15 July 2026

ACES celebrated its 55th Anniversary Gala Dinner on 15 July 2026 at the Island Ballroom, Shangri-La Singapore. This year's theme, **"Shaping Tomorrow, Celebrating 55 Years"** reflected ACES' continued commitment to advancing the engineering profession while honouring its legacy.

The Gala Dinner was attended by 721 guests comprising members, industry partners, associates, and invited guests, making it a memorable evening of celebration, networking, and meaningful experiences.

A highlight of the evening was the presentation of the ACES Design Excellence Awards, ACES Young Consulting Engineer of the Year Awards, and ACES Book Prizes, recognising outstanding achievements and contributions to the consulting engineering profession.

The celebrations commenced with a pre-dinner cocktail reception, providing guests with an excellent opportunity to reconnect, forge new relationships, and exchange ideas before the formal programme.

ACES was honoured to welcome Mr. Chee Hong Tat, Minister for National Development, as the Guest of Honour, whose presence added great significance to this milestone celebration.



### Welcome Address by ACES President

ACES President, Er. Choong Choon Guan, delivered an inspiring address commemorating ACES' 55 years of contributions to Singapore's consulting engineering profession while outlining the Association's vision for the future.

In his speech, Er. Choong paid tribute to the late Er. Tay Hin Guan for his invaluable contributions and dedicated service to ACES.

He reaffirmed the Association's commitment to leading the profession through innovation, sustainability, and value creation. Looking ahead, Er. Choong outlined four strategic priorities that will guide ACES' initiatives in the years to come:

1. Advancing Business Sustainability and Professional Value
2. Spearheading Digital and AI Transformation
3. Strengthening the Engineering Talent Pipeline
4. Championing Sustainability and Resilience

These priorities include strengthening business sustainability and professional value through the Value Articulation Framework (VAF), accelerating digital transformation with the launch of the M&E Digital Design Automation Platform (DDAP) and greater adoption of artificial intelligence, nurturing the next generation of engineers through the Young Professionals Connection (YPC), and promoting sustainability and resilience across the built environment. Together, these initiatives reinforce ACES' commitment to supporting its members while advancing the consulting engineering profession.

Er. Choong concluded his address by reaffirming ACES' commitment to corporate social responsibility through a donation to the Rainbow Centre. He also expressed his sincere appreciation to the Immediate Past President, Er. Chuck Kho, sponsors, members, industry partners, and stakeholders for their unwavering support, which made the ACES 55th Anniversary celebrations a meaningful and memorable milestone for the Association.

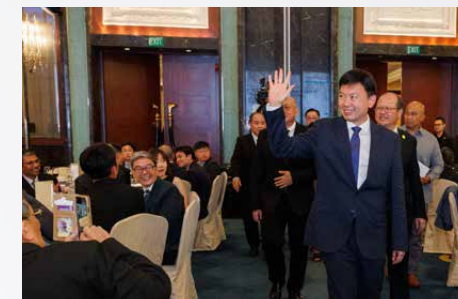
### Speech by Guest of Honour

#### Speech by Minister Chee Hong Tat at The Association of Consulting Engineers (ACES) 55th Anniversary Gala Dinner 2026 - Jul 15, 2026. [Link](#)

Guest of Honour, Minister for National Development Mr. Chee Hong Tat, congratulated ACES on its 55th Anniversary and commended the Association for its longstanding contributions to Singapore's built environment sector. He recognised the vital role consulting engineers play in delivering quality infrastructure, driving innovation, and ensuring the safety, resilience, and sustainability of Singapore's developments. The Minister also acknowledged ACES' continued partnership with the Government and industry stakeholders in advancing the transformation of the built environment sector.

In his address, Mr. Chee highlighted the importance of embracing digitalisation, artificial intelligence, and productivity-enhancing technologies to strengthen the industry's competitiveness. He encouraged firms to adopt new digital solutions, invest in workforce development, and nurture the next generation of engineering professionals. He also reaffirmed the Government's commitment to working closely with industry partners to improve productivity, strengthen capabilities, and create a more resilient and future-ready built environment sector.

The Minister concluded by expressing confidence that ACES will continue to play a pivotal role in shaping Singapore's engineering profession through innovation, collaboration, and professional excellence. He encouraged members to build on the strong foundation established over the past 55 years, work together to address emerging challenges, and seize new opportunities to contribute towards a sustainable, resilient, and liveable Singapore.



ACES Council Group Photo taking with Minister Chee Hong Tat

ACES Design Excellence Award 2026

Mr. Chee Hong Tat, Minister, Minister for National Development presented the ACES Design Excellence Awards for 2026 to the following winners at the ACES 55th Anniversary Gala Dinner on 15 July 2026.

This year we have total 16 winners. The winners were honoured to receive their awards from Minister Chee Hong Tat.



| Mechanical and Electrical Discipline – 6 winners |                                                                                                                                                      |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                                | Arup Singapore, Excellence Award for the project Mandai Rainforest Resort by Banyan Tree                                                             |
| 2                                                | WSP Consultancy, Excellence Award for the project East Coast Integrated Depot (ECID)                                                                 |
| 3                                                | Beca Carter Hollings & Ferner (S. E. Asia), Merit Award for the project 7-Storey Co-located Polyclinic, Active Ageing Hub and Kidney Dialysis Centre |
| 4                                                | CPG Consultants, Merit Award for the project NUS Executive Centre (THE RIDGE)                                                                        |
| 5                                                | Surbana Jurong Consultants, Merit Award for the project SGH Emergency Medicine Building – Plot H9A                                                   |
| 6                                                | Surbana Jurong Consultants, Merit Award for the project Woodlands Health Campus                                                                      |

Presentation of Donation Cheque to Rainbow Centre

As part of ACES’ Corporate Social Responsibility (CSR) initiative, the Council is pleased to donate part of the proceeds from this year’s event to Rainbow Centre, Singapore. [link](#)

Rainbow Centre envisions a world where persons with disabilities can lead Good Lives. Through education, support services, and community partnerships, the organisation empowers over 2,000 children and youth with disabilities to realise their potential and participate meaningfully in society.

Established in 1992 and recognised as an Institution of a Public Character (IPC), Rainbow Centre operates special education schools, early intervention centres, and family support programmes. At the heart of its mission is the Good Life Framework, which focuses on six key areas: being safe, independent, healthy, connected, engaged, and included.



| Civil and Structural Discipline – 10 winners |                                                                                                                                                |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                            | CPG Consultants, Excellence Award for the project Bidadari Integrated Park                                                                     |
| 2                                            | KTP Consultants, Excellence Award for the project One Pearl Bank                                                                               |
| 3                                            | Meinhardt (Singapore), Excellence Award for the project Keppel South Central                                                                   |
| 4                                            | Meinhardt (Singapore), Excellence Award for the project Boulevard 88 and The Singapore EDITION                                                 |
| 5                                            | Ronnie & Koh Consultants, Excellence Award for the project Proposed Erection of 3 Blocks at No. 1 Science Park Drive – Timber Canopy Structure |
| 6                                            | AECOM Singapore, Merit Award for the project Thomson - East Coast Line Stevens Interchange Station                                             |
| 7                                            | Arup Singapore, Merit Award for the project Singapore Rail Test Centre                                                                         |
| 8                                            | KTP Consultants, Merit Award for the project Labrador Tower                                                                                    |
| 9                                            | Meinhardt (Singapore), Merit Award for the project Woodleigh Residences and Woodleigh Mall                                                     |
| 10                                           | Mott MacDonald Singapore, Merit Award for the project Geneo 1 Science Park                                                                     |

This donation supports Rainbow Centre’s ongoing efforts in three vital areas:

- 1. Strengthening assistance for low-resource families;
- 2. Sustaining underfunded programmes that reduce social isolation and ensure continuity of care; and
- 3. Investing in innovative solutions to bridge service gaps and enhance engagement.

ACES is proud to contribute to this meaningful cause and support the important work of Rainbow Centre.



ACES Young Consulting Engineers of the Year Award 2026

Young consulting engineers are our future of the consulting industry. This award aims to recognise, celebrate and encourage young consulting engineers working in Singapore.

Recipients are judged in respect of the following attributes:

- Demonstrated communication and leadership skills;
- Positive/notable outcomes from their engineering work;
- Contribution to profession and community;
- Engineering competency;
- Creativity and innovation.

We were heartened that there are many young promising consulting engineers which augured well for the future of the Consulting Industry.



