

# Building the Future:

Shaping the Architectural and  
Engineering Consultancy Sector Together



The Report of the Taskforce for Architectural and Engineering Consultants

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# Foreword

From the mudflats of the past to the towering skyscrapers we see today, professionals of the Built Environment (BE) sector have been pivotal in reshaping Singapore’s urban landscape. With major projects on the horizon, such as Changi Airport Terminal 5, ongoing public housing developments and rail network projects, construction demand is projected to reach between S\$47 billion and S\$53 billion in 2025, and between S\$39 billion and S\$46 billion annually from 2026 to 2029<sup>1</sup> in nominal terms.

However, the architectural and engineering consultancies face several challenges. There is persistent talent shortage, coupled with unsustainable price competition where firms undercut fees to secure projects. There is a pressing need to develop solutions to address these issues, which could otherwise undermine the sector’s ability to deliver quality projects and attract talents in the long term. Hence, we established the Taskforce for Architectural and Engineering Consultants (“Taskforce”) in September 2024. The Taskforce brought together representatives across the sector and engaged multiple stakeholders, ensuring that various perspectives have been taken into consideration. We thank everyone who has contributed valuable insights to the Taskforce.

However, the work is far from over. To effectively address the issues at hand, we require the commitment and cooperation of all stakeholders to implement these recommendations. It is only through our collective efforts that we can foster a vibrant and sustainable BE sector for generations to come.

<sup>1</sup> Source: Projected construction demand provided by the Building and Construction Authority (BCA)



Taskforce Co-Chairs (from left to right): Ms. Indranee Rajah, Second Minister for National Development, and Mr. Chaly Mah, Chairman of Surbana Jurong Group.

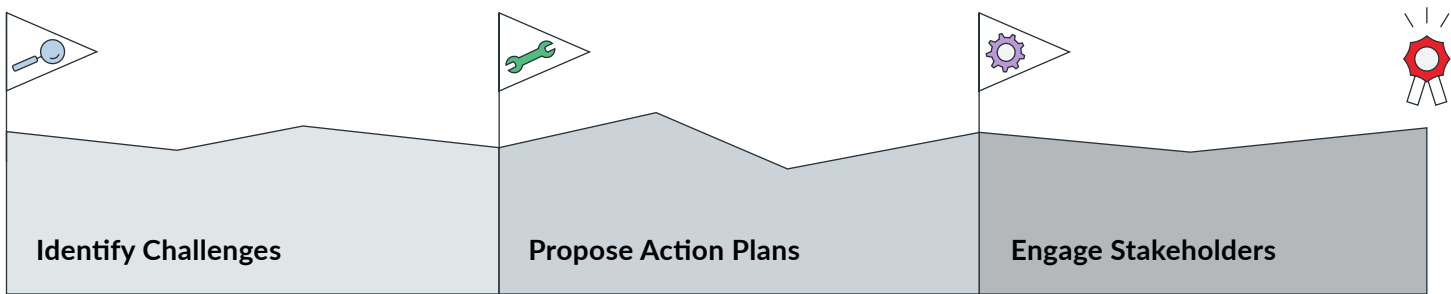




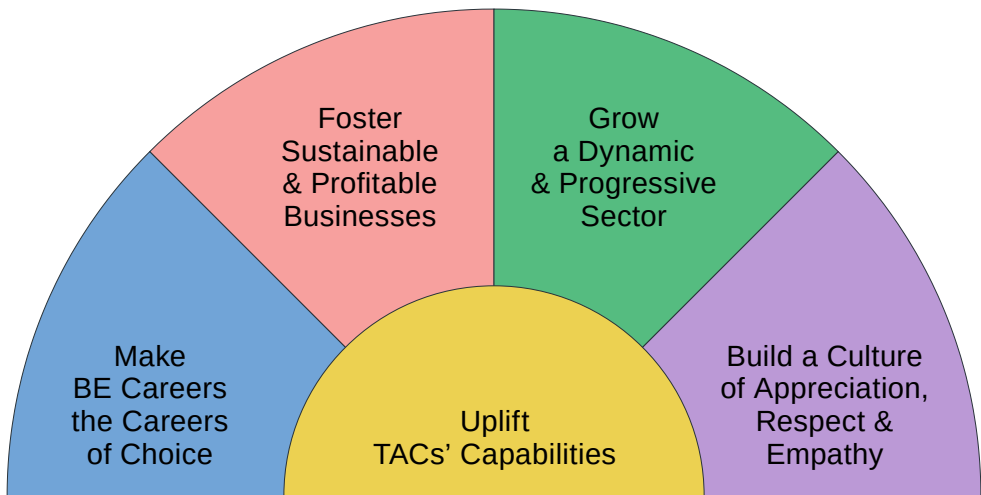
# About the Taskforce for Architectural and Engineering Consultants

The Taskforce was established in September 2024 to further strengthen the talent pipeline and business sustainability of the BE professions. Co-chaired by Ms. Indranee Rajah, Second Minister for National Development, and Mr. Chaly Mah, Chairman of Surbana Jurong Group, the Taskforce comprises representatives from the key Trade Association and Chambers (TACs), consultancy firms, major service buyers (government agencies/developers), Professional Registration Boards, Institutes of Higher Learning (IHLs), public agencies and young professionals.

## Objectives



## Key focus areas



## Stakeholder Engagement

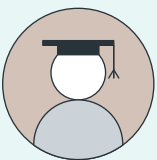

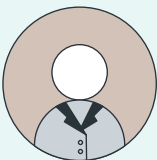



## Scale

40 Engagements and focus group discussions involving more than 400 participants



## Profile of participants

-  Students enrolled in BE programmes from secondary schools to universities
-  Young professionals working in BE consultancy firms and service buyers
-  Leaders from consultancy firms of various sizes and service buyers
-  Representatives from TACs and IHLs

Members

Ms. Indranee Rajah (Co-Chair)	Second Minister for National Development
Mr. Chaly Mah (Co-Chair)	Chairman Surbana Jurong Group
Er. Chuck Kho	President Association of Consulting Engineers Singapore (ACES)
Er. Kristian Tung Jing Yuan	Chairman Association of Consulting Engineers Singapore, Young Professionals Connection (ACES YPC)
Er. Eugene Fu	Business & Professional Practice Lead Association of Consulting Engineers Singapore, Young Professionals Connection (ACES YPC)
Mr. Lee Ang Seng	Executive Chairman, Singapore Beca Carter Hollings & Ferner (S.E. Asia)
Ar. Chan Kok Way	President Board of Architects (BOA)
Mr. Kelvin Wong	Chief Executive Officer Building and Construction Authority (BCA)
Ar. Angelene Chan	Executive Chairman DP Architects
Mr. Cheng Hsing Yao	Chief Executive Officer GuocoLand Group
Mr. Yee Boon Cheow	Deputy Chief Executive (Infrastructure & Development) Land Transport Authority (LTA)
Mr. Tay Ter Long	Chief of Government Procurement and Director (GPFO) Ministry of Finance (MOF)
Prof. Teo Kie Leong	Dean, College of Design and Engineering National University of Singapore (NUS)
Er. Lim Peng Hong	President Professional Engineers Board (PEB)
Mr. Kwee Ker Wei	1st Vice President Real Estate Developers' Association of Singapore (REDAS)
Ar. Melvin Tan	Immediate Past President Singapore Institute of Architects (SIA)
Ar. Pan Yi Cheng	Member Singapore Institute of Architects (SIA)
Mr. Bernard Nee	Deputy President (Industry & Community) Singapore Institute of Technology (SIT)
Sr. Wong Kin Hoong	Immediate Past President (Quantity Surveying) Singapore Institute of Surveyors and Valuers (SISV)
Mr. Bernard Ho	President Society of Project Managers Singapore (SPM)
Er. Chan Ewe Jin	President The Institution of Engineers Singapore (IES)
Ar. Fun Siew Leng	Chief Urban Designer Urban Redevelopment Authority (URA)

