



MEDIA RELEASE

# NEW INITIATIVE LAUNCHED TO ENHANCE STUDENT INTERNSHIPS IN THE BUILT ENVIRONMENT SECTOR

The new Built Environment (BE) Formation Programme will better prepare students for their internship and excite them about careers in the Built Environment sector
The inaugural iBuildSG Young Leaders' Advocate awards were presented to four role models, in recognition of their leadership and contributions through the Young Leaders Programme

**Singapore, 24 October 2019** – Internships are a key part of a student's journey to be job ready, particularly in the Built Environment (BE) sector where the pace of change is picking up rapidly. Students are exposed to and acquire practical, on-the-job skills before they join the industry. 2<sup>nd</sup> Minister for National Development Desmond Lee emphasised this in his opening speech at the BCA-Industry iBuildSG Scholarship and Sponsorship Ceremony held today, where 351 scholarship and sponsorship recipients received their awards. In particular, the number of part-time postgraduate sponsorship recipients has more than doubled this year, to 26, compared to 10 last year, as more firms appreciate the value of upskilling their workforce for longer-term retention.

2. The inaugural edition of the Built Environment (BE) Formation Programme for students in the BE-related courses took place from 2 to 5 September 2019, with close to 60 participants and support from 22 industry firms and agencies. The 4-day BE Formation Programme incorporates experiential and interactive activities – such as interactive simulations, learning journeys and group discussions – to help participants understand the BE ecosystem better. Participants obtained insights on various aspects

of the BE sector, including career pathways and latest technological developments. Participants also visited exemplary projects such as Eunoia Junior College, where they learnt about the application of innovative technologies such as Mass Engineered Timber; and Siemens Centre, where they saw how the implementation of data analytics for building operations and maintenance could improve building performance.

3. "I was able to learn many things from various industry titans who had fostered and built the core foundation of our sector. I've seen what the sector has to offer, especially with the Construction ITM, and I am excited to be part of the BE family and am ready to contribute to the best of my abilities in the coming years," said Mr Khoo Nee Kong, a Year 3 Building Services student from the Singapore Institute of Technology (SIT).

4. Another participant, Mr Umar Abdul Aziz, who is in his 3<sup>rd</sup> year at the Civil Engineering course at SIT, said, "One of the highlights of the BE Formation Programme was the learning journey to an ongoing construction project. The project displayed the country's push for Design for Manufacturing and Assembly with the usage of Mass Engineered Timber. As a future engineer, being aware of the latest industry trends prepares me for projects involving more intensive use of this construction method when I graduate."

5. Participating firms in the inaugural run of the programme were also supportive. Mr Tony Tay, Deputy Managing Director of WSP Consultancy Pte Ltd., which sent nine of their interns for the programme, said, "The programme gave the interns a good overview on the trends, opportunities and challenges faced by the sector today, including digital disruption of a traditionally labour-intensive industry. Having interns who are aware of industry transformation and trends will help them to be open-minded about new ideas and improve their perception of the industry".

6. Mr Roy Khoo, Director of Kimly Construction Pte Ltd, which also participated in the programme, added, "Our interns make up the future generation of the BE workforce.

It is pivotal for them to understand the rationale and importance of industry transformation and how they must be equipped with the right skillsets. The BE Formation Programme lays the foundation for these interns to join the industry and Kimly is pleased to support our interns' learning at such a platform."

7. Minister Lee also presented the inaugural iBuildSG Young Leaders' Advocate award to four role models, in recognition of their leadership and contributions through the Young Leaders Programme (YLP). Aside from sharing their experiences with younger students through initiatives such as the BE Formation Programme and career talks, the Young Leaders had also contributed their ideas in policy shaping and novel ways to transform the sector. The four Young Leaders are:

- Ms. Ong Yan Xiang, Senior Principal Engineer, CPG Consultants
- Ar. Tan Szue Hann, Managing Director, Miniwiz Pte Ltd
- Mr. Gavin Chan, Principal Geotechnical Engineer, CPG Consultants
- Ms. Ivie Sim, Assistant Development Manager, LendLease Retail Pte Ltd

8. BCA CEO Mr. Hugh Lim said, "We have come a long way in building our modern city, but beyond just infrastructure, we must also build up our sector's leadership and talent. To succeed in industry transformation efforts, we need leaders and professionals who are competent and forward-looking, and this is why we have put in place leadership and talent development strategies at different levels. We are glad that the BE sector has been working closely with the government in this important collective effort."

# Enclosed

- Annex A Built Environment Formation Programme
- Annex B iBuildSG Scholarship and Sponsorship Recipients 2019: Facts and Figures
- Annex C Selected Profiles of Exemplary Scholarship and Sponsorship Recipients
- Annex D Recipients of the iBuildSG Young Leaders' Advocate award
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- Annex F About the iBuildSG Scholarships and Sponsorships

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# About BCA

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. BCA's mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, it aims to differentiate Singapore's built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, its vision is to have "a future-ready built environment for Singapore". Together with its education arm, the BCA Academy of the Built Environment, BCA works closely with its industry partners to develop skills and expertise that help shape a future-ready built environment for Singapore. For more information, visit www.bca.gov.sg.

# Annex A – Built Environment Formation Programme

# Introduction

The Built Environment (BE) Formation Programme is an industry preparatory programme, recommended by the Built Environment SkillsFuture Tripartite (BEST) Taskforce. As internships are important avenues for students to better understand the BE sector, a positive experience would cement their commitment to take on BE careers after graduation. The BE Formation programme, comprising training workshops, industry sharing sessions, learning journeys and simulation activities, aims to better prepare students for work during their internship and develop their curiosity and interest to take on meaningful tasks during internship. The programme, incorporated into the first 4 days of students' internships, also helps students to understand the Construction Industry Transformation Map (ITM) and to be job-ready through an induction to the BE sector. The programme targets to benefit about 2,000 interns over the next 5 years.