**Civil and Structural Discipline**  
From Left: Mr. Eng Zheng, Ms. Li Yuenan, Er. Yong Fen Leong (ACES Vice President), Er. Zheng Zexi, Er. Lingyu Miao, Mr. Yiu Han Kit (not in picture: Mr. Podianko Surya)



**Mechanical and Electrical Discipline**  
From Left: Mr. Harry Tan, Mr. Arivindd, Er. Yong Fen Leong (ACES Vice President), Mr. Josiah Yang, Er. Koh Yeow Meng (not in picture: Mr. Lee Chean Yong)

| ACES Young Consulting Engineers of the Year Award 2026 – 12 winners |                                                                 |                    |
|---------------------------------------------------------------------|-----------------------------------------------------------------|--------------------|
| 1                                                                   | Ms. Li Yuenan – AECOM Singapore Pte. Ltd.                       | Civil & Structural |
| 2                                                                   | Mr. Podianko Surya – Arup Singapore Pte. Ltd.                   | Civil & Structural |
| 3                                                                   | Er. Zheng Zexi – Arup Singapore Pte. Ltd.                       | Civil & Structural |
| 4                                                                   | Er. Lingyu Miao – Arup Singapore Pte. Ltd.                      | Civil & Structural |
| 5                                                                   | Mr. Eng Zheng –CPG Consultants Pte. Ltd.                        | Civil & Structural |
| 6                                                                   | Mr. Yiu Han Kit – Meinhardt (Singapore) Pte. Ltd.               | Civil & Structural |
| 7                                                                   | Ms. Vanessa Ho Pei Rui – Surbana Jurong Consultants Pte. Ltd.   | Electrical         |
| 8                                                                   | Mr. Lee Chean Yong – WSP Consultancy Pte. Ltd.                  | Electrical         |
| 9                                                                   | Mr. Yang Xianyu Josiah – Aurecon Singapore Pte. Ltd.            | Mechanical         |
| 10                                                                  | Er. Koh Yeow Meng – Engie Impact Pte. Ltd.                      | Mechanical         |
| 11                                                                  | Mr. Harry Tan Chun Khang – Surbana Jurong Consultants Pte. Ltd. | Mechanical         |
| 12                                                                  | Mr. Arivindd S/O Arumugam – WSP Consultancy Pte. Ltd.           | Mechanical         |

ACES Book Prize

ACES also presented Gold Medal and Book Prize to outstanding students of the selected courses in three main engineering disciplines (civil, mechanical and electrical engineering) in the various universities and polytechnics. The consideration is that this pool of graduates has the potential to join consulting engineering firms. The awardees who were present to receive their awards are as follows:



**ACES Book Prize Awardees**  
From Left: Mr. Mohamed Fauzi, Er. Yong Fen Leong (ACES Vice President), Mr. Josiah Yan, Mr. Myat Hein Htet, Mr. Goh Zi Qian (not in picture: Mr. Tavis Toh Wei Jie)

|   | Name                          | Institution                      | Course                                                                                           |
|---|-------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------|
| 1 | Mr Tavis Toh Wei Jie (absent) | Nanyang Technological University | Gold Medal AY 2025/2026<br>Degree: Bachelor of Engineering (Electrical & Electronic Engineering) |
| 2 | Mr. Goh Zi Qian               | Nanyang Polytechnic              | ACES Book Prize AY 2025/2026<br>Diploma in Common Engineering Programme                          |
| 3 | Mr. Myat Hein Htet            | Ngee Ann Polytechnic             | ACES Book Prize AY 2026/2027<br>Diploma in Electrical Engineering                                |
| 4 | Mr. Mohamed Fauzi Bin Dollah  | Ngee Ann Polytechnic             | ACES Book Prize AY 2025/2026<br>Diploma in Engineering (Civil & Structural)                      |

ACES Sponsors

ACES extends our heartfelt thanks to all members who joined us for the celebration, and to our generous sponsors for their invaluable support in making the 55th Anniversary Gala Dinner a memorable success.



**Platinum Sponsor**  
Daikin Holdings (Singapore) Pte. Ltd.  
Mr. Liu Shaw Jiun, Managing Director



**Gold Sponsor**  
Azbil Singapore Pte. Ltd.  
Mr. Shingo Kakizaki, Managing Director



**Gold Sponsor**  
Cantal Electric Pte. Ltd.  
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Mr. Masaru Kumekawa, General Manager



**Gold Sponsor**  
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Mr. Ke Yam Cheong, Senior General Manager



**Gold Sponsor**  
NM FIRE (S) Pte. Ltd.  
Mr. Ivan Tan, Director



**Gold Sponsor**  
Obayashi Singapore Pte. Ltd.  
Mr. Chabayashi Kazuhiko, Senior Project Director



**Gold Sponsor**  
Santarli Construction Pte. Ltd.  
Mr. E Chee Leong, Chief Executive Officer



**Gold Sponsor**  
Woh Hup (Private) Limited  
Er. Cong Zhengxia, Senior Director of Engineering (Building)

The night concluded on a high note with an exciting matchsticks game and lucky draw, where delighted winners walked away with attractive prizes. ACES would like to extend our heartfelt thanks to our prize sponsors - Mitsubishi Electric Asia Pte. Ltd., Changi-Light Pte. Ltd. and SOE Engineering Pte. Ltd. for generously sponsoring some of the lucky draw prizes. It was a truly memorable evening, filled with fun, laughter, and meaningful networking among industry peers.

## ACES Durian Party – 20 August 2026

With the return of the much-anticipated durian season, ACES hosted its sixth Durian Party on 20 August 2026 at Richstar Durian, bringing members together for an evening of good food, fellowship and lively conversations.

Members were invited to join the feast at a modest fee of \$15 per person, with each member firm entitled to register up to three participants. The event received an overwhelming response, with 100 members coming together to enjoy the evening and reconnect with fellow engineers and industry colleagues.



Members were treated to two premium durian varieties—the ever-popular Mao Shan Wang and the rich and creamy Black Gold—complemented by a refreshing selection of mangosteens, longans and young coconuts. Beyond the feast, the gathering provided a relaxed and enjoyable setting for members to catch up, and strengthen professional friendships in a more informal environment.

The enthusiastic participation and positive feedback reflected the popularity of the event, highlighting the value of creating opportunities for members to connect beyond the workplace. The Durian Party has once again proven to be a well-loved and much-anticipated fixture on the ACES social calendar, and ACES looks forward to continuing this annual tradition in the years ahead.



## ACES Appreciation Night 2026 cum Technical Seminar – 28 August 2026

The ACES Appreciation Night 2026 cum Technical Seminar was held on 28 August 2026 at Chui Huay Lim Teochew Cuisine. The event gathered ACES members, council representatives, and invited guests for an evening that combined technical knowledge sharing with community appreciation. The programme began with an opening address by ACES President, Er. Choong Choon Guan.

The evening also featured dinner and networking, providing a platform for industry exchange and strengthening professional ties. The event concluded with the presentation of appreciation certificates to ACES council members and representatives, acknowledging their service and contributions. Overall, the event successfully blended learning, engagement, and appreciation for the ACES community.

### Technical Seminar Segment

During the technical seminar, Mr. Lee Hsein Loong presented Mitsubishi Electric-Climaveneta's latest air- and water-cooled chiller models, highlighting advanced data centre cooling solutions such as Fan Walls, CRAC, liquid cooling CDUs, and Phase Change Cooling Systems for high-density environments. Additionally, Mr. Max Goh introduced Mitsubishi Electric Diamond Controls, detailing smart BMS automation technologies that leverage the Niagara 4 Supervisory Platform and JACE DCM-9000 controllers to optimise building performance, operational efficiency, and sustainability.



### Dinner & Networking

Participants engaged in networking over dinner, facilitating exchange of industry insights and strengthening professional relationships.



ACES President, Er. Choong Choon Guan received a Certificate of Appreciation from ACES Past President/President of the PE Board, Er. Lim Peng Hong.

### Appreciation Segment

Certificates of appreciation were presented to Council members, YPC Committee members, and representatives on various external committees in recognition of their contributions Association for the Session 2026-2027.

The event was attended by approximately 65 invited guests. ACES extends its gratitude to Mitsubishi Electric Asia for sponsoring this occasion.

The event was attended by approximately 65 invited guests. ACES extends its gratitude to Mitsubishi Electric Asia for sponsoring this occasion.



ACES President, Er. Choong Choon Guan presented a Certificate of Appreciation and a Past President's Medal to ACES Immediate Past President, Er. Chuck Khoo.