Subject Matter Experts

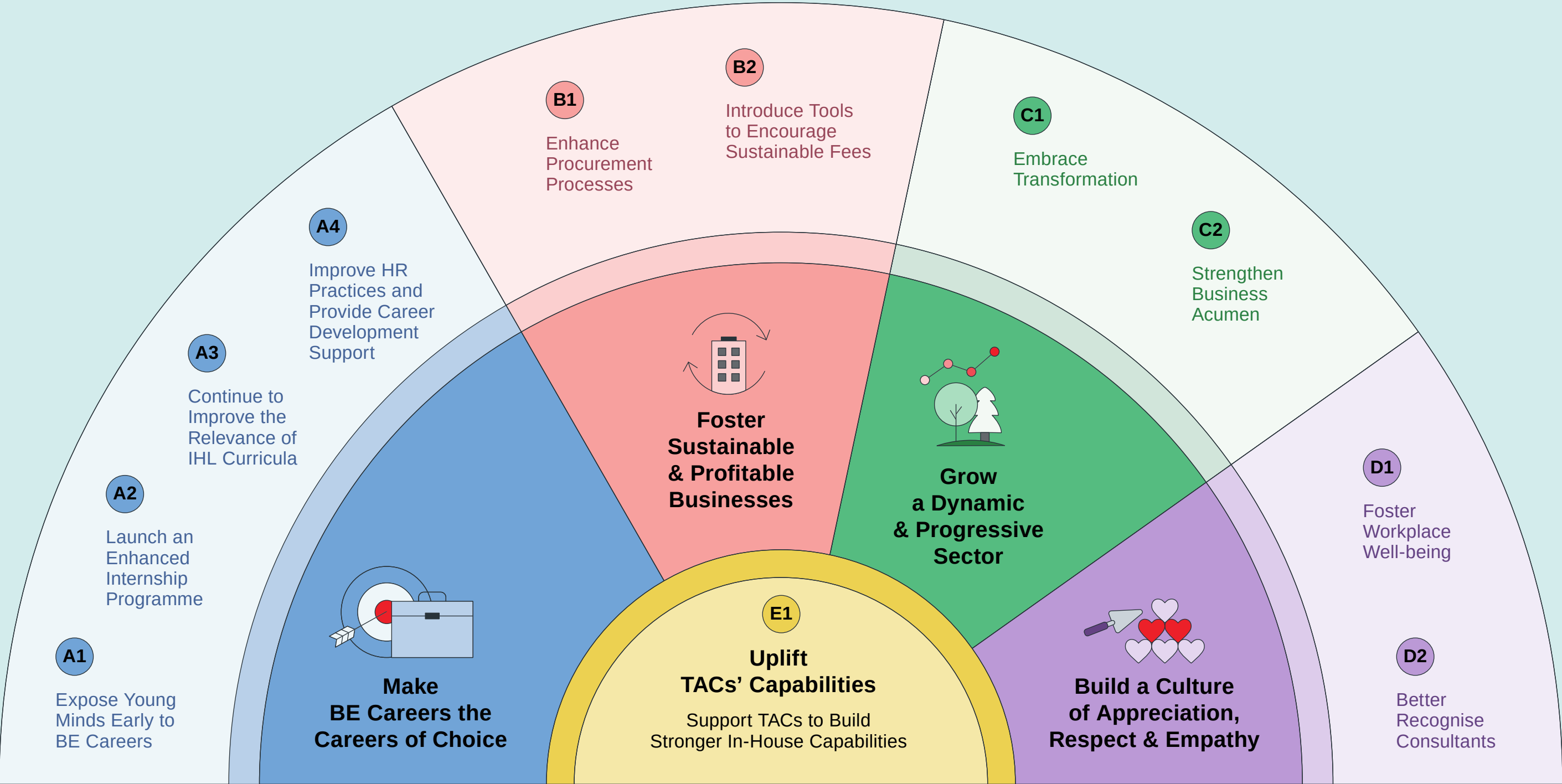
Mr. Christopher Chuah	Managing Director Christopher Chuah Law Chambers LLC
Mr. Jeff Cheong	Chief Executive Officer DDB Worldwide
Mr. Chow Kok Fong	Managing Director Equitas Chambers and Equitas Consulting
Ms. Justina Tan	Master Professional Institute for Human Resource Professionals (IHRP)
Mrs. Sarah Tham	Senior Professional Institute for Human Resource Professionals (IHRP)
Mr. Eugene Chong	Singapore Career Products Leader Mercer
Ms. Leow Siew Jin	Director (Higher Education Planning Office) Ministry of Education (MOE)
Mr. Ng Kim Beng	Managing Partner Rajah & Tann Singapore

The Taskforce





# Key Focus Areas & Recommendations







# Sector Overview

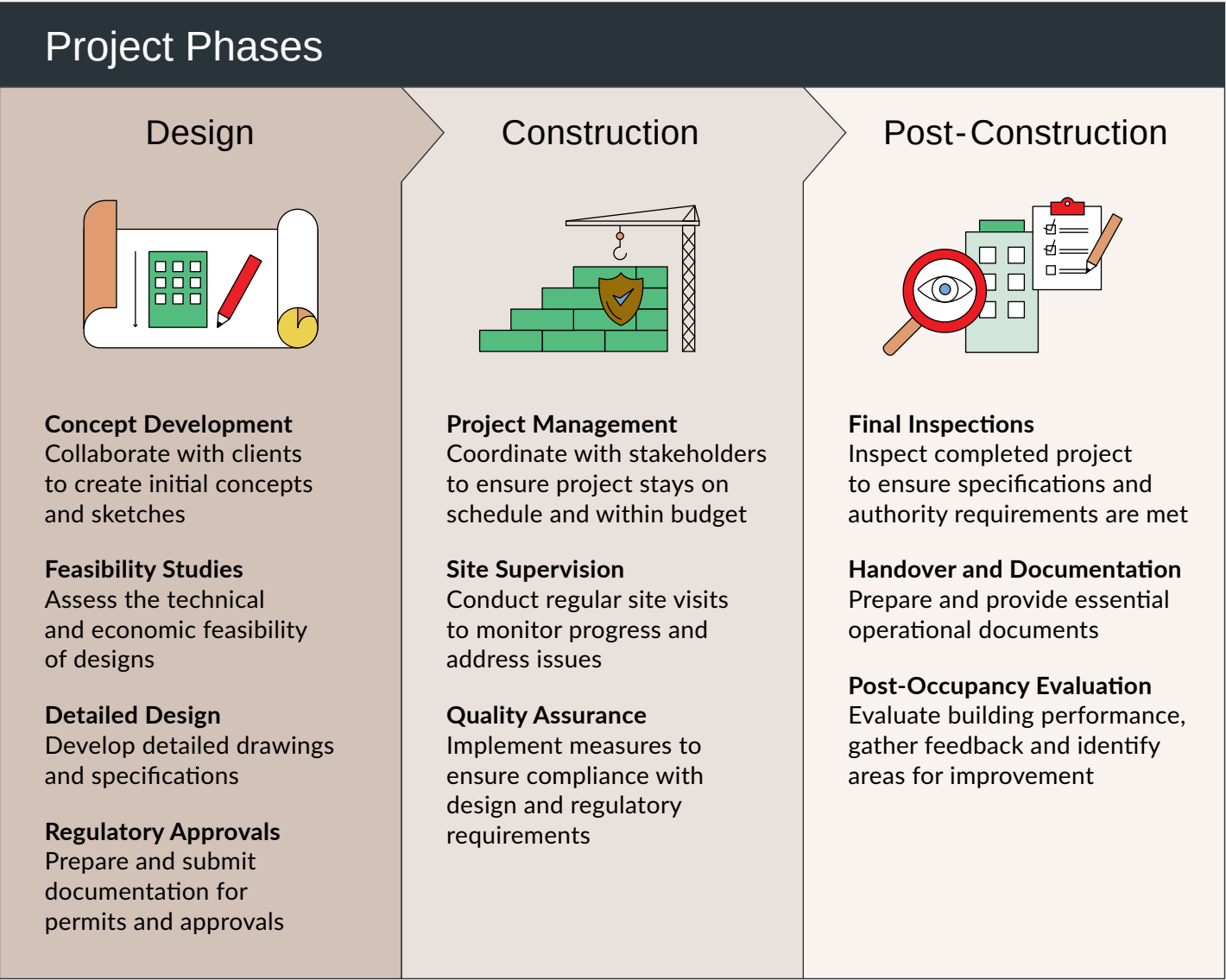
Geneo by Surbana Jurong Consultants, Mott Macdonald,  
Squire Mech, WT Partnership, Woh Hup  
For CapitaLand Development  
Photo by CapitaLand Development

# Sector Overview

## Role of Architectural and Engineering Consultants

Architectural and engineering consultants play crucial roles in the execution of BE projects. Their involvement spans across the entire development process, from initial design through construction and into post-construction. With expertise across various disciplines, they ensure that projects are visually appealing, structurally sound and meet the functional requirements of users now and in the future.