# **Programme Objectives**

- Internship Preparation: Better prepare students for work during internship and understand the inter-disciplinary building processes involved in the sector
- Understanding Construction ITM: Provide exposure to new transformation areas (Integrated Digital Delivery, Design for Manufacturing and Assembly and Green Buildings)
- Inspire students for a career in the BE sector: Give students a better appreciation of the sector's contributions in building and operating modern Singapore, so as to convey a higher sense of purpose and infuse excitement to join the BE sector

# Conduct and Delivery of Programme

The BE Formation programme is an intentional, compact and interactive induction programme to the BE sector. With content co-developed by individuals throughout the BE spectrum, the programme gives participants a rich and insightful experience. It covers several key focus areas, namely history and background of the BE sector, ecosystem and challenges of the sector, professional pathways and competency development, as well as prospects and outlook. The programme is delivered through blended learning with the following learning modes:

- a) Pre-programme e-learning
- b) Interactive Activity/Collaborative Workshops
- c) Industry Sharing/Dialogue
- d) Learning Journey
- e) Daily Reflection

Built Environment Future Leaders<sup>1</sup> and Young Leaders<sup>2</sup> are engaged to be anchor facilitators for the programme who stay with the participants throughout the 4-day period. In addition, representatives from relevant Trade Associations and Chambers (TAC), industry professionals and veterans also provide assistance in co-developing and co-delivering the programme.

<sup>&</sup>lt;sup>1</sup> Future Leaders are iBuildSG Scholarship and Sponsorship recipients who are committed to pursuing BE career with passion for innovation & digitalization. They are also committed to personal development and participation in TACs or BCA/ industry events.

<sup>&</sup>lt;sup>2</sup> Young Leaders are firm-nominated young leaders aged 35 & below, who demonstrate good business and leadership potential with good project track record, and are actively involved in TACs or industry committees. These young leaders are selected by the firms for their leadership potential.

# Inaugural BE Formation Programme

The inaugural run of the programme was organised from 2 to 5 Sep 2019 for interns from the Singapore Institute of Technology (SIT) with the support of 22 internship firms and agencies. The breakdown of student participation is as shown in Table 1 below.

School	Course	No. of participants
SIT	Civil Engineering	27
	Sustainable Infrastructure Engineering	32
	(Building Services)	
	Total	59

Table 1: Breakdown of student participation in inaugural run of BE Formation Programme

Going forward, the Civil and Environmental Engineering Departments of the National University of Singapore (NUS) and NTU have committed to encouraging their students going for internships in January 2020 to join the programme. BCA is also in discussion with the Singapore University of Technology and Design (SUTD) as well as the various Polytechnics on their students future participation in the formation programme.

# ANNEX B – iBuildSG Scholarship and Sponsorship: Facts and Figures

Programmes	Total	Male	Female
Undergraduate scholarship recipients	102	66	36
Undergraduate sponsorship recipients	115	76	39
Undergraduate direct Stage 2 <sup>3</sup> recipients	10	4	6
Diploma scholarship recipients	6	5	1
Diploma sponsorship recipients	33	21	12
ITE scholarship recipients	39	29	10
Postgraduate sponsorship recipients (Part-time)	26	21	5
Undergraduate sponsorship recipients (Part- time)	3	2	1
Diploma sponsorship recipients (Part-time)	5	5	0
Grand Total	339	229	110

Table 1: iBuildSG scholarship and sponsorship recipients 2019

Table 2: Building Specialist Sponsorship

Building Specialist Sponsorship	Total	Male	Female
BSS(Foreman/Supervisor/Specialist development)	7	7	0
BSS (Crane Operations)	5	5	0
Grand Total	12	12	0

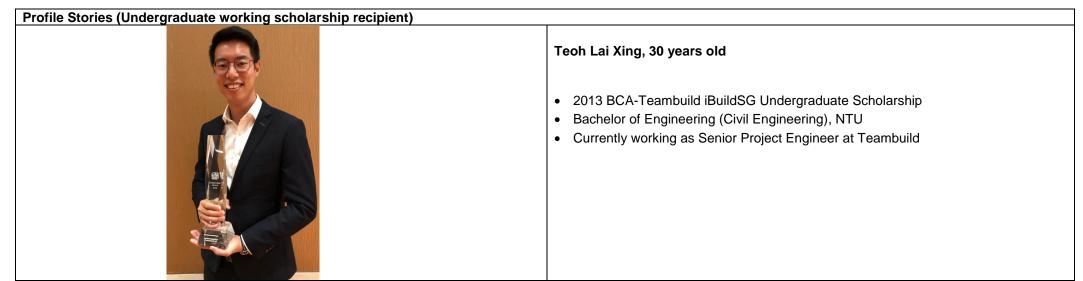
Table 3: Industry Sponsors

Industry sponsors	Number
Undergraduate Scholarship / Sponsorship	61
Diploma Scholarship / Sponsorship	7
ITE Scholarship	3
Postgraduate Sponsorship (Part-time)	15
Undergraduate Sponsorship (Part-time)	3
Diploma Sponsorship (Part-time)	4
Building Specialist Sponsorship	7
Total <i>unique</i> number of sponsors	89

Please note: Information in Tables 1, 2 and 3 are accurate as at 21 Oct 2019.

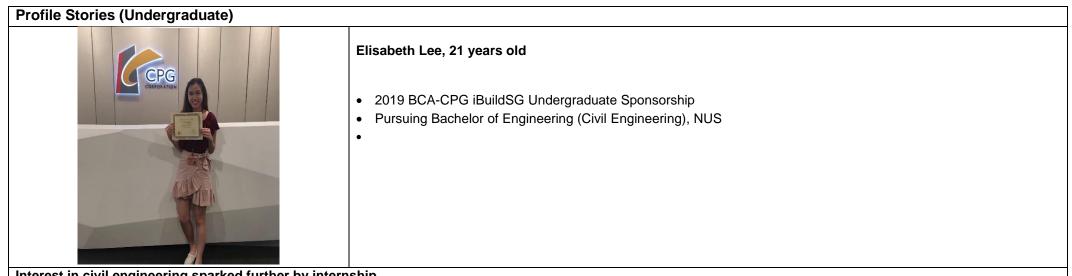
<sup>&</sup>lt;sup>3</sup>Undergraduate Direct Stage 2 programme provides post-Degree development for the recipients, which includes structured On-Job-Training (OJT) and upgrading/ training opportunities.