# ACES Design Excellence Award 2026 – Winning Projects

## Bidadari Integrated Park by CPG Consultants



Image credit: Finbarr Fallon, 2025

Nestled within Bidadari Estate, the 13ha Bidadari Park is Singapore’s first district-scale climate-resilient park, seamlessly integrating flood protection, biodiversity and community spaces into a single multifunctional landscape.

### Engineering Jewel – Alkaff Lake

At the heart of the park lies the 1.8ha Alkaff Lake – Singapore’s first-of-its-kind multifunctional stormwater infrastructure. Functioning as a scenic centrepiece during dry weather, the lake transforms into a high-capacity retention pond during heavy rainfall.

With a storage capacity of 30,000m³ (equivalent to 12 Olympic-size swimming pools), the lake attenuates peak flows and gradually releases water through controlled outlets, providing flood protection to 44ha of surrounding development while serving as a distinctive blue-green landmark for the community.

### Multifunctional Stormwater Treatment

Faced with space constraints, our team developed an innovative terraced wetland system that delivers high water-treatment performance within a compact footprint of 1,560m².

Combining horizontal wetland processes with vertical biofiltration, the system improves water quality, attenuates stormwater runoff and provides additional detention storage.

### Embracing Floodable Urban Spaces

Conventional flood management in Singapore is highly risk-averse, yet land constraints often limit the implementation of typical flood protection measures. In response, our team adopted an “adapt and live with water” approach to flood resilience.

Transiently floodable zones (e.g. lower-tier footpaths and terraced wetlands) are intentionally located within the lake’s active detention zone. During dry periods, these spaces support recreation, biodiversity and water treatment. During storm events, they are designed to be temporarily inundated, providing additional detention storage.

To maintain public safety, both physical design measures (e.g. clear signage, warning systems) and detailed hydraulic modelling were implemented to ensure sufficient evacuation time.



Image credit: Finbarr Fallon, 2025

### A Blueprint for Future Cities

Rather than treating water solely as a hazard, Bidadari Park demonstrates a replicable model for integrating climate adaptation infrastructure into the public realm, delivering flood resilience alongside environmental, social, and recreational benefits.

Moreover, by transforming essential blue-green infrastructure into a cherished community destination, Bidadari Park showcases how innovative engineering can shape resilient, liveable and climate-adaptive spaces within a high-density urban setting.

Coupled with other space-saving strategies (e.g. vortex-induced separators), the design maximises the multifunctional benefits derived from the available land.

### Project Credits

|                                                                 |                                            |
|-----------------------------------------------------------------|--------------------------------------------|
| Board of Clients                                                | Housing Development Board                  |
|                                                                 | National Water Agency PUB                  |
|                                                                 | National Parks Board                       |
|                                                                 | National Heritage Board                    |
| Lead Consultant                                                 | CPG Consultants                            |
| Architecture                                                    | CPG Consultants                            |
| Civil & Structural Engineering                                  | CPG Consultants                            |
| Environmental Engineering & ABC Waters Professional Engineering | CPG Consultants                            |
| Landscape Architecture                                          | Henning Larsen                             |
| Water Sensitive Urban Design                                    | Ramboll Waters, Henning Larsen             |
| Main Contractor                                                 | Expand-Landscape Engineering Joint Venture |
| Mechanical & Electrical Engineering                             | CPG Consultants, BECA                      |
| Project Management                                              | CPG Consultants                            |
| Quantity Surveyor                                               | AECOM                                      |
| Signage and Wayfinding                                          | CPG Consultants, Henning Larsen            |
| Site Supervisory Team                                           | Construction Professional Team             |

## One Pearl Bank by KTP Consultants

### Integrated Engineering Innovation for a Landmark High-Rise Development by One Pearl Bank

One Pearl Bank (OPB) is a landmark residential development comprising two uniquely curved 39-storey towers (178m high) connected by two skybridges above a challenging hilltop site with four basement levels. As the appointed Civil & Structural Engineer, KTP Consultants Pte. Ltd. delivered an integrated structural, geotechnical and construction engineering solution that transformed complex site constraints into an innovative, sustainable and cost-effective development.

A defining innovation is the pair of curved skybridges spanning over 42m and 19m, designed as semi-rigid structural outriggers that couple two towers with differing stiffness instead of functioning as conventional bridges. Advanced non-linear structural and construction-stage analyses optimised the coupling effect, significantly improving lateral stability, reducing building drift and enhancing occupant comfort.

Eliminating conventional movement joints and bridge bearings reduced long-term maintenance while creating a continuous rooftop urban habitat featuring the skyrise allotment gardens.

The steep hilltop site required four deep basement levels adjacent to Pearl’s Hill. An innovative 28m-high engineered vertical soil-nailed slope enabled efficient bottom-up construction while safely resisting unbalanced earth and groundwater pressures. Comprehensive instrumentation and staged monitoring ensured construction safety, reduced temporary works and improved project efficiency.

The project also adopted a raft foundation system that eliminated piling for the high-rise towers. Extensive geological investigations, pressuremeter testing and advanced soil-structure interaction analyses enabled a lean and reliable foundation design. Performance monitoring confirmed that the raft exceeded design predictions, delivering faster construction, lower costs and reduced environmental impact.

Construction efficiency was further enhanced through modular precast concrete components, an innovative porous steel tube truss system using standard steel sections, and early integration of construction methodology, including detailed skybridge lifting analysis.

By integrating structural, geotechnical and construction engineering from concept through completion, One Pearl Bank achieved lean design, reduced embodied carbon, improved construction certainty and enhanced lifecycle performance. The project demonstrates how engineering innovation can successfully integrate structural performance, sustainability and architectural vision to create an iconic, resilient and people-centric high-rise development.



## Keppel South Central by Meinhardt (Singapore)

Keppel South Central (KSC) is a 33-storey commercial development with 1 basement and a 5-storey podium, offering offices, retail and event spaces, as well as a diverse range of indoor and outdoor amenities, including a swimming pool, fitness deck, sky terraces and a social kitchen. Sitting on the previous Keppel Towers site, the 200m tall office tower offers premium workspaces and placemaking activities, adding Grade A office and retail spaces to the Central Business District.

The site is generally underlain by the Jurong Formation, with weathered sandstone as the founding material. The office tower is supported on a cost-effective raft foundation with settlement-reducing piles. As the column and core wall loads are concentrated, these settlement-reducing piles are strategically provided to control maximum and differential settlement across the raft. The provision of piles below the columns also helps to neutralise the effect of punching shear onto the raft slab and reduce the extent of shear links around the column heads.

The ERSS system adopts a contiguous bored piled wall with grout piles to mitigate water ingress during excavation. The semi-top down method is executed, whereby Level 1 is designed and detailed as ring slabs to prop the wall during basement construction. The CBP wall spans directly from L1 ring slab to the ground at the formation level, eliminating the need for intermediate level strutting.



Two structural schemes have been considered for the office superstructure – concrete and steel. The structural steel scheme is identified as the overall preferred option, bringing in the full benefits of a lighter and more buildable structure, faster erection and with lower construction risks. The layout demands for long-span, column-free spaces within the offices and also long cantilevers at the building corners. The framing of the office floors is performance-driven, consisting typically of an efficient grillage of primary and secondary steel beams, providing greater spatial flexibility for architectural planning and services coordination.



The steel beams are designed as composite with the decking slab, pin-jointed to the supports and adopting simple bolted connections on site. At the cantilevers, the steel beams penetrate through the columns to achieve continuity in stiffness and bending capacity to resist the high hogging moments. The core wall and columns are cast-in-situ using self-climbing and system forms. A creative erection strategy is adopted for the superstructure to improve the floor cycle time. Steel sections embedded in the concrete columns are provided to jump-start the erection of the structure of up to two storeys before the concrete columns are cast. The steel sections are prefabricated with collars at the beam-column junctions to serve as permanent formwork for casting of the columns, eliminating complex formwork typically required at these joints. Overall lateral stability of the building structure is provided by the corewall.

A high-performance Vierendeel Frame cantilevers from the tower columns and supports the podium floors from L3 to L6, housing the flexible workspaces, shared amenities, sky terrace and wellness facilities, including an indoor gymnasium, outdoor fitness deck and a swimming pool at L5. This in turn creates a grand tower entrance at the 1st-storey vehicular drop-off, offering unobstructed street views in all directions. The plaza canopy is a signature architectural feature, conceived as a free-flowing fabric skirting from the tower façade and providing a high-volume shaded plaza. It is supported on eight cruciform columns from the 1st Storey, branching out to hold up the glass roof, at a height of about 18m.