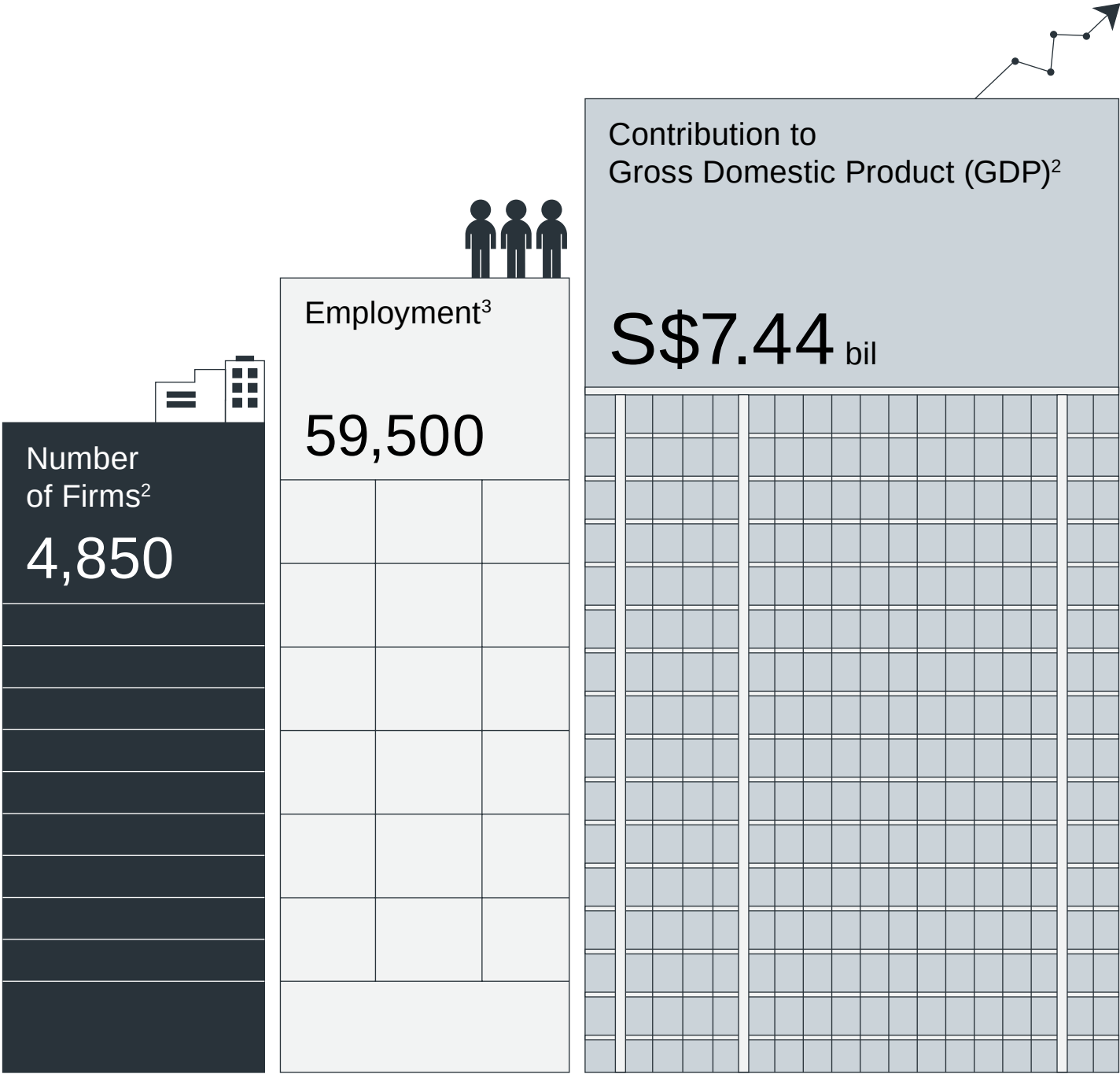
At every stage of the process, consultants must collaborate closely with multiple stakeholders, including clients, contractors, regulatory agencies, and community members. This ensures that expectations are aligned and needs are met across all parties, ultimately laying the foundation for a successful project.





Key Facts & Figures

(For Architectural & Engineering Activities And Related Technical Consultancy)



<sup>2</sup> Source: Singapore Department of Statistics (DOS) – key indicators by detailed industry in all services industries

<sup>3</sup> Source: Ministry of Manpower (MOM) – administrative records and labour force survey, manpower research & statistics department

Note: Data is based on firms classified under Singapore Standard Industry Classification (SSIC) 711 - Architectural & Engineering Activities And Related Technical Consultancy.

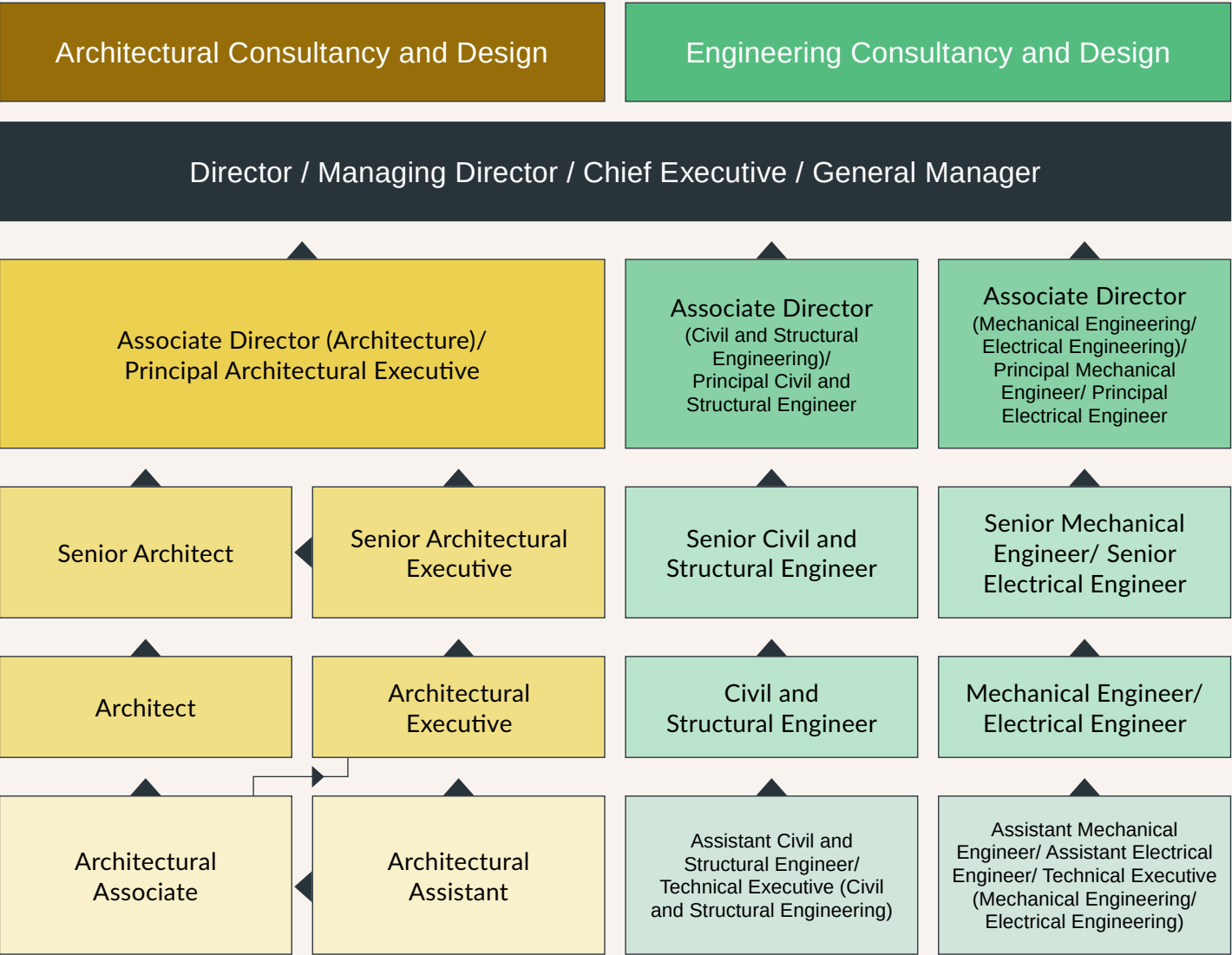
Note: Employment data is primarily from administrative records, with the self-employed component estimated from the Labour Force Survey.