## ANNEX C – Selected Profiles of Exemplary Scholarship and Sponsorship recipients



Career Progression and Exposure to Advanced Technologies in the Built Environment Sector

- Upon graduation in 2015, Lai Xing joined Teambuild as an Assistant Project Engineer. He was later promoted to Project Engineer and Senior Project Engineer in 2016 and 2017 respectively.
- He was involved extensively in projects that adopted Precast Construction, both conventional as well as Volumetric Construction. He was given the opportunity to witness Teambuild's journey in the use of Volumetric Construction, from Prefabricated Volumetric Construction (PVC) for a public housing project West Terra @ Bukit Batok back in 2015, to full Prefabricated Prefinished Volumetric Construction (PPVC) at Fernvale Glades in Jalan Kayu in 2018, as well as an upcoming development, CCKN8C11, at Choa Chu Kang.
- Lai Xing had the chance to practice construction methods utilising Mass Engineered Timber (MET) as well as DfMA (Design for Manufacturing & Assembly) link bridges during his first project.
- In addition, as all projects that Lai Xing was involved in were Design and Build projects, he was able to inject ideas to refine the construction process and methodology for PPVC construction.

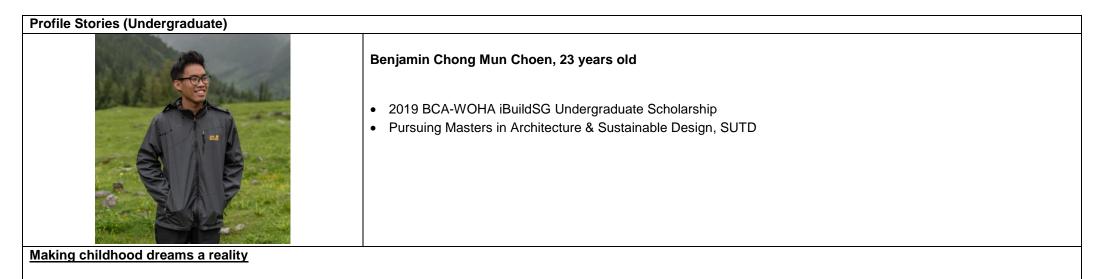


Interest in civil engineering sparked further by internship

- Since young, Elisabeth has been fascinated by unique infrastructure and buildings and knew that civil engineering was the right choice of course for her in university. The vast knowledge and skills gained on structural design in the first three years of study in NUS Civil Engineering have made her more certain of her career choice to be a structural consultant after graduation.

To gain more exposure to working life in a consultant firm and understand the job scope of a structural engineer, she decided to intern at CPG Consultants in her third year. Through her internship at CPG, she was given the opportunity to be involved in mega projects, use the latest engineering software as well as deepen her understanding of structural design for superstructures and substructures.

- One of the mega projects that she was involved in was the Deep Tunnel Sewerage System (DTSS), worth more than S\$500 million. She was involved in the design of underground circular concrete pipes, a substation and its foundation, and also learnt how to design underground chambers. On top of design work, she was able to hone her interpersonal skills through interaction with contractors and on-site engineers. In addition, she learnt how to prepare submission packages to various authorities.
- The internship had opened her eyes to the work in a consultant firm and affirmed her career choice. Meanwhile, her positive work attitude and internship performance had impressed CPG and led them to offer her a full-time position with them and sponsor her university studies.
- She is inspired to contribute towards the development of Singapore's future landscape and believes that the sponsorship will help to take her interest even further. Although Civil Engineering work is demanding at times, she feels that the greatest joy lies in the entire process of seeing one's hard work turn into fruition and that there is always much to learn, especially with the current transformation of the BE sector.



- Benjamin spent his childhood tinkering, exploring his grandfather's workshop and helping him fix broken household items or making wooden toys. He learnt the importance of being resourceful and creative. He later went on to study at NUS High School, understanding the world through math and science, and learning the systematic approach of experimenting and exploring. He doodled during his free time, later turning his doodles into designs for his friends and school.
- Benjamin taught himself graphic design, taking every opportunity to exercise his creativity and learn new skills. He picked up photography and learnt how to compose shots, which was when he started to appreciate and understand the qualities of space, the importance of light, and improvising in real time.
- He had the opportunity at SUTD to pursue creative design through the lens of technology and parametric design. He enjoyed bouncing off ideas among his peers, and they also acknowledged and appreciated his creativity.
- His internship at WOHA was an invaluable source of experience, letting him appreciate how architectural solutions should also be sustainable solutions. He also saw that
  good design principles could help improve the well-being of occupants. During his internship at WOHA, he was involved in project Lyf one-north Singapore, the first co-living
  property in Singapore's research and innovation business hub at WOHA. His supportive WOHA colleagues also taught him to use the BIM software, exposing him to the
  technology even before it was taught in his classes at school. He also had the opportunity to encounter real-life constraints when designing an actual project, such as
  building codes and construction details, which will be beneficial for him to apply when he graduates.
- Benjamin is very thankful for the opportunities that have led him to where he is today, and is appreciative of people in his life who constantly drive him to improve himself to meet challenges head on.

# Profile stories (Diploma) Wuhammad Asyraf Bin Chumino, 25 years old • 2019 BCA-EM Services iBuildSG Diploma Sponsorship • Diploma in Hotel and Leisure Facilities Management at Singapore Polytechnic • Currently working as Property Officer at EM Services Pte Ltd

#### Continuous upgrading and passion to help others

- Asyraf is the youngest of three children, and his father passed away from cancer when he was two years old. Unfortunately, with his father's passing, his mother later fell into depression, and could not hold on to a stable job.
- Asyraf struggled with his studies during his younger days but with the support from his teachers and a renewed interest in the vocational skills taught at NorthLight, he performed well in the end. It was also at NorthLight where he participated in activities such as football, where he also took on the role as captain of the team.
- He excelled in ITE, graduating with a near perfect GPA score. He was the Chairman for ITE Civil Defence (CD) Lionhearter Club, a club which organises events teaching emergency preparedness skills to others. After he took up the iBuildSG ITE scholarship, he had greater clarity in his career and future. He subsequently pursued Hotel and Leisure Facilities Management at the Singapore Polytechnic, and received the BCA-EM Services iBuildSG Diploma Sponsorship.
- Asyraf has a great sense of empathy and compassion, and enjoys helping people. As a property officer at Pasir Ris- Punggol Town Council with EM Services, he feels a
  sense of satisfaction when encountering grateful and appreciative residents after he has resolved their problems. His work scope includes carrying out daily inspections to
  ensure that the HDB estates under his charge are well maintained. He is thankful for colleagues who have given him on-job-training guidance, as it has helped him to
  perform his job with more confidence.
- Since 2013, EM Services Pte Ltd has been very supportive of the iBuildSG Diploma Sponsorship programmes, awarding more than 50 sponsorships to students. Tapping on this programme, the firm has been able to inject new talents to their workforce.