The highest level of the iconic tower features a premier double-storey rooftop restaurant and bar, offering 360-degree panoramic views of the city and seascape. The tower is capped with a crown, articulating to a maximum height of 30m above the roof level. The crown structure is fabricated in elegant steel, adopting innovative bolted connections on site to ease erection, while maintaining structural rigidity and continuity. Plate nut (headed bars) is introduced first time in this project, to simplify the anchorage of the tower column reinforcement at the interface with the steel roof crown.

## Boulevard 88 and The Singapore EDITION by Meinhardt (Singapore)



Boulevard 88 and The Singapore EDITION is an integrated residential and hotel development located along Orchard Boulevard, Singapore. The residential component, Boulevard 88, consists of two 28-storey towers, while the Singapore EDITION is an 8-storey hotel. The residents have access to a dedicated Skypark on the rooftop, connecting the two towers with amenities including swimming pools, garden lawn, dining facilities and function rooms. It offers panoramic views of Orchard Road and the city skyline.

The project involves a challenging 6-basement excavation and construction within the MRT 2nd Reserve, over undulating terrain across the site. The site was previously occupied by another hotel, which was subsequently demolished. Part of the basement structure is left below ground and has to be demolished and removed during excavation and construction of the new basements.

The site is predominantly underlain with the highly variable Bukit Timah Granite Formation, with localised Kallang Formation encountered along Cuscaden Road. The top 25 to 30m of the soil is generally poor, with low SPT values. The terrain is also undulating from being higher along Orchard Boulevard, sloping towards Cuscaden Road; the height difference across the site is about 11m. An innovative and measured hybrid ERSS system and excavation strategy, using the basement slabs as walers and transferring the lateral pressure differences as side

shears to the basement in-plane diaphragm walls, enables 'independent' construction of the residential towers and hotel efficiently and safely.

A highly-sustainable integrative piled-raft is designed to support the residential towers. The hybrid foundation system comprises re-purposed piles installed previously from 1980s to 2000s, new bored piles and the ground bearing resistance at the formation level. Calibrated on-site verification of the existing pile quality and capacity, coupled with extensive geotechnical modelling and analysis have been carried out to investigate and study the load distribution between the existing and new piles, and the ground. Field tests include ultimate load tests, working load tests, high strain dynamic load tests and pile integrity tests are conducted. Concrete core samples extracted from some of the existing piles are also made to carry out in-situ strength verification and petrography tests to establish the quality of the piles.

Due to the quantum of proposed piles to be re-purposed and site constraints, it is not practical to test all the reused piles. Only a sample size of piles is selected to conduct the tests. The tests are progressively conducted prior to and during the excavation and construction of the basement structure. The reused pile capacities are determined through careful review and assessment of the as-built records, coupled with sound engineering judgement and calibration of the ground profiling and test results. Sensitivity studies on varying pile and

ground stiffnesses are also undertaken to cater for the possible bounds of behaviour under full loading. The resulting design optimises material reuse, reducing cost and time.

Advanced Manufacturing and Assembly (AMA), embracing Integrated Digital Delivery (IDD) and DfMA technologies are holistically implemented, with high sustainable construction and harmony with nature in mind. The structure adopts highly buildable systems for the basements and podium in the form of flat plate and band beam. The superstructure is designed adopting predominantly the flat plate system, creating a 'beam-less structure' internally offering the buyers full layout flexibility. The residential towers are predominantly erected in semi-precast construction to enhance buildability and safety. The hotel room floors are further enhanced using post-tensioning to achieve long span flat plate structures.

Lateral loads acting on the residential towers are resisted by shear walls, core walls and framed action between the perimeter beams and columns. The two towers are coupled and joined at the penthouse and sky terrace levels to improve their structural and dynamic performance. Innovative steel is efficiently executed in the design and detailing of the skybridge, spanning over the courtyard between the towers and hotel, permitting independent building drifts, but without compromising serviceability requirements.



## Proposed Erection of 3 Blocks at No. 1 Science Park Drive – Timber Canopy Structure by Ronnie & Koh Consultants

### Synopsis

The proposed development comprises 3 blocks business park buildings at Science Park Drive. The 3 blocks are linked by a 3,000sqm event plaza with high headroom, covered by louvre and glass canopy. This canopy is approximately 27m high from the ground level. In order to achieve the project sustainability goal, Mass Engineered Timber (MET) was used for the structure of the event plaza canopy.



Figure 1. 3D Render of the Event Plaza

### Description of Features

The 27m high MET structure consists of 20 meter high column with arches spanning 15.6m from column to column. Each internal column is of a distinct shape that makes the column look seamlessly connected to the 8 arches.

To create the distinctive 8 pointed asterisk shaped column, 7 pieces of Glulam timber were fabricated and delivered to offsite assembly yard. Three of the pieces were connected to create the cruciform section of the column that forms the primary structural member and they were connected using steel angle and nails before delivery to site for installation. The remaining 4 pieces serve to form the shape of the column and provide fire protection to the primary members. They were fixed to the primary members using screws and they come with chamfer that allows space for M&E services.

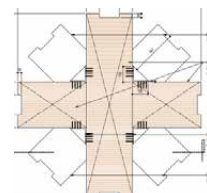


Figure 2. Column Section

The glulam beam forming an arch that spans between columns were fabricated in 2 pieces for ease of transportation to the site. The pieces were spliced on the ground at site using steel brackets and steel dowels.

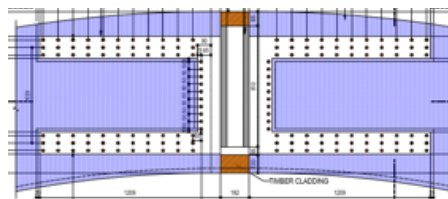


Figure 3. Glulam Arch Splice

For the connection from the cruciform column to the Glulam arches, an elaborate Steel Assembly was fabricated. Threaded Glued-in rods were preinstalled inside the column to connect the Steel Assembly to the cruciform Glulam column by simple nut tightening on the rods. Together, they provide moment connection at the top of the column. Glulam arch was connected to the Steel Assembly using a single steel pin. This was proposed for ease of installation. Timber cladding is used to protect this steel connection from fire.

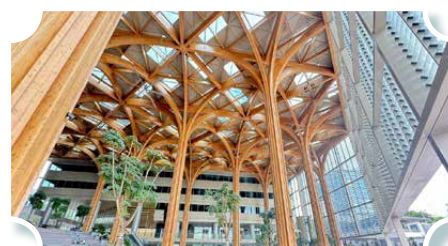


Figure 4.8. Nos Glulam Arches to Glulam Column Steel Assembly

### Quality of Engineering Solutions

Structural analysis and design were carried out to ensure the adequacy of structural assembly using steel fasteners. Joint slip modulus was taken into account in the input of column stiffness parameter and the stiffness of splice joint. 3D analysis including buckling analysis was performed to check the adequacy of the structure assembly to meet both strength and serviceability criteria. Moreover, 3D analysis and design check was also done for the sequence of installation to ensure the structural stability during construction.

The proposed engineering solutions presented take into account the aesthetic as well as the fabrication and installation process in order to ensure the design can be implemented well during construction to achieve good quality.



### Benefits

The proposed solution of fabricating separate components for the Glulam columns and Arches allow more efficient and cost-effective shipment compared to the shipping of full component. The Glulam columns were fabricated at a dedicated yard offsite. This was primarily done to improve the quality of the assembly, reduce congestion from stored material on site and reduce dust and noise pollution on site.

The proposed solution for connecting 8 numbers of Arches to column using a simple single steel pin connection allows for easier installation on site and minimises the manpower required. Timber cladding was used as fire protection for the steel connections. This is more cost-effective in terms of material, application and maintenance of fire protection coating such as intumescent paint. And together they provide the seamless and continuous look of the whole structure.

### Environmental and Social Considerations

Timber used for the canopy structure was PEFC-certified, which means they were sourced from sustainably managed forest and by adopting this building material, impact on the environment is minimised. In addition, timber has lower net carbon emission compared to other construction material. As one of the Design for Manufacturing and Assembly (DfMA) methodologies, MET structure construction reduces site and noise pollution, and improves site safety and productivity.

This event plaza was created under Privately-Owned Public Spaces (POPS) scheme, providing an accessible public space that benefits the community and facilitates social interaction.

### Impact on the Profession at Large

The design concept proposed for the structural assembly of the timber components and connections can be adopted and applied to other projects. The use of unconventional shaped column and arch components provide an example that complexity and aesthetics can be achieved and made simple by using timber material to the Singapore construction industry which is currently still at its early stage of timber structure adoption in Singapore.