Career Progression Pathways

Published in 2020, the Skills Framework for Built Environment was jointly developed by SkillsFuture Singapore (SSG), Workforce Singapore (WSG), Building and Construction Authority (BCA) and BCA Academy, TACs, IHLs, organisations and unions. The framework provides a common skills language for different stakeholders in the sector, to facilitate skills recognition and design of training programmes, while complementing the manpower strategies in talent attraction, retention and skills development.

Under the framework, job roles within the architectural and engineering consultancy sector fall under the “Architectural Consultancy and Design” and “Engineering Consultancy and Design” career tracks. The diagram below shows the job roles and respective progression pathways.

Skills Framework For Built Environment (Career Pathways)



Extracted from “Skills Framework for Built Environment”.  
More information is available at <https://www.skillsfuture.gov.sg/skills-framework/built-environment>





# Impetus for Review

New Bahru by Farm, KH Consultants, WISTEC Engineers,  
Nice Projects, Sunray Woodcraft Construction  
For The Lo & Behold Group  
Photo by Finbarr Fallon

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## Impetus for Review

The architectural and engineering consultancy sector faces challenges that threaten its sustainability and growth. This section provides a closer look at these issues.



### Challenges in the Architectural and Engineering Consultancy Sector



Difficulties in Attracting and Retaining Talent



Unsustainable Business Models, Fees, Salaries and Risks



Insufficient Capability Development and Innovation



Need to Strengthen the Standing and Morale of the Professions



Stronger TACs Needed to Support the Sector



■ **Talent pipeline challenges**

Stakeholders have experienced difficulties in attracting new entrants. The industry is facing a talent shortage, exacerbated by an ageing workforce, falling birth rates and declining interest from younger generations. Architecture and Civil Engineering programmes intake at local universities has been steadily declining in the past few years. A shrinking talent pool has left consultancy firms struggling to fill key positions, which could compromise their abilities to deliver projects and drive innovation.

■ **Unsustainable price competition**

During industry engagements, stakeholders highlighted the intense competition in the architectural and engineering consultancy sector, with numerous small firms vying for limited projects. This has led to unsustainable business practices, with firms resorting to aggressive fee-cutting to win contracts. The “race to the bottom” has resulted in declining profitability, making it harder to offer competitive salaries. Furthermore, when firms prioritise securing contracts over delivering quality, it can damage client trust and tarnish the industry’s reputation.

■ **Insufficient investments in industry and workforce capabilities**

Global megatrends are reshaping the sector. Emerging technologies, such as Artificial Intelligence (AI) and Robotics and Automation (R&A), are transforming how buildings are designed and constructed, while digital platforms are revolutionising work processes. Beyond technical skills, consultants must also develop business acumen, project management, and innovation skills to drive growth. Unfortunately, feedback from the ground indicates that many firms are not investing enough time and resources in capability development and innovation, which are essential to seize opportunities.

■ **Challenging work experience**

The sector has voiced challenges regarding stressful dynamics within project teams, high client expectations, limited resources and time pressure. These stresses intensified during the post-COVID rush to meet delayed schedules. Such experiences can dampen morale, leaving professionals feeling undervalued and disillusioned.

■ **Stronger TACs needed to uplift professions**

TACs play a crucial role in fostering growth in the BE sector. As the industry landscape evolves, TACs are increasingly called upon to assist their members in transforming. Industry stakeholders have drawn attention to resource and capability constraints that have hampered TACs’ ability to implement high-impact initiatives for the sector.

The architectural and engineering consultancy sector faces pressing challenges. Against this backdrop, the Taskforce was established to strengthen the sector’s long-term viability amidst a strong pipeline of construction demand.



Taskforce’s engagement with young professionals nominated by TACs (SIA, ACES, SISV, SPM) and service buyers (HDB, LTA, JTC, MOHH, CAG), to identify areas that contribute to job satisfaction and retention (done in partnership with Friendzone).



# Make BE Careers the Careers of Choice

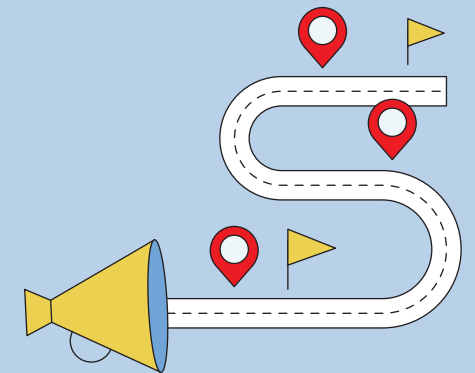


Photo from BCA's BuildSG Branding Campaign

The Taskforce noted various ongoing initiatives to engage students and grow their interest in the BE sector.

- **iBuildSG Club ("Club")** is an interest group for students from secondary schools, junior colleges, Institute of Technical Education (ITE), polytechnics, and universities. The Club introduces students to the sector through activities that showcase various BE careers in the field, and the industry's transformation efforts. Currently, the Club has more than 5,000 members.
- **Built Environment Scholarship** under the Singapore-Industry Scholarship (SgIS): University students interested in the BE sector can apply for SgIS, which is administered by the Ministry of Education (MOE). This programme provides tuition fee funding and/or other expenses to eligible students studying at local or overseas universities. Recipients have to fulfill a bond with the co-sponsoring firm upon graduation. To date, more than 20 BE firms have joined as Sponsoring Organisations under the SgIS.
- **Industry bodies**, including TACs, are actively bridging the gap between education and practice through various youth-focused initiatives. For instance, the Young Architects Workshops organised by the Young Architects League of the Singapore Institute of Architects (SIA-YAL) provide hands-on exposure to architectural students and fresh graduates to ease the transition from academia to industry.
- **Social media engagement** has been strengthened through various efforts on multiple platforms. SIA's #HEYYAL campaign on Instagram showcases young architects in diverse roles, offering realistic glimpses into the profession. Similarly, the #CYArchitects campaign highlights promising young Asian architects across Architects Regional Council Asia, fostering regional connection and inspiration. For the engineering community, BCA has collaborated with the Association of Consulting Engineers Singapore (ACES) to launch the Hello Engineer Series, connecting aspiring engineers with industry professionals and providing insights into engineering careers.

While these efforts are encouraging, there is potential to create stronger multi-stakeholder partnerships among TACs, IHLs, and firms. Such collaborations would help expand the impact of outreach programmes, create more meaningful networking opportunities, and ultimately attract a wider pool of talent to the industry.





# Recommendations

## A1. Expose Young Minds Early to Be Careers

Through engagements, the Taskforce notes strong interest from students to learn about careers that make a tangible impact on the society. The BE sector is well-positioned to meet these aspirations. While various organisations are already conducting outreach initiatives, these efforts can be amplified through better coordination and more diverse engagement channels.

- **Extend outreach to pre-IHL students:**  
Beyond students in IHLs, the Taskforce recommends TACs and firms to reach out to pre-IHL students, for them to make informed choices about their educational pathways and foster genuine interest in the sector.

To this end, the Taskforce noted that TACs, such as SIA, ACES, Singapore Institute of Surveyors & Valuers (SISV), and the Institution of Engineers Singapore (IES) will take the lead in connecting with the youths, and work with stakeholders to organise student-centric initiatives. This will allow youths to engage industry professionals and have exposure to real-world projects.