#### Profile stories (ITE)



Muhammad Shakir Bin Noordeen Ahamed, 21 years old

- 2019 BCA-Tat Lee iBuildSG ITE Scholarship
- Currently working as Project Supervisor at Tat Lee Sanitary & Plumbing Pte Ltd

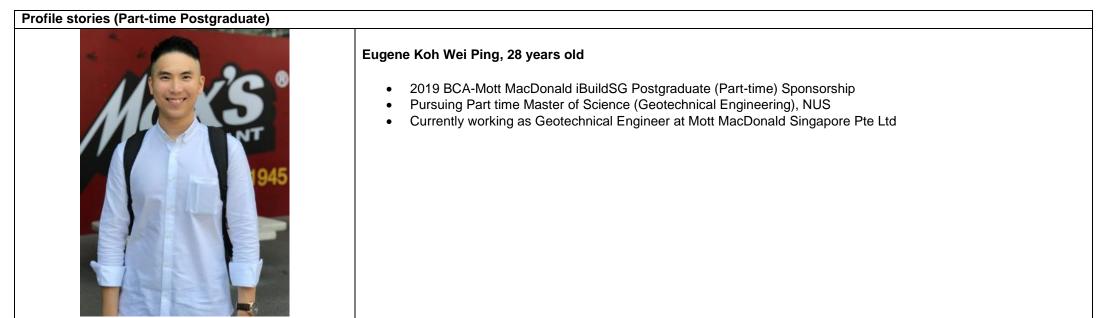
Newfound passion to pursue career in mechanical engineering

- Since young, Shakir had wanted to follow in his father's footsteps to become a businessman. However, he began to develop a strong interest in engineering after he took up
  Design and Technology (D&T) as an additional subject in secondary school. His D&T lessons allowed him to tinker with recycled materials to make useful crafts and tools for
  daily use, which piqued his curiosity on mechanical engineering. Engineering is not foreign to him; he observed his older brother working on circuit boards and soldering
  electrical items for his Diploma in Electrical and Electronic Engineering course.
- His newfound passion in mechanical engineering eventually led him to take up NITEC in Mechanical Technology after completing his 'N' Levels. Halfway through his studies, he found himself struggling to pay for his course fees, and was afraid that he could not continue with his studies. He searched for scholarship and sponsorship opportunities and chanced upon the BCA-Industry iBuildSG ITE Scholarship, which he received in 2015.
- He values the importance of industry experience, thus preferred to start work first to gain a deeper understanding of the BE sector instead of furthering his studies right after completing National Service in April this year. When he was offered a scholarship with Tat Lee Sanitary and Plumbing Pte Ltd, he leapt at the opportunity.
- He was appointed as a project supervisor at Tat Lee, taking on responsibilities such as mechanical piping works, supervising worker safety on site and looking into risk assessment, safe work procedure and method of statements. Although he has been with Tat Lee for only 5 months, he has gained many new skills that have built his confidence to think quickly on his feet when troubleshooting in order to resolve technical and safety issues on site.
- Spurred by the interesting stories shared by his colleagues and positive encouragement, Shakir looks forward to building a career in the BE sector. He hopes to be able to
  deepen his knowledge and skills at Tat Lee and further his studies to achieve his aspiration to become a mechanical engineer.



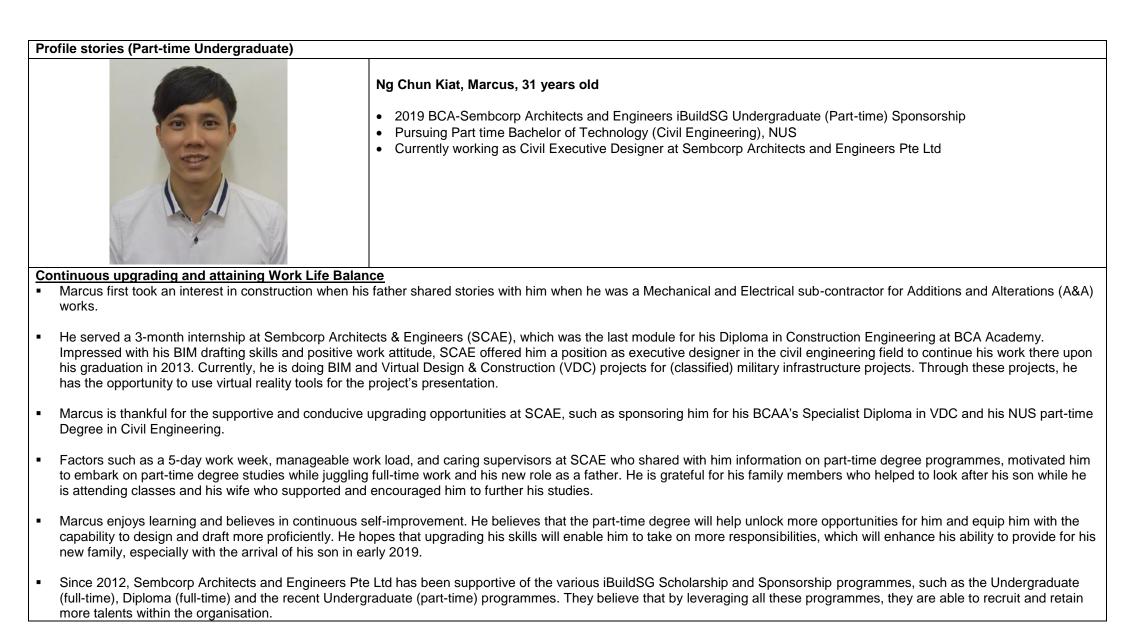
A Better Future for a Typical Lift Technician