## East Coast Integrated Depot (ECID) by WSP Consultancy



### Project Description

Erection of a 6-storey with 2-basement Rail Depot with Office, Stabling, Workshop, 2 levels of Carpark, Canteen & Auditorium and a 5-storey Bus Depot with Office, Workshop and Bus Parking Decks at Laguna Golf Green

### Role of Firm

Contract E1005 - M&E Consultancy Services

### East Coast Integrated Depot – World's first 4-in-1 Depot

The East Coast Integrated Depot (ECID) is the world's first 4-in-1 integrated transport infrastructure, combining three MRT depots—Downtown Line (DTL), Thomson-East Coast Line (TEL) and East-West Line (EWL)—together with a 5-storey bus depot within a single site. This innovative vertical stacking approach optimises land use in land-scarce Singapore, achieving approximately 0.44 km<sup>2</sup> of land savings (equivalent to 60 football fields), while supporting over 220 trains and 500 buses with comprehensive stabling, maintenance workshops and operational facilities.

Initiated more than 13 years ago, the project was among the first mega public sector developments to implement full multi-disciplinary Building Information Modelling (BIM), in alignment with BCA's 2010 BIM Roadmap. Despite early industry constraints, including the need to develop customised M&E object libraries and significant IT infrastructure investment to support real-time multi-model coordination, the BIM implementation enabled early clash detection, reduced rework, improved constructability and enhanced installation quality. ECID has since become a pioneering reference for subsequent large-scale projects BIM adoption.

Sustainability is a defining feature of ECID. Extensive solar photovoltaic (PV) panels have been deployed across all available roof areas, with over 11,700 panels installed on the rail depot alone. The system generates approximately 15MWh per day, equivalent to powering 450 to 500 households, with an annual yield exceeding 5GWh. Optimised through appropriate panel orientation and simulation modelling, the system achieves performance ratio of 78% and represents the largest PV installation within an MRT depot cluster. In addition, pilot trials of micro wind turbines were implemented to evaluate the technical feasibility and long-term potential of small-scale wind energy, supporting broader renewable energy diversification.

The project presented significant engineering challenges arising from the vertical stacking of three depots, operated independently across underground, at-grade and elevated levels within a footprint of approximately 2km by 1km. A critical operational requirement was to ensure that any incident in one depot does not affect the operation of the others, while maintaining system resilience, safety and long-term maintainability. Additional complexity included the provision of effective ventilation and smoke management for

large, deep-plan spaces with potentially high heat and fire loads.

These challenges were addressed through an integrated, performance-based M&E engineering design. Centralised shared M&E systems—including cooling, power supply and fire protection—enhance efficiency, reduce duplication and optimise space utilisation, while preserving operational independence through clearly defined system boundaries and governance frameworks. A high-efficiency centralised chilled water plant (COP ~0.598 kW/RT) serves all depots, supplemented by hybrid cooling strategies in air-conditioned spaces with smart controls.

Natural ventilation is maximised through the provision of large air wells, dedicated tall vent shafts, jack roof configurations, porous façades and high-volume interior spaces, enabling more than 80% of internal areas to be effectively naturally ventilated. Thermal comfort in Workshop areas is enhanced with high-volume low-speed (HVLS) fans while reducing reliance on full mechanical ventilation systems. Complementing this is a performance-based fire safety engineering design, where natural smoke venting replaces conventional smoke extraction systems. Extended smoke reservoir zones reduce the need for extensive smoke barriers, while gravity-operated dampers, quick-response sprinklers and flame detectors provide effective fire detection and control with reduced system complexity and maintenance requirements.

The successful completion of ECID establishes a new global benchmark for integrated depot design, demonstrating how innovative M&E engineering solutions, BIM adoption and performance-based design can deliver a resilient, efficient and scalable model for future urban infrastructure.

### Client and Other Consultants/Architects

|                                           |                                     |                          |
|-------------------------------------------|-------------------------------------|--------------------------|
| Client                                    | Land Transport Authority, Singapore | Land Transport Authority |
| Lead Consultant (under Contract E1001)    | WSP Consultancy Pte. Ltd.           | WSP                      |
| Architect (under Contract E1001)          | RDC Architects Pte. Ltd.            | RDC ARCHITECTS           |
| Civil & Structural (under Contract E1001) | WSP Consultancy Pte. Ltd.           | WSP                      |

## Business & Professional Practice Committee Updates

BY ER. JEE YI YNG AND ER. CHUCK KHO

### VAF Automation – Advancing Digitalisation of Fee and Resource Planning

The Value Articulation Framework (VAF) initiative continued to progress, with ACES reviewing and updating the framework following BCA's proposal to incorporate it as a tool for a proposed resourcing guide for government procurement. The VAF provides a structured listing of the tasks and deliverables typically undertaken by Civil & Structural and Mechanical & Electrical engineering consultants, with the aim of establishing the manpower and man-days required for a project and supporting the derivation of consultancy fees. The Council agreed for the YPC to take the lead in exploring the automation of the VAF, in consultation with the BPP Committee.

### Building the Engineering Talent Pipeline

ACES continued discussions with JTC on initiatives to strengthen the engineering talent pipeline, including the potential revival of scholarship programmes within Built Environment sector institutions. While such programmes could support the attraction of new talent, discussions also highlighted the importance of ensuring the long-term retention of scholars within the Built Environment industry.

### ACES-ACEHK Dialogue – Collaboration on Industry Issues

ACES also explored potential areas for dialogue and collaboration with the Association of Consulting Engineers Hong Kong (ACEHK), covering topics such as NEC contracts, AI, collaborative contracts, professional fees and talent retention. The proposed dialogue is pending further clarity on the programme with ACEHK.

### Engineering Price Index – Strengthening Industry Benchmarking

ACES continued its engagement with the Department of Statistics (DOS) on the development of an Architecture and Engineering Services Price Index, with data collection targeted to commence in January 2027. ACES expressed support for exploring a service price index for Consulting Engineers and highlighted the need for a practical methodology that takes into account the different engineering disciplines, as well as variations in project type, size, duration and complexity. ACES will continue to engage DOS to ensure that the index is relevant and useful to the consulting engineering industry.

### Promoting Engineering to the Next Generation

The YPC participated in the Ministerial Dialogue on 22 July 2026, contributing to discussions on how to encourage young people to consider engineering as a career. The session included a role-play scenario involving an IHL open house and an elevator pitch highlighting the value proposition of the engineering profession. Following the dialogue, the YPC will continue to drive outreach and social media efforts to promote engineering as an attractive and meaningful career choice.

## M&E Practice Committee Updates

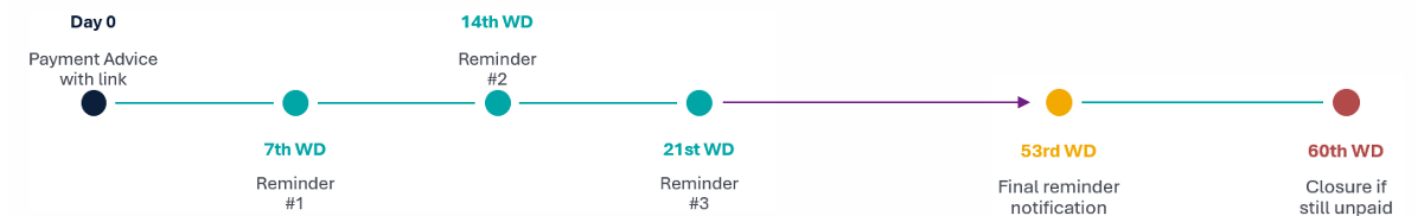
BY ER. NG HAN SIONG AND ER. HO SEE FONG

### PUB Dialogue – 26 Jun 2026

#### A. CORENET 2.0 Payment Workflow Enhancement

To provide clearer guidance and closure of payment outstanding cases:

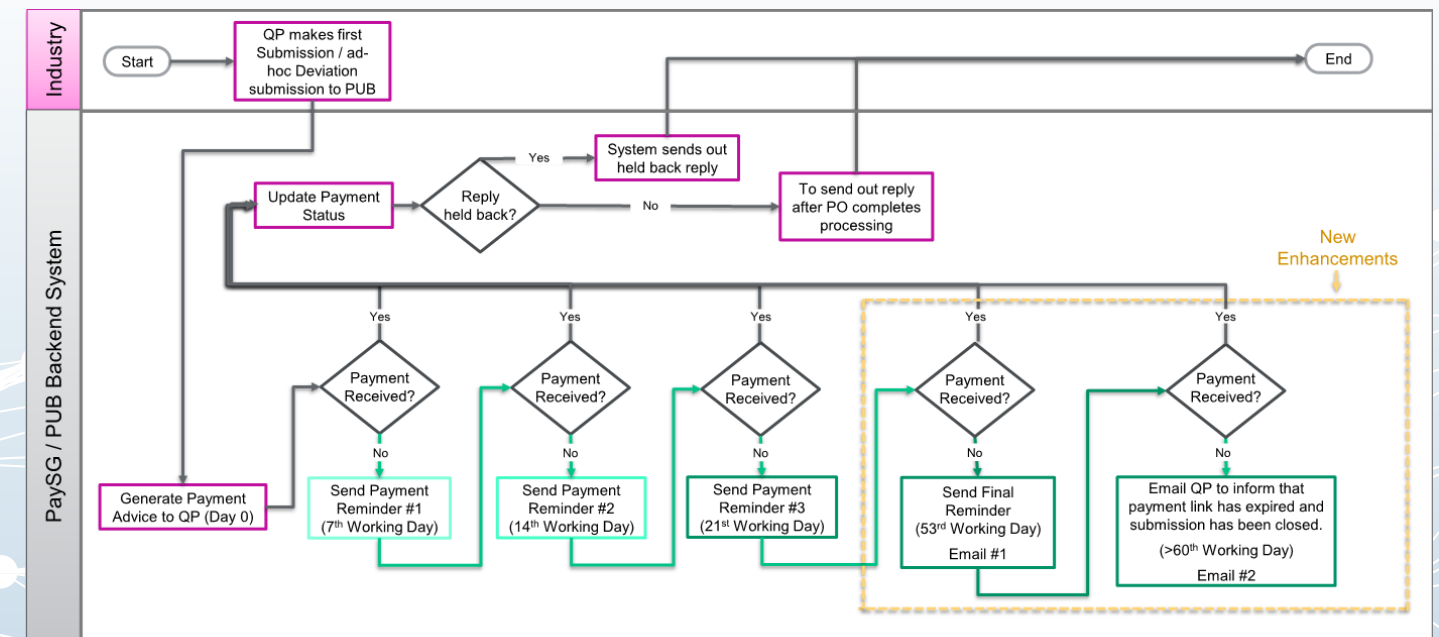
- A final reminder notification will be issued on the 53rd working day.
- If payment is still not received:
  - ◊ The payment link will be terminated on the 60th working day
  - ◊ The submission will be considered void on the 60th working day
- QPs will thereafter be notified via email that the payment link had terminated, and the submission has been voided.



Should the QP wish to proceed with the submission after it has been voided and the payment link terminated, a new submission will need to be made, and a new payment link will be issued accordingly.

When encounter submission issues, QPs could submit a Regulatory Submission Enquiry to PUB via <https://eservices.pub.gov.sg/helpandfeedback/report/regulatory-sub>

Below diagram illustrates the CORENET 2.0 payment enhanced workflow:



## B. Prevention of damage to under-construction water and sewer pipes

### 1. New Requirements under PU(PWPI)R and SD(PPSS)R

To prevent damage to sewer pipes that had been constructed at site by PUB (but not commissioned) has been a requirement since 2022 that proposed specified activities within the sewer corridor of these newly constructed sewers will require POWS approval from PUB before the activities can proceed.

Strating from 4 Jan 2027 (tentatively), PUB will be expanding this requirement to newly constructed water pipes as well. Any specified activities carried out within the protection corridors of newly constructed water pipes will require notification or approval prior to the commencement of works.

### 2. New Regulations under PU(PWPI)R and SD(PPSS)R

To prevent damage to sewer pipes that had been constructed at site by PUB (but not commissioned) had been a requirement since 2022 that proposed specified activities within the sewer corridor of these newly constructed sewers will require POWS approval from PUB before the activities can proceed.

Strating from 4 Jan 2027 (tentatively), PUB will be expanding this requirement to newly constructed water pipes as well. Any specified activities carried out within the protection corridors of newly constructed water pipes will require notification or approval prior to the commencement of works.

## C. Dormitory – Water Efficiency Requirements

### 1. Currently, various types of housing facilities for foreign workers are:

- Purpose-built dormitories (PBDs);
- Quick build dormitories (QBDs);
- Factory-converted dormitories (FCDs);
- Construction Temporary Quarters (CTQs);
- Temporary Occupation License Quarters (TOLQs);
- Workers Quarter at Farms (WQFs); and
- HDB Flats

### 2. New Water Efficiency Requirements for Dormitories

PUB plan to roll out following new water efficiency requirements for dormitories by 3Q 2026. The new requirement will apply to Purpose-Built Dormitories (PBD), Factory-Converted Dormitories (QBD) under following conditions:

- New dormitories,
- Intensification of dormitories,
- Renewal of existing dormitories without any WSI works (effective after 1 October 2027), or
- Undertaking WSI works

All the above will have to comply with the following new water efficiency requirements:

- All water taps and mixers, dual-flush low-capacity flushing cisterns (LCFC), water closet (WC) flush valves, urinal flush valves and waterless urinals installed shall carry a minimum 3-tick rating under PUB's Mandatory Water Efficiency Labelling Scheme (MWELS).
- Where domestic washing machines are provided, only models with a minimum 4-tick rating under PUB's MWELS shall be used.

## SCDF Standing Committee Meeting – 24 Jun 2026

A. SCDF informed of new requirement to submit related product under PLS scheme for protected CD shelter works. Currently, only submission is required to BCA (shelter).

B. SCDF informed of new Fire Safety Engineering courses conducted by SIT. The courses will lead to Master of Science (MSC) in Fire Engineering. Further information can be obtained from SIT.



# C&S Practice Committee Updates

BY ER. YONG FEN LEONG AND ER. GWEI SIONG MONG

## Guidebook for Remote Site Supervision Version 2

Minister Chee Hong Tat announced this initiative during his speech at the ACES Gala Dinner on 15 July 2026. The initiative remains voluntary at this stage with no mandatory implementation requirement. However, remote site supervision is one of the requirements for the accreditation for BCA-licensed Site Supervision Firms.

## BCA Firm-Based Supervision Regime / BCA-licensed Site Supervision Firms (SSFs)

Full implementation of this regime is targeted for year 2028 for projects exceeding \$75 million.

## BCA Accredited Checker Tier Framework / AC VAF Updates

BCA has launched the framework in September 2026 during the IBEW. The framework adopts a relatively low threshold to encourage broader industry participation, requires AC firms to handle QP projects, and includes plans to adjust S-point calculations for greater objectivity.

## TR26 Deep Excavation Guidebook

ACES is currently participating as workgroup member in an on-going effort by BCA to review and revise the Technical Reference 26:2010 – Technical Reference for Deep Excavation guidebook to incorporate latest developments in regulations, codes development, lessons learnt from current practices towards safe, productive and effective design.

## Qualified Person Quality Workstream

A second meeting was held on 17 August 2026 to review discussion points and share updates on the development of the Professional Compliance Framework.

## Joint Circulars with BCA published 1 Sep 2026 and 22 Sep 2026

In the strive for sustainability and productivity, ACES has continued to work with BCA on various initiatives and jointly published following circulars in September prior to the IBEW 2026.

- Joint Circular on Post-Installed Anchors (PIAs) [Key Considerations for Post-Installed Anchors Link](#)
- Joint Circular on Standardised Sampling Rate - Identity Testing for Compressive Strength of Concrete [Standardised Sampling Rate – Identity Testing for Compressive Strength of Concrete Link](#)
- Joint Circular on Central Reinforcing Steel Registry - Framework for Centralised Testing

## Quantity Surveyor as Certifier Role in Standard Contract Form

Following adverse views raised by SIA, BCA held an online meeting on 14 August 2026 to align perspectives on the role of Quantity Surveyors (QSS) in payment certification. ACES

## Digital Delivery Committee Updates

BY ER. MAK SWEE CHIANG

### The ACES Rhino-Grasshopper Essentials workshop – 19 August 2026

The ACES Rhino-Grasshopper Essentials workshop was successfully conducted on 19 August 2026 at the SMU School of Accountancy, with 30 participants. The workshop was designed as a beginner-friendly introduction to Grasshopper, with participants guided through hands-on exercises to develop an understanding of parametric and generative design workflows.

The session was facilitated by Adrian Foo and Ranzi Huang, structural engineers from Arup with extensive experience in applying Grasshopper to real-world projects and cross-disciplinary parametric workflows.



The workshop introduced participants to the fundamentals of Grasshopper and parametric design, demonstrating how visual programming can be used to create logic-driven models and establish relationships and rules that allow designs to be updated efficiently. Through a series of practical and hands-on exercises, participants were guided step-by-step in developing a “Helix Bridge” using Grasshopper, Python, and AI assistance. The hands-on format enabled participants to gain practical exposure to parametric modelling and explore how these digital tools can support more efficient design workflows.