- **Improve branding and outreach efforts:**  
To improve the reach and effectiveness of talent outreach efforts, TACs and firms have stepped up efforts in the digital space to better resonate with today's talents. These include amplifying success stories, sharing career progression pathways, and showcasing innovative projects and technological adoption in the sector. These can enhance the sector's image, making it more relatable and appealing to potential future professionals.

Er. Chuck Kho  
President  
ACES



Engineers play a crucial yet understated role in developing infrastructure as part of nation building. We need to acknowledge their roles, highlight their contributions, inspire pride in the profession and demonstrate the value they bring. This spirit is exemplified by ACES' Young Professionals Connection's 'SG60 Building with Passion' social media campaign, where BE professionals shared their motivations and career stories.



Ar. Bianca Gill  
Chair  
SIA-YAL



At the SIA-YAL Career Talks, we're not handing out roadmaps. We're holding space – for real conversations about what it means to grow into this profession with heart, purpose, and integrity. Because the truth is, our cities aren't shaped by structures alone. They're shaped by people bold enough to ask: Where do I belong? What kind of difference can I make? When young minds see themselves reflected in the stories of others – in the pivots, the stumbles, the breakthroughs – the Built Environment transforms from a career path into a deeply human calling.

## A2. Launch an Enhanced Internship Programme (INSPIRE)

Internships are vital for workforce development, serving as the first gateway for students to gain practical experience in the BE sector. Well-structured internship programmes allow students to put their knowledge into practice, while firms gain valuable insights into the interns' skills and work ethics to assess if they would be a good fit for the organisation. This creates a win-win situation for both parties.

The Taskforce recommends IHLs and progressive firms to jointly enhance their internship programmes to cultivate industry-ready talent that can provide greater value-add upon graduation. This allows the internship period to be recognised as relevant work experience, thereby justifying higher starting salaries. Key features of the programme form the "INSPIRE" acronym, which include:

- **Interactive Mentorship:**  
Dedicated mentors will be assigned to guide the interns, provide learning opportunities and on-the-job exposure;
- **Innovative Solutions:**  
Interns are encouraged to think out of the box and propose creative solutions to real-world challenges; and
- **Structured Learning:**  
Internship period is extended (to minimally 30 weeks), to facilitate practical learning outcomes in both technical and soft skills;
- **Purposeful Tasks:**  
Interns will be given meaningful tasks for them to acquire essential skills while making valuable contributions to the host companies;
- **Rewarding Experience:**  
Besides a fulfilling internship experience, interns can look forward to a higher internship allowance and higher starting salaries upon joining full-time, with the internship recognised as relevant work experience. The Professional Engineers Board (PEB) and Board of Architects (BOA) Singapore are also exploring to recognise the INSPIRE programme as qualifying practical experience towards professional registration requirements.

IHLs offering BE courses, such as the Singapore Institute of Technology (SIT), National University of Singapore (NUS), Nanyang Technological University (NTU), and Singapore University of Technology and Design (SUTD) will progressively offer this programme to students.

The following firms have committed to enhancing their internship programme and offering higher starting salaries to interns who join them as full-time employees upon graduation: ADDP Architects, AECOM, Aedas, Arup, Beca, CPG Corporation, DCA Architects, DP Architects, DP Engineers, ECAS Consultants, ID Architects, KTP Consultants, Kyoob Architects, Ong&Ong, P&T Consultants, PH Consulting, SAA Architects, SCDA Architects, Surbana Jurong Consultants, WOHA, WSP and more.



Er. Lim Peng Hong  
President, PEB



A well-structured internship provides engineering students with valuable hands-on experiences in applying their engineering knowledge to practise in the real world.

PEB will recognise the enhanced internship programme as part of the relevant practical experience required for PE registration. As an employer of graduating engineers, it gives us the opportunity to assess the interns and appreciate their strengths so that we can put them into the correct positions when they graduate.

# Recommendations

## A3. Continue to Improve the Relevance of IHL Curricula

IHLs play an important role in cultivating a skilled workforce that can effectively address the needs of the industry. The strong partnership between educational institutions and the industry is vital for improving graduates' employability and fostering overall growth and innovation in the BE sector.

- **Alignment with BE Industry Transformation Map (ITM):** In discussions with IHLs offering BE-related undergraduate programmes, the Taskforce noted that key transformation areas identified in the BE ITM have been integrated into their curricula, either as core or elective modules. This alignment ensures that students are equipped with relevant knowledge and skills that meet the current and future demands of the sector.
- **Regular review of Pre-Employment Training (PET) curricula:** The Taskforce recommends that IHLs work closely with the industry to conduct regular reviews of their curricula, to keep pace with ongoing transformation efforts. This includes areas like construction robotics, designing with sustainability in mind, and enhancing other BE programmes, like the quantity surveying curriculum, to align with evolving industry standards. This proactive approach will help students stay informed about emerging trends and technologies that are shaping the sector.



**Professor Pang Sze Dai**  
Dean's Chair Associate Professor;  
Deputy Head (UG and Student Life)  
NUS



Ensuring the relevance of IHL curricula in the Built Environment begins with strong industry partnerships. By engaging an active advisory board comprising trade association representatives, IHLs gain valuable insights to enhance their programmes – equipping graduates with the skills and mindset needed to support and lead industry transformation.



## A4. Improve HR Practices and Provide Career Development Support

Effective HR practices are essential for attracting and retaining talent in organisations. By fostering a positive workplace culture, offering competitive salaries, and providing opportunities for professional growth, firms will be well placed to attract and retain quality talents.

**Collaboration between TACs, the Institute for HR Professionals (IHRP) and BCA:** The Taskforce recommends industry to strengthen HR and career development support for in-service professionals, to meet their professional growth and development needs and better retain in-service talents. Firms can tap on the partnership between TACs, IHRP and BCA to uplift their HR competencies, which will provide HR transformation support through a three-step approach:

- Onboard firms via Human Capital Diagnostic Tool (HCDT) clinics, where they can participate in a complimentary assessment to do a 'HR health check' and identify areas for improvement in their HR practices.
- Build a Community of Practice among firms to share common HR challenges and best practices.
- Encourage firms to implement HR best practices. If needed, IHRP can recommend HR consultants for customised training and consultancy services. TACs will also help firms access funding support from relevant agencies.

**Ar. Angelene Chan**  
Executive Chairman  
DP Architects



In the Built Environment industry, a strong workplace culture isn't just a nice-to-have – it's essential. Beyond buildings and blueprints, it's the people who shape the future of our cities. That's why firms that invest in their people – through career development, collaborative learning and meaningful leadership – stand out. When professionals feel empowered to grow, supported through life's transitions and trusted to lead with purpose, they don't just stay – they bring their best, grow with the organisation and help build something greater than themselves.



Through the Human Capital Diagnostic Tool (HCDT), ECAS gained valuable insights to guide evidence-based human capital decisions. This led to the successful rollout of our Performance Appraisal System and Individual Development Plans, alongside comprehensive frameworks for Competency, Career Development, and Talent & Succession Planning – strengthening alignment with our business strategy and meeting future talent needs.

**Er. Chan Ewe Jin**  
Managing Director  
ECAS Consultants





# Foster Sustainable & Profitable Businesses



Gardens by the Bay MRT Station by Aedas, Arup, AECOM,  
Nishimatsu Construction – Bachy Soletanche  
For Land Transport Authority (LTA)  
Photo by Aedas

04

The Taskforce has received feedback that firms are increasingly engaging in fee-diving through submission of unsustainably low bids to win contracts.

This practice creates an unhealthy environment where firms prioritise winning contracts through low prices, rather than providing quality and fostering sustainable business practices. The Taskforce acknowledges that several measures have been put in place to discourage such practices and encourage more sustainable approaches.

- **Consultancies’ initiatives:**

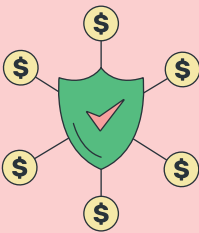
TACs have been actively providing feedback on unfair contractual conditions. This collaborative approach has led to tangible improvements, with some clients reviewing and revising their contract terms.
- **Private Sector Service Buyers’ efforts:**

The Real Estate Developers’ Association of Singapore (REDAS), together with SIA and ACES, are reviewing the payment schedule for consultants in preparation for CORENET X implementation.
- **Public Sector Service Buyers’ strategies:**

The Government has enhanced its tender evaluation approaches to deter fee-diving and strengthen quality-based procurement criteria.