- Dickson Tong was just five when he found himself stuck in a lift with his mother. Without any lights, ventilation or a smartphone to call for help, it was one of the most uncomfortable experiences for him as a young boy. The incident left a lasting impression on him, and after completing National Service (NS), he decided to join the lift industry to be a "Lift" Hero. Dickson is now a Senior Lift Technician at Hitachi Elevator Asia.
- In the 18 years that Dickson has been with Hitachi, he has witnessed technological disruption making its way into the lift industry. When he started out, he had the guidance of
  mentors and seniors to help him pick up the necessary skills and tricks of the trade. But, as lifts became increasingly high-tech, Hitachi Elevator Asia began developing courses
  and training modules to equip their technicians with the necessary skills to stay relevant, such as working with computer software used in running the diagnostics for lifts. The
  role of a lift technician requires specialised skills to undertake the critical task of repairing lifts.
- Dickson's passion as a "Lift" hero has not diminished even after 18 years. It has spurred him to further his studies through the Work Study Diploma (WSDip) in Vertical Transportation. He is eager to pursue this as a lifelong career and to influence and lead as many young talents as possible.



#### Continuous upgrading in pursuit of becoming a Professional Engineer

- Since young, Eugene has been interested in construction and machinery, i particularly in the area of underground works. He served a 2-month internship at Mott MacDonald (MM) in 2016. Impressed with his positive work attitude, MM offered him an Undergraduate sponsorship and a position as a Geotechnical Engineer upon his graduation in 2017.
- Currently, he is handling rail and transport infrastructure designs in projects such as the Thomson East Coast Line and the new North-South Corridor. He has to co-ordinate and liaise with various agencies to meet the design and regulatory requirements. He derives a sense of satisfaction from designing Singapore's key infrastructure while ensuring quality and safety.
- He is thankful for his seniors at work, who are his role models, as well as the supportive and conducive working and learning environment at MM. MM promotes continuous learning by providing structured training and mentorship, and flexible work hours to support employees in their upgrading.
- Eugene is self-motivated and believes in continuous learning to create better designs at work. He is currently pursuing his part-time Masters in Geotechnical Engineering, sponsored by MM, while he works towards attaining his Professional Engineer (PE) certification.
- Since 2015, Mott MacDonald Singapore Pte Ltd has been supportive of the BCA-Industry iBuildSG Scholarship and Sponsorship, such as the Undergraduate (full-time) and
  Postgraduate (part-time) programmes. They believe that by tapping on these programmes, they are able to recruit and retain more talents within the organisation. All these
  programmes have provided them with a platform to support the development of their workforce.



#### ANNEX D – Recipients of the iBuildSG Young Leaders' Advocate award

Young Leader	
	<ul> <li>Ms. Ong Yan Xiang, 36 years old</li> <li>Senior Principal Engineer</li> <li>CPG Consultants Pte Ltd</li> <li>Nominated by CPG Consultants in 2016 to join Built Environment Young Leaders Programme</li> </ul>

#### Career progression / Leadership opportunities in the BE Sector

Yan Xiang graduated as an Engineer (Electrical and Electronics Engineering) in 2006, with a view that it is cool to be an Engineer, and this impression has never changed. Over the years, she realised engineering work trains her to think systematically and view problems objectively. This has made her more determined to pursue a long-term career as an Engineer.

She was nominated by her employer, CPG consultants, to join the YLP in 2016. Since then, she has been actively participating in the programme activities as well as working with BCA to outreach to IHL students and to promote the role of female engineers in the BE sector.

Yan Xiang shared that the YLP has given her many opportunities to learn the latest technologies through site visits, BE insights through dialogue sessions with political officer holders, and helped in widening her network with industry partners and professionals.

Yan Xiang was involved in the contract administration and electrical works for the Tahir Foundation Building, a structure that employs green technologies that helps it save enough energy to power the equivalent of 845 HDB 5-room flats for a year. Located at the NUS Yong Loo Lin School of Medicine, this building, and one of its laboratories, have been awarded the Platinum rating under BCA Green Mark for Non-Residential Buildings and BCA Green Mark for Laboratories schemes respectively.

As an engineer and green enthusiast, she hopes to continue contributing to the electrical engineering profession and design green buildings and infrastructure not just locally, but overseas as well. She hopes to be able to inspire younger engineers to stay in the BE sector and students to take on green engineering. To her, job satisfaction comes from looking at projects that she has accomplished successfully and knowing that the building occupants are reaping the benefits of the green building. She feels that the BE sector can be a promising sector for young talents to join.

Yan Xiang feels that BE sector can be a promising sector for young talents to join. She was glad to be able to build consensus to the younger generation by co-delivering with BCA on outreach to IHL students through career talks and mentorship sessions where she shares her passion and experience to inspire and motivate the students to take up their course in BE sector. She also partnered with BCA to promote the role of female engineers in the BE sector during the International Engineering Week.

# Young Leader

#### Ar. Tan Szue Hann, 36 years old

- Managing Director
- Miniwiz Singapore
- Nominated by Singapore Institute of Architects in 2016 to join Built Environment Young Leaders Programme

#### Career progression / Leadership opportunities in the BE Sector

Szue Hann has always been passionate about his work for the Built Environment and is enthusiastic about sharing his ideas and knowledge with the younger generation. Szue Hann is a Registered Architect with the Board of Architects, Singapore and a Board Member of the Singapore Green Building Council (SGBC). He is also Council Member of the Singapore Institute of Architects (SIA), as Chairman of Sustainability.

Szue Hann was nominated by SIA to join the YLP in 2016. Thanks to his active involvement with TACs, he was also invited to be a member of the Green Mark Advisory Committee and the BuildSG Tripartite Committee. It was there that he partnered BCA to build consensus and co-deliver on the importance of the BE sector and Green buildings from an Architectural point of view, through engaging with younger students on platforms such as Career Talks and as a judge for student competitions, where he also shared professional advice with competition teams. He has been a speaker and moderator at several local and international conferences, including the international Green Building Conference.