The workshop provided an engaging platform for participants to enhance their digital design capabilities and explore the application of parametric design in engineering practice. By combining Grasshopper, Python, and AI, the session highlighted emerging approaches that can enhance design iteration, workflow efficiency, and cross-disciplinary collaboration. The interactive and practical nature of the workshop also encouraged participants to apply the knowledge gained to their own design and engineering workflows.

### Event to watch out in the 1st Quarter of 2027

ACES AI Seminar – ACES is organising a seminar where vendors and practitioners can share what they have been up to in this age of Artificial Intelligence. In particular, Agentic AI for workflow automation where companies can use smart, autonomous software agents that plan, make decisions, and execute multi-step tasks across different apps without needing constant human guidance. EnterpriseSG has various schemes where companies can benefit from government funds to adopt AI with the help of these vendors.

### CORENET X Update

Mandatory Submission via Corenet X gateway process will be mandatory for projects more than 5,000m2 GFA come 1st October 2026. So far there are 123 projects under the Gateway process already.



The 3 main benefits that the CorenetX process is pushing for remain as Saving time, coordinated inter-agency approval with minimum WD's and well-coordinated design that minimise abortive work for all. BCA continues to strive for maximum 2 WDs and 20 working days response time.

With the numerous engagements with the industry, BCA has advised the TACS recently that they are positive about the system and highlighted that the industry agrees that there are fewer issues downstream. Nevertheless, BCA are constantly fine-tuning the system to mitigate the issues that industry is facing. Some of them are as follows:

- ✓ Concurrent submission of demolition and Design Gateway applications
- ✓ Concurrent submission of Design and Piling Gateway applications
- ✓ Part structural submissions allowed by BCA for qualifying large projects to address upstream structural details challenges
- ✓ External works to LTA, NParks and PUB can be submitted separately after Construction Gateway to minimise main development clearance delays
- ✓ 2-stage approach is implemented for LTA's Traffic Impact Assessment to avoid delay in piling commencement
- ✓ Conditional approval by NEA may be allowed to address challenges of providing Pneumatic Waste Conveyance System specialist details upstream
- ✓ To minimise impact to project timelines:
  - Calibrated the process and requirements for Design Advisory Panel by URA
  - Allow for progressive submission of Energy Efficiency Opportunity Assessments reports to NEA
  - Cater for more flexible Fire Engineering Design Brief by SCDF
  - Clarified the positions for naming of facilities and spaces, to minimise need for amendments to plans and sales materials
  - Allowed applications for IRAS House and Unit Numbers and BCA Share Value applications, in parallel to CG resubmission

## Professional Development Committee Updates

BY ER. YEO SER CHONG

### Technical Visit to Intertek Testing Labs – 9 July 2026

The **Technical Visit to Intertek Testing Labs** was successfully conducted on **9 July 2026** at the Intertek premises, providing participants with valuable insights into product standards, laboratory testing solutions, and certification processes for electrical products. The programme included a presentation by Mr. Stanley Ong on regulatory frameworks, testing methodologies, and certification requirements, followed by a guided tour of the testing laboratories, where participants observed various testing facilities, including switchgear, EV chargers, cable safety and fire testing, home appliances, and chemical testing.

A total of **14 participants** attended the technical visit. The event concluded with a networking session, providing attendees with the opportunity to engage directly with the Intertek laboratory team, exchange industry knowledge, and discuss practical applications of testing and certification in engineering consultancy and product compliance.



### NTUC: Operations and Technology Roadmap (OTR) for the consulting engineering industry held on 17 & 24 July 2026 and 26 August 2026

The Operations and Technology Roadmap (OTR) for the Consulting Engineering Industry workshop was successfully conducted over three sessions on 17 and 24 July 2026 and 26 August 2026, bringing together industry professionals to explore strategies for enhancing productivity, advancing digital transformation, and strengthening long-term business sustainability within the consulting engineering sector.

A total of 17 members attended the session on 17 July, 12 members on 24 July, and 10 members on 26 August. The workshop provided participants with valuable insights into emerging technologies, operational best practices, and practical approaches to strengthening organisational capabilities in response to the evolving needs of the industry.

Throughout the programme, participants actively engaged in discussions and interactive sessions, contributing their experiences and perspectives. The workshop served as an effective platform for knowledge sharing, peer learning, and networking, enabling participants to exchange insights, explore opportunities for collaboration, and identify practical strategies to drive innovation, enhance productivity, and achieve operational excellence across the consulting engineering industry.



### ACES-NTUC MOU signing on 24th of July 2026 at NTUC centre

The Memorandum of Understanding (MOU), signed on 24 July 2026 between the Association of Consulting Engineers Singapore (ACES) and the National Trades Union Congress (NTUC), establishes a collaborative partnership to support the transformation and development of the consulting engineering sector. The collaboration focuses on strengthening the capabilities of ACES corporate members, consulting engineers, and Professionals, Managers and Executives (PMEs) through workforce upskilling and reskilling, technology adoption, professional development, mentorship, and the promotion of Company Training Committees (CTCs) and CTC Grants. The MOU is effective until 31 December 2027, with an option for extension upon mutual agreement.

Under the MOU, NTUC will leverage its resources, expertise, funding support, and networks to promote CTC Grants, improve workplace practices, and ensure fair employment standards, while ACES will encourage industry participation by promoting CTC Grants, providing industry guidance for CTC projects, and supporting NTUC membership among eligible ACES employees and Executive Committee members. The MOU also outlines provisions on joint branding and communications, confidentiality, personal data protection, dispute resolution, and governance, with only specified administrative and legal clauses being legally binding, while the collaboration itself reflects the Parties' mutual commitment to advancing workforce development and industry transformation.



# ACES signs MOU with AHRI on 4 September 2026

The Consulting Engineering (CE) profession is critically important to the built environment (BE) and heating, ventilation, air-conditioning, and refrigeration (HVACR) and water heating sectors in Singapore, across Southeast Asia, and globally.

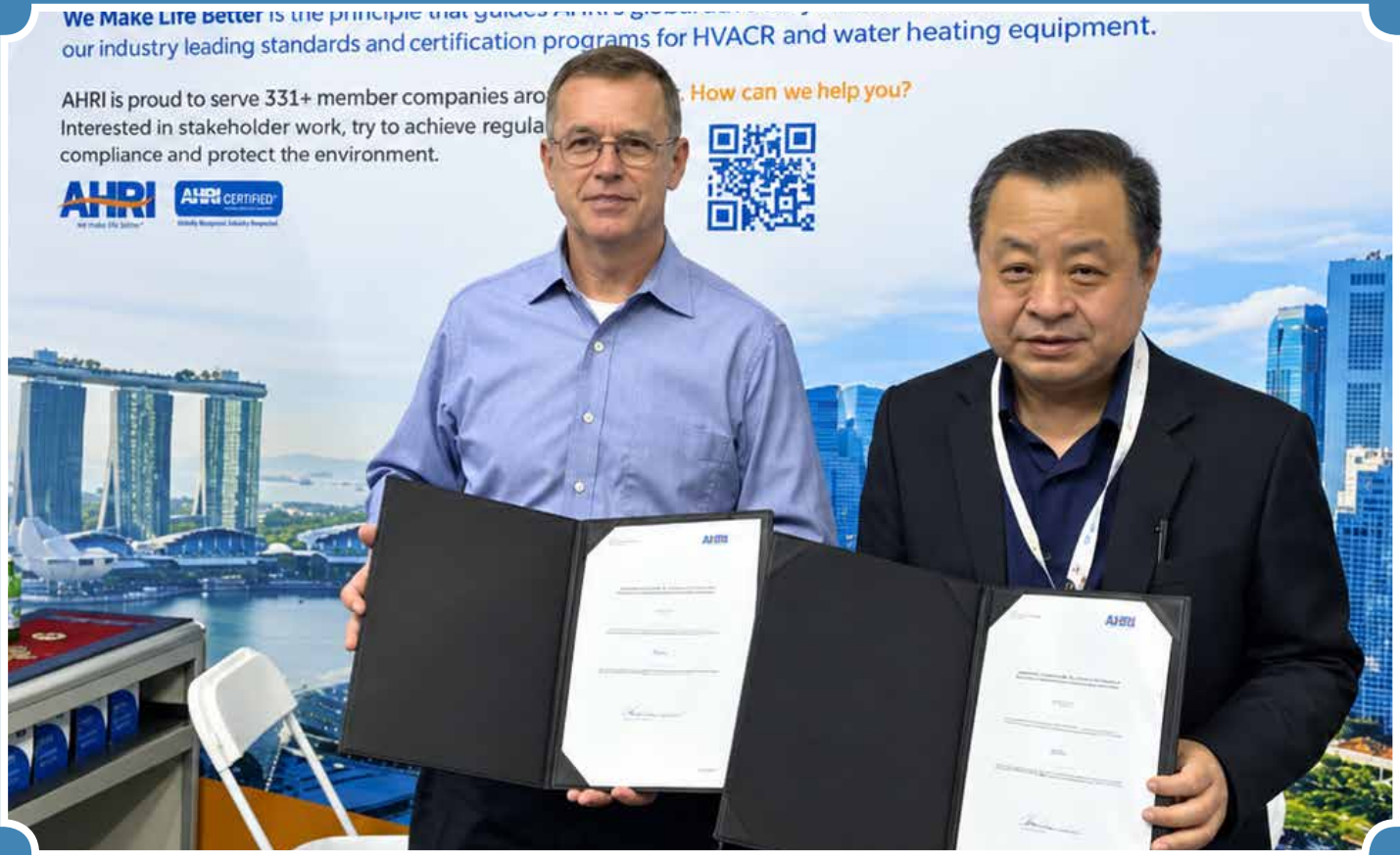
ACES is proud to have signed a Memorandum of Understanding (MOU) the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) [Link](#) during the 2026 BEX Asia trade show [Link](#) in Singapore.