In March 2024, Government agencies started piloting a new ‘Reduced Fee-Score’ approach that applies to all Quality Fee Method (QFM)<sup>4</sup> tenders with an estimated construction cost of up to \$50 million. The pilot has been designed to identify and disqualify outlier bids that are unsustainably low. Together with previous QFM enhancements, public sector tenders have shown positive results - the proportion of tenders awarded to low outlier bids has decreased significantly between 2017 and 2024, with most tenders now being awarded to bids that demonstrate higher quality standards.

Building on the momentum from previous enhancements, there is scope to reinforce quality-centric evaluation approaches and develop more balanced contractual frameworks, while providing firms with comprehensive guidance on sustainable pricing strategies. This will promote both service excellence and business sustainability, while safeguarding the robustness of procurement processes.



Additionally, from November 2024, the Standard Consultancy Agreement (SCA)<sup>5</sup> has been enhanced to maintain fair and timely remuneration, commensurate with the scope of work provided, and provide a more balanced allocation of risk, especially for unanticipated events. For example, both the service buyer and consultant will equally share any additional consultancy costs in the event of construction delays.

<sup>4</sup> The Quality Fee Method (QFM) is a structured tender evaluation framework for public sector construction-related consultancy tenders, with greater emphasis on non-fee attributes over fee attributes.

<sup>5</sup> The Standard Consultancy Agreement (SCA) is a standard contract form used when government agencies procure construction-related consultancy services in Architecture, Civil and Structural Engineering, Mechanical and Electrical Engineering, Quantity Surveying and Project Management.



# Recommendations

## B1. Enhance Procurement Processes

With a stronger focus on quality, consultancy firms will be better positioned to invest in human capital and drive innovation, enabling the sector’s long-term growth.

The Taskforce recommends both public and private sector service buyers to **continue emphasising quality-based procurement** and further disincentivise fee-divers. This will create a more sustainable business environment.

- For example, the Taskforce noted that the Government has announced that it is looking to expand the ‘Reduced Fee Score’ pilot, by increasing the qualifying project threshold from \$50 million to \$100 million.
- URA is also working with agencies on the use of appropriate types of design competitions for selected public sector projects. This creates more opportunities for private sector firms and fosters a more design-led approach by adopting a quality-only evaluation with a fixed fee.

The Taskforce recommends for the public and private sector service buyers to **continue enhancing contractual clauses to enable a more equitable distribution of risks between service buyers and consultants.**

- For example, the Taskforce noted that the Government had been reviewing the Limitation of Liability clause in the SCA, to make it mandatory to specify a limit on consultants’ contractual liabilities that are commensurate with their fees and more insurable.
- In addition, public and private sector service buyers are reviewing the Fit for Purpose (FfP) clauses in Design & Build (D&B)<sup>6</sup> contracts. This is to ensure that the FfP standard, which is often not insurable, is not imposed on consultants unnecessarily.

Ar. Tan Shao Yen  
Group CEO  
CPG Corporation



In the past, as quality amongst consultants was very close, the competition tended to be on fees. And with tender criteria which accord higher points to lower fees, it inevitably led to fee-diving behaviours amongst tenderers. Hence, the solution to correct fee-diving behaviours will have to be through changing the procurement criteria, by focusing on quality and discouraging fee-diving.

The recent changes have certainly changed our company’s tendering behaviour. For tenders with ‘Reduced Fee Score’, we are mindful that outlier low bids run the risk of disqualification or receive a reduced score, and it is only sensible to price the fee according to optimal resourcing and differentiated quality.

We are hopeful that with improving profit margins, there will be adequate resources to be channeled into innovation and skills development, leading to virtuous cycles in the near future.

<sup>6</sup> At present, D&B contracts allow developers to bundle design consultancy and construction works together, promoting better integration for the two. In such contracts, builders are responsible for ensuring that the completed project is ‘fit-for-purpose’, else they will be liable for claims.

## B2. Introduce Tools to Encourage Sustainable Fees

For consultants and service buyers to have a clear understanding of the services offered and its associated costs, it is essential to develop tools that support consultants in formulating sustainable fee proposals and assist service buyers in evaluating these proposals during the tender process.

The Taskforce recommends **consultants and service buyers to use the Value Articulation Frameworks (VAFs)**. Prepared by SIA and ACES for their respective professions, the VAFs outline detailed breakdowns of the necessary tasks at each project milestone. The VAFs provide consultants with a structured approach to demonstrate the value of their services and justify their fee proposals with detailed resource plans. Service buyers will be able to understand the costs tied to project requirements and be able to make better procurement decisions.

- The Taskforce encourages the industry to make new tools available to evaluate sustainable fee proposals. For example, a resourcing guide could be developed to detail manhours and manhour rates, using a standardised approach to facilitate more objective comparisons across fee proposals and ensure proposed fees adequately reflect the resources required to deliver quality outcomes.

Clients are encouraged to consider implementing the Reduced Fee Score, contractual clauses and VAF in concert where appropriate, as they complement each other in promoting sustainable business practices.

Er. Teo Yann  
Group Managing  
Director  
Squire Mech



The VAF is a more detailed description of the works and tasks the engineering consultant has to deliver for the project. With this level of detail, clients will be aware of the amount of works the consultant has to undertake, the resources required to deliver the works and the costs involved.

Ar. Lau Chee Meng  
Managing Director  
Kyoob Architects



SIA’s VAF is a useful tool that we use to not only build up our fees but also as a way to illustrate the multiple stages, tasks and seniority of manpower applied. We often get asked by clients why our fees are a certain quantum. VAF helps to establish a common understanding between clients and us, which protects both parties downstream. So in both cases of increased and reduced scope, the interests of both parties are protected.

We are also encouraged that SIA endeavours to continue conversations on the VAF, as and when new regulations or requirements arise. This is a positive step towards having commensurate fees for architects and other consultants in the BE sector.



# Grow a Dynamic & Progressive Sector



NS Square by WOHA, Ramboll, Meinhardt, AECOM, Expand  
For Ministry of Defence and Ministry of National Development  
Impression by WOHA

The Taskforce recognised that the BE sector is experiencing significant transformation driven by several key trends.

Increasing emphasis on sustainability is propelling a shift toward greener buildings and more environmentally friendly practices, while advances in technology are reshaping how projects are designed and constructed. The Taskforce notes that multiple initiatives are already in place to support the sector's transition toward new ways of working.

■ **BE ITM:** Launched in September 2022, the refreshed BE ITM serves as a blueprint to guide the sector's transformation. Focusing on three key transformation areas, namely 1) Integrated Planning and Design, 2) Advanced Manufacturing and Assembly, and 3) Sustainable Urban Systems, the ITM outlines a comprehensive strategy aimed at fostering collaboration, enhancing productivity, and promoting sustainability measures.

■ **BuildSG Leadership Engagement And Development (LEAD) framework:** Strong leadership is essential to drive transformative changes effectively. The BuildSG LEAD framework aims to nurture a core group of forward-thinking leaders to champion change in their firms and the broader industry. This is delivered through the various leadership engagements under the framework including the annual BuildSG LEAD Summit, structured leadership training programmes including the iBuildSG LEAD Milestone and iBuildSG LEAD Horizon Programmes, and curated Global Perspectives Programmes.

■ **Funding programmes:** To implement transformation initiatives, firms can take advantage of the various grants and funding programmes available.

→ *Productivity Solutions Grant (PSG) for the Built Environment* supports Small and Medium Enterprises (SMEs) in their digitalisation journey by co-funding the cost of adopting pre-approved digital solutions under the BE Industry Digital Plan (IDP).

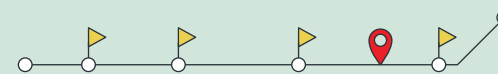
→ *SkillsFuture Enterprise Credit (SFEC)* supports firms which are keen to invest in workforce training and development.