Szue Hann received the Singapore's 2015-16 Young Green Architect of the year, awarded by BCA-SGBC, in recognition of his strong belief in Green and passion for his work. In 2017, the BCA SkyLab project, of which Szue Hann was a part of, received the Minister's Award (Ministry of National Development).

Szue Hann was the lead architect and Qualified Person (QP) for the construction and design of the BCA SkyLab, a state-of-the-art rotatable test bed for energy-efficient technologies in façade, airconditioning, lightings and controls. Sitting atop a 7-storey building with a 360-degree rotatable platform, it conducts tests under "real-world" conditions at any desired building orientation. The BCA SkyLab serves as a key national infrastructure for the built environment industry and research community to co-innovate green building technologies.

To continue engaging the younger generation to develop interest in the BE sector, Szue Hann is an Adjunct Assistant Professor for Architecture & Sustainable Design at the SUTD where he shares his beliefs and experiences with the students and he hopes to inspire them to continue practising what they have learned. According to Szue Hann, Architecture can no longer be about bricks and mortar, steel and glass. There is a need to reduce wasteful consumption patterns by thinking about how to adopt principles of the circular economy amidst our existing habits.

#### Young Leader



#### Mr. Gavin Chan, 34 years old

- Principal Geotechnical Engineer
- CPG Consultants Pte Ltd
- Nominated by CPG Consultants in 2016 to join the Built Environment Young Leaders Programme

#### Career progression / Leadership opportunities in the BE Sector

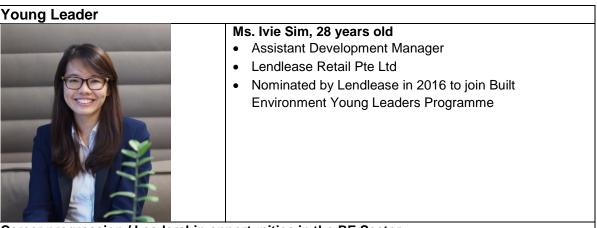
Gavin, who had aspired to be an engineer since young, took up Civil Engineering in Nanyang Technological University. His employer, CPG Consultants, nominated him to join the Built Environment Young Leaders Programme (YLP) in 2016. Since then, Gavin actively participated in programme activities such as site visits to acquire new knowledge and learn about the adoption of new technologies applied in the BE sector. He was one of the Young Leaders who joined in the ITM focus group discussions on Design for Manufacturing and Assembly (DfMA) to share his views. To equip himself to embrace the transformation of the BE sector, Gavin took up the Specialist Diploma in Design for Manufacturing and Assembly at the BCA Academy.

Gavin has made many friends from the government agencies, contractors and other consultants firms through the programme and the contacts have helped form a support network for him to navigate the industry. The familiar faces to him make the BE sector feel homelier and more welcoming.

To Gavin, the YLP has given him a broad understanding of the macro-economic forces behind our ITM and the intricacies of how the whole BE comes together to create value for the nation. He has enjoyed and benefitted much from the programme. He also worked with BCA on two policy studies and found it meaningful to be at the forefront of an evolution that will bring about better jobs for Singaporeans. He hopes to be able to bring change at both the individual level, and the community level via policy changes that will inculcate more innovative practices and better adoption of technology for the BE sector.

To nurture and inspire the younger generation to pursue a career in the industry upon graduation, Gavin worked with BCA to co-deliver the inaugural Built Environment Formation Programme as a Facilitator, Content Developer and Speaker to engage participants from Institutes of Higher Learning (IHLs).

To Gavin, the BE sector is on the cusp of an exciting digital revolution. The sector has achieved much with innovative solutions and changing mindsets – one example being ground-freezing techniques. In 10 years' time, he hopes to be able to change the perception of the BE sector from Dirty, Dangerous and Demanding to Desirable, Digital and Daring.



Career progression / Leadership opportunities in the BE Sector

Ivie developed a budding interest in sustainable buildings back in her third year of engineering studies while attending a course on "Strategies for Sustainable Architecture". She remembers vividly being intrigued by the fact that there is no "one size fits all" or "one concept fits all" approach to achieving sustainability in the built environment. She also learned how the local community embraces strategies if they are tailored to the local context and consider the needs of the people who will use and occupy those spaces.

It was during her student exchange programme in Finland, where she realised that while sweeping landscapes and nature are very much a part of the everyday life of people living in larger countries, there is no similar luxury of land in Singapore. This had made lvie appreciate Singapore's efforts in planning sustainably and greening our city so that we can optimise the liveability and convenience of a city and yet enjoy the benefits of nature.

Through the YLP, Ivie had the opportunity to connect with and learn from other passionate young leaders in the industry, and participate in site visits to exciting projects that she would not normally get to see in her day job. One example would be the site visit to the construction site of the new Thomson East Coast Line Marina Bay Station. In addition, being a Young Leader also gave her the opportunity to share her views and provide inputs to key industry initiatives such as the development of the Construction Industry Transformation Map.

Ivie was also the member of the Built Environment SkillsFuture Tripartite (BEST) Taskforce where she played a part in transforming the tertiary education curriculum and continued education and training. She was happy for the opportunity, as she personally believes in the value of investing and ensuring quality education to nurture the future generation in order for Singapore to continue to grow and succeed as a nation.

# ANNEX E – iBuildSG Leadership Engagement and Development (LEAD)

# Framework

# Background

The **iBuildSG LEAD framework** was launched to support leadership development for the sector.

It was recommended by young leaders of the industry, guided by the iBuildSG Tripartite Committee, consisting of Trade Associations and Chambers (TACs), IHLs and Professional Boards.

# **Objectives & Outcomes**

The objective of the iBuildSG LEAD framework is to nurture a core group of committed and forward-thinking industry leaders to drive sustained industry transformation efforts. The framework builds leadership capacity at various levels:

- i) **Industry level** builds collective stewardship and network for leaders to foster stronger collaboration across the construction value chain.
- ii) **Firm level** supports firms in developing talent and growing their leadership pipeline so each firm has the bench strength to grow domestically and abroad.
- iii) **Individual level** helps industry practitioners build up their competencies to advance the sector, and recognises those with outstanding contributions.