ACES' Council Member and Mechanical & Electrical (M&E) Practice Chair Er. Ng Han Siong, and AHRI President & CEO Stephen Yurek signed the MOU. AHRI's Senior Vice President for Global Operations Henry Hwong, Vice President for Global Operations Bridge Xue, and ASEAN Chief Representative Dom LaVigne were also present.

The MOU encompasses:

- 1. Advancing the Consulting Engineering (CE) profession, especially relating to its critical importance to the HVACR and water heating industry in Singapore, Southeast Asia, and globally.
- 2. Supporting and contributing to the Singapore government's and Singapore HVACR and built environment (BE) industries' national, regional, and global roadmaps on areas that include: standards development, energy efficiency, sustainability, and low-carbon and green buildings, Low Global Warming Potential (Low-GWP) refrigerant transition, and HVACR industry Environmental Product Declarations (EPDs) and Product Category Rules (PCRs).

- 3. Cooperating and contributing to the development of HVACR equipment performance standards and certification in Singapore and globally.
- 4. Where feasible under the organisations' respective operating practices, to facilitate cross-participation in AHRI's and ACES' respective standards and certification technical committees (TCs) and working groups (WGs).
- 5. Jointly evaluating, discussing, and promoting awareness of internationally recognised standards and certification programs, including those administered by AHRI, where appropriate.
- 6. Educating policymakers, standards ecosystem stakeholders, consulting-specifying engineers, allied trade associations, engineering societies, media, and the public about the importance of the CE profession and the importance of performance-based standards and certification for HVACR and water heating equipment in the BE, HVACR, and related sectors.
- 7. Co-developing industry events (e.g., seminars, technical forums, workshops, career/internship fairs) and helping raise awareness and educate public and private sector stakeholders on the importance of the CE and HVACR professions, standards and certification, and other areas.



# ACES-YPC Committee Updates

BY MR. LOOI CHENG HUI, ACES YPC COMMITTEE CHAIRMAN

## Association of Consulting Engineers Young Professionals Connection (ACES YPC) Committee 2026/2027

Our vision for the YPC is to provide a platform through which Young Professionals make a positive difference and sustainable excellence in the Engineering Consultancy landscape. The objectives of the ACES YPC are:

- To create awareness of and encourage graduates to take up the consulting engineering profession.
- To promote advancement of young professionals in the consulting engineering industry.
- To address the relevant issues that affect young professionals in the consulting engineering industry.
- To act as a bridge between young professionals and established engineers.
- To provide a link between young professionals of different organizations.



Through past activities and engagements, the past ACES YPC Committees have achieved these objectives. We encourage more young professionals to join us as members and take up ACES YPC committee roles to contribute further to the landscape. The current members of ACES YPC Committee 2026/2027 are below:

| Role          | Name               | Company                                            |
|---------------|--------------------|----------------------------------------------------|
| Advisor       | Er. Kristian Tung  | CPG Consultants Pte. Ltd.                          |
| Chairman      | Mr. Looi Cheng Hui | Mott MacDonald Singapore Pte. Ltd.                 |
| Vice Chairman | Mr. Ngai Jia Le    | Arup Singapore Pte. Ltd.                           |
| Secretary     | Ms. Joey Ang       | Beca Carter Hollings & Ferner (S.E.Asia) Pte. Ltd. |
| Treasurer     | Ms. Mandy Wong     | WSP Consultancy Pte. Ltd.                          |
| Committee     | Mr. Niguel Benoza  | Arup Singapore Pte. Ltd.                           |
|               | Ms. Yin Liang Hui  | CPG Consultants Pte. Ltd.                          |
|               | Er. Beh Ee Ling    | Beca Carter Hollings & Ferner (S.E.Asia) Pte. Ltd. |
|               | Ms. Phyllis Teh    | PDC Consultants Pte. Ltd.                          |
|               | Mr. Cai Tianyu     | Arup Singapore Pte. Ltd.                           |
|               | Er. Dickson Fong   | Arup Singapore Pte. Ltd.                           |
|               | Er. Jess Tan       | Mott MacDonald Singapore Pte. Ltd.                 |
|               | Er. Yiu Han Kit    | Meinhardt (Singapore) Pte. Ltd.                    |
|               | Er. Lam Choon Kit  | Meinhardt (Singapore) Pte. Ltd.                    |
|               | Mr. Kelvin Yung    | Meinhardt (Singapore) Pte. Ltd.                    |
|               | Ms. Bong Gia Yen   | AECOM Singapore Pte. Ltd.                          |
|               | Mr. Vashan Pillai  | CPG Consultants Pte. Ltd.                          |

### ACES-YPC Committee 2026/2027

The list of committee members is available on the ACES website. [Link](#)

### Strengthening the Branding of Consulting Engineering

ACES participated in an industry dialogue hosted by Minister Indranee Rajah, which brought together Professional Services Trade Associations and industry stakeholders to discuss how Built Environment professions can be better positioned and promoted to future generations. As part of the programme, Mr Looi Cheng Hui, Chairman of the ACES YPC, delivered a sharing on behalf of ACES on the value and opportunities offered by the consulting engineering profession.



A key highlight of the session was a sharing by the International Advertising Association (IAA) Singapore, which provided valuable insights into branding, storytelling and public engagement. The discussion explored how the Built Environment sector can better communicate its purpose, impact and career opportunities to students, young professionals and the wider public.

One of the key takeaways for ACES YPC was the importance of clearly articulating the value proposition of consulting engineering. Consulting engineers combine technical expertise, creativity and problem-solving to develop solutions that balance safety, functionality, constructability, sustainability and cost. Working alongside clients, architects, project managers, quantity surveyors, contractors and government agencies, consulting engineers play a pivotal role in transforming concepts into practical engineering solutions that shape the built environment, from buildings and transport networks to utilities and community infrastructure.

The session supports ACES YPC's ongoing efforts to raise awareness of consulting engineering among students and Institutes of Higher Learning (IHLs), while inspiring the next generation to pursue meaningful and rewarding careers in the profession. Through continued engagement with industry partners and educational institutions, ACES YPC remains committed to promoting consulting engineering and showcasing its contribution to society.

#### News and Activities

The ACES YPC Committee is currently planning the ACES YPC Inter-Consultancy Badminton Tournament 2027. We are also excited to announce that an Inter-Consultancy Futsal Tournament is being planned for October 2026, so stay tuned for more details.

We welcome suggestions from young professionals for future events, industry engagements and social gatherings. To explore our past initiatives and activities, please visit the ACES YPC News & Activities page. [Link](#)

More activities and engagements are currently being planned and will be announced in due course.

#### Want to Get Involved?

Join the ACES Young Professionals Connection (YPC) and be part of a growing community of young engineers passionate about learning, collaboration, and professional growth. Through YPC, you can connect with peers and industry leaders, participate in technical and networking events, and contribute to initiatives that support the future of the consulting engineering profession.

To learn more or become a member, please reach out to a YPC committee member or contact the ACES Secretariat.

Together, let's build a vibrant and supportive community of Young Professionals in 2026!