→ *Support for Job Redesign under Productivity Solutions Grant (PSG-JR)* provides financial assistance to redesign jobs and processes for improved productivity.

→ *Built Environment Technology and Capability (BETC) Grant* helps BE firms develop long-term capabilities in enterprise, technology, and manpower aspects.

■ **Continuing Professional Development (CPD) framework:** Individual professionals also need continued growth and development. The CPD framework plays a vital role in encouraging continuous upskilling. Under the framework, professionals are required to engage in professional development activities to stay abreast of industry trends, best practices, and emerging technologies. Through a culture of lifelong learning, the sector is well-equipped to meet the evolving demands of the future.

For more firms to benefit from transformation, firms need to better access support schemes tailored to different business needs and transformation stages. Professionals also need to pick up emerging skills needed to thrive in this evolving landscape.





# Recommendations

## C1. Embrace Transformation

The ongoing technological revolution and projected growth in construction demand present room for BE consultants to transform their practices and capture opportunities. There remains untapped potential in emerging technologies, like AI, that could revolutionise workflows and create higher-value jobs.

The Taskforce recommends that the **industry capitalise on these technological advances** to deliver enhanced value to clients. At the same time, technological innovations can help our BE professionals unleash their creativity in new ways and open up new career opportunities. The possibilities are endless and immensely exciting.

- BE consultancy firms and professionals can leverage a newly created one-stop resource guide to navigate the various support programs and funding opportunities offered by BCA, TACs, IHLs, and technology solution providers.
- TACs and firms should expand on existing collaborations with leading technology firms to access cutting-edge technologies and innovative solutions. By keeping abreast of technological developments, firms can seize opportunities and blaze the tail.



**Ar. Pan Yi Cheng**  
Principal Architect  
Type0 Architecture

For production, we develop in-house codes and programmes to automate and streamline documentation while maintaining design intent. For project delivery, we use collaborative Common Data Environments to ensure seamless coordination with consultants and builders. We also leverage precision fabrication technologies for prototyping and prefabricated assembly, supporting our commitment to craft, efficiency, and design quality.



At Type0 Architecture, we integrate technology holistically across our workflows. In the design stages, we employ computational design tools and AI-enhanced BIM modelling to generate and test ideas with precision and speed.



At Arup, we see technology and transformation first as a means for collaboration to bring the best value for Singapore's projects. Our active participation in the Built Environment Accelerate to Market Programme (BEAMP) reflects this spirit of collaboration, where we influence through our thought leadership to create, test, and deploy innovations with industry partners to embrace technology and build deeper expertise. For example, the use of 3D Digital Twin ready models can reduce 30% of the time spent onsite by the Competent Personnel (CP) during all stages of design and construction.

**Donny Darmawan**  
Associate, Australasia  
Geospatial Leader  
Arup



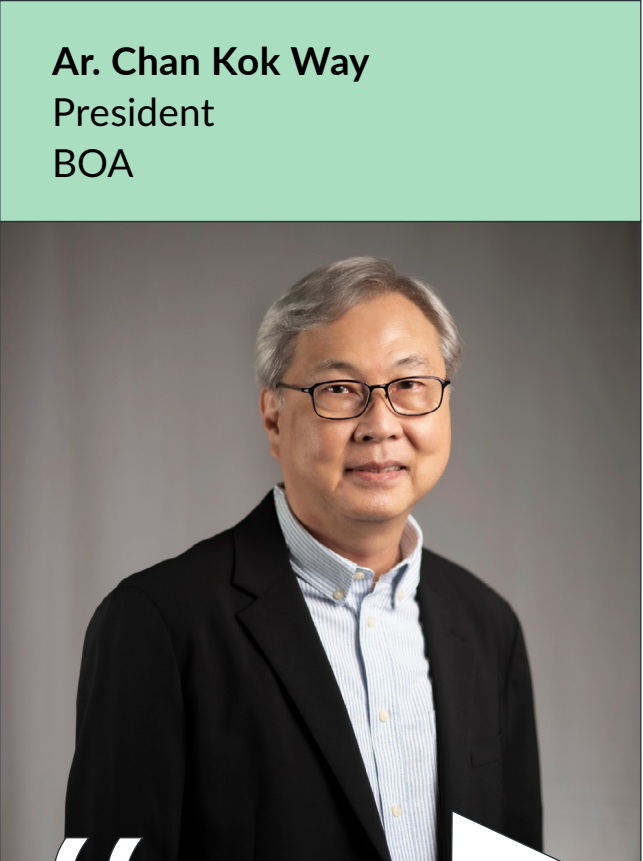
## C2. Strengthen Business Acumen

- While BE consultants possess strong technical expertise, there is potential to sharpen business acumen and level up strategic management and negotiation skills.
- **Business development skills:** The Taskforce recommends BE professionals to strengthen their strategic business capabilities and acumen. Developing these competencies among senior leaders is particularly crucial, as it can enable them to identify and harness business opportunities for their firms. The recently renewed funding support<sup>7</sup> for the LEAD programme demonstrates the Government's continued commitment to developing essential business skills within the sector.
  - To motivate professionals to develop these skills, PEB and BOA are also reviewing the recognition of business, leadership and ethics as part of qualifying courses under the CPD/Professional Development Units (PDU) framework.

**Er. Jee Yi Yng**  
Chairperson,  
CPD Committee  
PEB



PEB will incorporate strategic business and leadership training into our CPD framework to equip our Professional Engineers with the leadership and business acumen to build and grow their engineering and consultancy business and seize new opportunities.



**Ar. Chan Kok Way**  
President  
BOA



Incorporating business and leadership training into the BOA's CPD framework empowers architects to see beyond design. It equips them with the foresight to navigate complex business landscapes, the skills to lead with confidence, and the vision to shape sustainable practices that elevate both their profession and the Built Environment.

<sup>7</sup> Funding details subject to final approval and confirmation.



# Build a Culture of Appreciation, Respect & Empathy



Central Manpower Base by DP Architects, Meinhardt, AECOM, Tiong Seng Contractors, DP Sustainable Design For Ministry of Defence, Defence Science and Technology Agency  
Photo by DP Architects

06

Despite the hours and workload, the Taskforce is heartened that BE professionals remain driven to build our future Singapore.

They find fulfilment in seeing their designs materialise into physical structures and knowing that their work leaves a lasting legacy on Singapore's landscape. Many express pride in their role in shaping the nation's future and improving Singaporeans' lives through thoughtfully designed spaces and infrastructure. The Taskforce noted various initiatives to recognise contributions and enhance well-being in the sector.

## ■ BuildSG Branding Campaign:

The campaign aims to enhance public understanding and appreciation of the sector's role in nation-building, and showcase success stories and inspiring career journeys. A key initiative includes content partnerships highlighting innovative individuals who are reshaping Singapore's urban landscape.

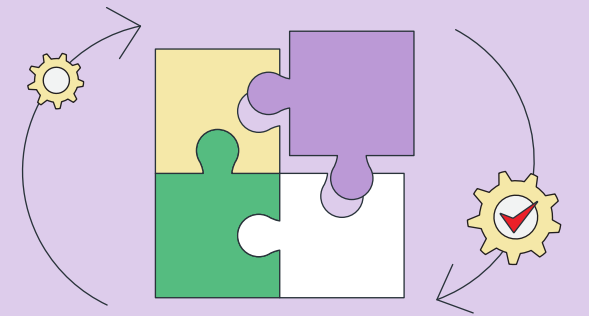
## ■ Collaborative Contracting:

BCA has been advocating the adoption of collaborative contracting in Singapore. This approach emphasises partnership and cooperation among all stakeholders, and creates an environment where ideas and concerns can be shared openly. This initiative is gaining momentum, with over 20 public and private projects having adopted or are planning to adopt collaborative contracting. Such a shift is essential for developing a more integrated and responsive project delivery ecosystem that benefits everyone.

## ■ Celebrating team contributions:

The sector recognises individual and corporate excellence through various awards and platforms. For example, going beyond traditional acknowledgment approaches, the project team of Changi Airport Terminal 4 took an inclusive approach by permanently engraving the names of all contractors and consultants onto one of the terminal's featured art pieces, creating a lasting tribute to the collective effort behind this development.