# **Programme Partners**

Structured training programmes within the framework are anchored by SMU and SUTD as academic partners, with recognition from the Singapore Economic Development Board (EDB) and SkillsFuture Singapore (SSG) under the national SkillsFuture Leadership Development Initiative (LDI) for the BE Sector.

In addition, the iBuildSG LEAD framework will cross recognise existing leadership programmes offered by industry partners and synergise efforts with professional development bodies in alignment with professional progression pathways and the national SkillsFuture leadership development framework.

# Structure of the Framework

There are both structured and informal programmes, which includes two bespoke structured training programmes, the LEAD Horizon Programme and the LEAD Milestone Programme, complemented by a broader Insights@LEAD channel.

Target Audience Programmes	Young, emerging leaders nominated by firms for leadership pipeline. LEAD Horizon Programme for	enterprise-level leaders who are part of the C-suite team within the organisations LEAD Milestone Programme for
	<ul> <li>young emerging leaders</li> <li>Covering the following areas: <ul> <li>Innovative Mindset &amp; Agility</li> <li>Commercial Awareness</li> <li>Personal Effectiveness</li> <li>Core Technical Competencies</li> </ul> </li> <li>Insights@LEAD <ul> <li>iBuildSG LEAD Summit</li> <li>Case Study Teams</li> <li>Learning Journeys</li> <li>BuildSG Leadership Foru</li> </ul> </li> </ul>	enterprise-level leaders Covering the following areas: • Strategic Leadership • Sustainable Enterprise Growth • Harnessing Transformation • Accelerating Growth

# LEAD Horizon Programme

Designed for *young emerging leaders* nominated by firms for leadership pipeline, the LEAD Horizon Programme aims to cultivate better commercial awareness and a more innovative mindset open to new ideas and technologies; build personal effectiveness; and convey the importance of integration and collaboration across different disciplines. The programme comprises an 8-day Executive Development Programme conducted by the Singapore Management University (SMU), complemented by a 4-day workshop-based Innovation Bootcamp conducted by SUTD to lead competency building in innovation. There will also be out-of-classroom project work to allow participants to put into practice what they have learnt from the workshop. The entire training programme provided by SUTD carries subject credits stackable towards SUTD's ModularMaster programmes, which in turn facilitates the prospective further up-skilling of the participants.

The inaugural run of the LEAD Horizon Programme commenced in Aug 2019. The iBuildSG LEAD BCA-SMU Executive Development Programme was scheduled from 29 Aug to 27 Sep 2019, followed by the SUTD-BCA Innovation Bootcamp from 10 Oct to 22 Nov 2019. Industry leaders from the BE sector have been invited to anchor and facilitate key topics to enhance the programme with industry contextualisation. To enable cross learning from other industries, inspiring innovators and disruptors from non-BE sectors have also been invited as guest speakers on emerging topics.

About 25 participants from the 1st cohort of the LEAD Horizon Programme commenced training since Aug 2019, where they were nominated by firms from

across the value chain representing a good mix of Developers, Consultants, and Builders as well as representatives from the public sector. The profile of the attendees are mainly aged 35 and below, where the programme facilitates good opportunities for the cultivation of cross learning as well as builds a strong network of next generation leaders for better integration and collaboration to drive the BE sector forward.

The next run of the iBuildSG LEAD BCA-SMU Executive Development Programme is tentatively scheduled in March 2020.

# LEAD Milestone Programme

Designed for *enterprise-level leaders* who are part of the C-suite team within their organisations, the LEAD Milestone Programme focuses on the development of cohesive and progressive enterprises through fostering stronger collaboration to catalyse industry transformation. This programme's intent is to support senior leadership succession in firms and TACs and provide an important opportunity to foster cohesion amongst the future leaders of industry. It will also offer an important touchpoint to build shared perspectives for industry transformation. The programme comprises a 6-day Advanced Management Programme conducted by SMU and a 9-day Overseas Immersion that includes collaboration with Imperial College London as well as best-in-class visits targeting high growth regions such as in China and India.

The inaugural run of the LEAD Milestone Programme will commence in Oct 2019, with the iBuildSG LEAD BCA-SMU Advanced Management Programme scheduled from 31 Oct to 29 Nov 2019.

# Insights@LEAD

The Insights@LEAD platform aims to provide opportunities for long-term engagement, alignment and recognition of all BE leaders in the LEAD community.

- **iBuildSG LEAD Summit**: Annual Event to bring together all leaders on the LEAD framework together for learning through keynote sessions with thought leaders, networking luncheons and dialogue sessions with Political Office Holders or Public Sector senior leadership, for insights into policies, trends and directions.
- LEAD Case Development Initiative: Initiative facilitating knowledge building via the formation of case study teams and iBuildSG study teams. Case study teams comprise younger members on the framework grouped with senior leaders and relevant resource persons from the industry to support the gathering of the collective wisdom of the industry into case studies for sharing. iBuildSG study teams consist of younger members on the framework, researching and addressing BE topics requiring industry perspectives, as part of leadership development under the LEAD Horizon structured training programme.
- Learning Journeys: Tailored for members of the LEAD Framework, to build capability via experiential learning. Includes local and overseas learning

journeys in areas of enterprise leadership, internationalisation, innovation leadership etc.

• BuildSG Leadership Forum provides a platform where pertinent ITM topics and challenging BE issues are discussed by Industry Thought Leaders and attended by Leaders from the different sectors within the built environment. The sharing is aimed at bringing the BE community together and moving the industry ahead.

# ANNEX F – About the iBuildSG Scholarships and Sponsorships

## Introduction

The iBuildSG Postgraduate / Undergraduate / Diploma / ITE Scholarship/Sponsorship (fulltime / part-time) Programme is a partnership among BCA and industry firms to offer young people of high calibre and vision an opportunity to take up the challenge of a career in the BE sector. The scholarship/sponsorship programme is tenable for full-time and part-time BE courses at the local Universities, Polytechnics, ITEs and the BCA Academy.