There are opportunities to scale up such good practices. Such efforts would help accelerate the necessary shifts towards more effective partnerships and a stronger culture of collaboration.





# Recommendations

## D1. Foster Workplace Well-being

The BE sector has made encouraging progress in fostering positive work environments, with growing awareness and willingness among industry leaders to improve workplace well-being. While current challenges such as high-pressure and demanding work culture have impacted retention, there is industry commitment to address them through meaningful changes. This creates a strong foundation to improve standards for workplace well-being in the sector.

■ **Built Environment Culture of Appreciation, Respect, and Empathy (BE CARE) Charter:** The Taskforce has launched a new Charter that outlines best practices to develop more collaborative relationships amongst project teams and strengthen workplace well-being. Drawing inspiration from established practices (e.g. Mindful Business Charter), this Charter focuses on three essential elements: fostering openness and respect, ensuring effective meetings and communications, and protecting rest periods.

Firms can demonstrate their commitment by becoming signatories at the project or firm level, and have management teams actively communicating these principles across the project teams and firms. This ensures all project personnel uphold these standards.

■ Central to the Charter is the feedback mechanism to address inappropriate behaviour. The Charter calls for firms to establish well-defined channels for team members to raise well-being concerns. For example, through direct communication with supervisors or at designated project meetings. By providing clear guidelines for respectful engagement and proper issue resolution, the Charter hopes to foster more positive working relationships.

■ Principles on mindfulness are also being developed to guide regulatory agencies' interactions with BE professionals.

Government agencies such as JTC Corporation, Land Transport Authority (LTA), Ministry of Education (MOE) and Public Utilities Board (PUB), as well as private service buyers such as Allgreen Properties, CapitaLand Development, Far East Organization, Frasers Property, GuocoLand, MCL Land, Pontiac Land, SingHaiyi Group and UOL Group are supportive of the BE CARE Charter and will pilot the charter in selected upcoming projects.

Beyond the service buyers listed above, the following firms have committed to the implementation of the Charter, either at the project-level or firm-level:

- |                     |                     |
|---------------------|---------------------|
| • ADDP Architects,  | • Kyoob Architects, |
| • AECOM,            | • P&T Consultants,  |
| • Aedas,            | • PH Consulting,    |
| • Arup,             | • RSP,              |
| • Beca,             | • SAA Architects,   |
| • CPG Corporation,  | • SCDA Architects,  |
| • DCA Architects,   | • Surbana Jurong    |
| • DP Architects,    | Consultants,        |
| • DP Engineers,     | • WOHA,             |
| • ECAS Consultants, | • WSP               |
| • ID Architects,    | • and more.         |
| • KTP Consultants,  |                     |



Please scan this QR code for more information on the BE CARE Charter

## D2. Better Recognise Consultants

In addition to promoting workplace well-being, the industry has started to highlight BE professionals' contributions through different platforms. There is strong interest from stakeholders to elevate the visibility of BE professionals' contributions.

■ **Service buyers to recognise consultants' contributions:** As key industry stakeholders who directly benefit from consultants' expertise and work, the Taskforce recommends service buyers to make greater effort to showcase contributions through various channels, such as media features or industry roadshows. Such gestures will foster greater appreciation for the work of our BE professionals.

**Kwee Ker Wei**  
1<sup>st</sup> Vice President  
REDAS



“The BE CARE initiative reminds us that building well is also about how we work together. By signing this Charter, project parties commit to act with professionalism and respect, support open conversations on wellbeing, and keep these values present in our teams. Each and every consultant is vital to the success of every project. Recognising their contributions and working together with care and respect will strengthen trust and collaboration across the project ecosystem, leading to better outcomes for our Built Environment and for Singapore.

**Calvin Chung**  
Assistant Chief Executive Officer,  
Engineering & Operations  
JTC



“In the BE sector, where our professionals navigate complex projects and demanding timelines, a conducive work environment enables our engineers, architects and project managers to deliver their best while safeguarding their wellbeing. By adopting the BE CARE Charter, JTC is making a commitment to foster a more sustainable and respectful work culture. We recognise that our consultants' expertise and dedication are instrumental in shaping quality urban spaces. Through meaningful recognition of their contributions and the cultivation of strong partnerships, we can continue to deliver world-class infrastructure that catalyse Singapore's economic growth.



# Uplift TACs' Capabilities

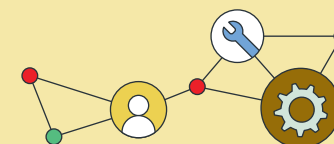
Bird Paradise by Mandai Wildlife Group  
in collaboration with RSP Architects Planners & Engineers,  
AECOM, Surbana Jurong Consultants, Arcadis  
For Mandai Wildlife Group  
Photo by RSP Architects Planners & Engineers

# 07

TACs play vital roles in the overall growth and sustainability of the BE sector. The Taskforce acknowledges the range of initiatives already implemented by TACs to support their members' development.

- **Advocacy:** TACs amplify members' voices by representing industry interests in dialogues with stakeholders. A notable example is their participation in the BCA-Construction Industry Joint Committee (CIJC) Procurement Discussion Group (PDG), where TACs highlighted concerns about procurement practices and worked collaboratively to find solutions.
- **Training and Development:** TACs contribute to their members' growth through training programmes that address needs. For instance, TACs like SIA, ACES, SCAL and REDAS's involvement in the development of CORENET X training courses demonstrates their commitment to equipping members with skills essential to the sector's transformation.

With their extensive networks, TACs are well-positioned to support industry transformation efforts. More can be done to enhance their capabilities, enabling them to perform this important role more effectively.



## Recommendations

### E1. Support TACs to Build Stronger In-House Capabilities

TACs have the potential to amplify their impact beyond their current scale. However, TACs currently have limited bandwidth and resources.

- **Support TACs' capability building:** To effectively champion the Taskforce's recommendations and create greater impact, the Taskforce advocates TACs to build more in-house capabilities in critical areas, such as in sector branding, talent outreach, and providing transformation support for member firms. TACs may explore pooling resources and leverage economies of scale, such as through bulk tenders and the development of shared service offerings.

**Ar. Melvin Tan**  
Immediate Past  
President, 65th  
Council 2025/26  
SIA



“

SIA is committed to supporting capability building, particularly for SME firms. Through initiatives such as the VAF, a forthcoming HR standard agreement, and efforts to explore organisational development for smaller practices, we aim to help our members better define their value, strengthen their operations, and compete effectively in both local and international markets.



# Charting the Path Ahead

Over the course of the year, the Taskforce embarked on a mission to identify challenges in the BE consultancy sector and develop a comprehensive action plan to address these issues. Five focus areas had been identified, and the Taskforce engaged a diverse range of stakeholders to gather different views and perspectives. This consultative approach allowed the Taskforce to gain valuable insights, leading to the 11 recommendations outlined in this report. While many of these initiatives are already in progress, further development is essential to maximise their impact.

Looking ahead, the Taskforce expects AI to reshape the BE sector. Stakeholders should continue to watch this space and be prepared to harness the benefits from AI adoption across the different project stages. For example, some firms have been experimenting the use of AI to analyse client's requirements, while others have used AI to generate design drafts that can be optimised for various client considerations, such as cost or environmental sustainability. AI can also be used to identify spatial design conflicts and improve project coordination. The sector should invest in upskilling BE professionals and integrate innovative AI solutions into our practice.

In addition, the Taskforce would like to emphasise the importance of close collaborations amongst various stakeholders to address common challenges. For example, while the Taskforce had focused on architectural and engineering consultants, there may also be similar challenges faced by other BE professions that would need the collective efforts of the sector to tackle. After all, the BE sector is only as strong as its weakest link.

Let's continue to share the future of our architectural and engineering consultancy sector by working closely together!





Developments on cover page (left to right):

**Surbana Jurong Campus by Safdie Architects in collaboration with  
Surbana Jurong Group (SJ Group), KTP Consultants, Boustead**  
Photo by SJ Group

**21 Carpenter by WOHA, Bescon Consulting Engineers, Ramboll,  
WT Partnership, Sunray Woodcraft Construction**  
For 8M Real Estate  
Photo by Jovian Lim

**CapitaSpring by Bjarke Ingels Group in collaboration with  
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