The Stage 2 Post-Degree / Diploma / ITE Development Programme encourages scholarship and sponsorship recipients to remain in the BE sector upon graduation and completion of their bond. The Stage 2 programme spans 2 years for graduates from the Degree and Diploma programmes and 3 years for ITE graduates, and it involves structured On-Job-Training (OJT) and upgrading / training opportunities. If the scholarship and sponsorship recipients remain in the BE sector beyond their bond period, they will receive retention incentives and training grants.

For more information on the programmes, visit www.buildcareers.gov.sg.

	During undergraduate study	
Scholars	nip	Sponsorship
	n S\$18,000 per year per scholarship recipient who is a	Minimum S\$10,000 per year per sponsorship recipient who is a
• •	Resident with at least a two-year bond with the	Singapore Resident with at least a two-year bond with the sponsoring
sponsorin	-	firm
Year	After graduation Stage 2 programme (2 years)	
Tear	Stage 2 programme (2 years)	
1	Sponsoring firm will provide the graduate with a structured On-Job-Training	
2	Sponsoring firm will sponsor the graduate for part-time upgrading course	
Incentiv	es	
	e to sponsor:	
Up to \$1	0,000 per graduate during 2 years bond	
Built Envi	ironment Courses	Nanyang Technological University (NTU)
	domy (PCAA)	<ul> <li>Civil Engineering</li> <li>Electrical and Electronic Engineering</li> </ul>
	demy (BCAA) Sivil Engineering	<ul> <li>Civil Engineering</li> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> </ul>
• (	<b>demy (BCAA)</b> Civil Engineering Construction Management (Building)	Electrical and Electronic Engineering
• (	Civil Engineering Construction Management (Building)	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul>
• ( • ( National (	Civil Engineering Construction Management (Building) University of Singapore (NUS)	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> </ul>
• ( • ( National ( • A	Civil Engineering Construction Management (Building)	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT)
• () • () National () • A • () • E	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul>
• () • () • A • A • () • E • E	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Environmental Engineering	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD)
• C • C • A • C • E • E • N	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Environmental Engineering Mechanical Engineering	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD)
• C • C • A • A • C • E • E • E • M • F	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Environmental Engineering	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD) <ul> <li>Architecture &amp; Sustainable Design</li> </ul>
C     C     National I     A     C     C     E     E     F     F     E     Iigibility	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Environmental Engineering Aechanical Engineering Project and Facilities Management Real Estate	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD) <ul> <li>Architecture &amp; Sustainable Design</li> </ul>
Constitution of the second secon	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Environmental Engineering Mechanical Engineering Project and Facilities Management Real Estate Frean Citizens and Singaporean Permanent Residents	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD) <ul> <li>Architecture &amp; Sustainable Design</li> </ul>
Constitution of the second secon	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Mechanical Engineering Project and Facilities Management Real Estate rean Citizens and Singaporean Permanent Residents My known as Singapore Residents)	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD) <ul> <li>Architecture &amp; Sustainable Design</li> </ul>
National I A B B B B B B B B B B B B B B B B B B	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Mechanical Engineering Project and Facilities Management Real Estate rean Citizens and Singaporean Permanent Residents <i>ly known as Singapore Residents</i> ) Polytechnic students and undergraduates	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD) <ul> <li>Architecture &amp; Sustainable Design</li> </ul>
National I National I A C E E I C C C C C C C C C C C C C	Civil Engineering Construction Management (Building) University of Singapore (NUS) Architecture Civil Engineering Electrical Engineering Mechanical Engineering Project and Facilities Management Real Estate rean Citizens and Singaporean Permanent Residents My known as Singapore Residents)	<ul> <li>Electrical and Electronic Engineering</li> <li>Environmental Engineering</li> <li>Mechanical Engineering</li> </ul> Singapore Institute of Technology (SIT) <ul> <li>Civil Engineering</li> <li>Sustainable Infrastructure Engineering (Building Services)</li> </ul> Singapore University of Technology & Design (SUTD) <ul> <li>Architecture &amp; Sustainable Design</li> </ul>

tage 1: I	During diploma study	
Scholarship		Sponsorship
• S\$15,000 per year per scholarship recipient who is a		S\$7,000 per year per sponsorship recipient who is a Singapore
ingapore	e Resident with at least a two-year bond with the	Resident with at least a two-year bond with the sponsoring firm
ponsorin	g firm company	
1	After graduation	
tage 2: /	After graduation	
-		
Year	Stage 2 programme (2 years)	
-		
-	Stage 2 programme (2 years)	I-Job-Training
-	Stage 2 programme (2 years)           Sponsoring firm will:	
-	Stage 2 programme (2 years)           Sponsoring firm will:           -         provide the graduate with a structured On	
-	Stage 2 programme (2 years)         Sponsoring firm will:         -       provide the graduate with a structured On         -       pay the diploma graduate a minimum bas	sic salary of S\$2,300
Year 1	Stage 2 programme (2 years)         Sponsoring firm will:         - provide the graduate with a structured On         - pay the diploma graduate a minimum bas         Sponsoring firm will:	sic salary of S\$2,300 alist / Advanced Diploma course

Incentive to graduate:

- Up to \$3,000 training grant (unlocked for use upon completion of their bond) within 3 years of completion of bond or Stage 2 programme
- \$7,000 retention incentive 1 year after completion of bond or Stage 2 programme

#### **Built Environment Courses**

Close 4	Ciana Di
Stage 1	Stage 2:
Full-time Diploma courses	Part-time Specialist / Advanced Diploma courses
BCA Academy	BCA Academy
Architecture (Technology)	Specialist Diploma in Architectural Technology
Construction Engineering	Specialist Diploma in Building Cost Management
Digital Engineering (formerly Construction Information	Specialist Diploma in Building Information Modelling (BIM)
Technology)	Specialist Diploma in Construction Management
Design (Interior and Landscape)	Specialist Diploma in Construction Productivity
Electrical Engineering & Clean Energy	Specialist Diploma in Design for Manufacturing &
Facilities Management	Assembly (DfMA)
<ul> <li>Mechanical Engineering (Green Building Technology)</li> </ul>	<ul> <li>Specialist Diploma in Facility &amp; Energy Management</li> </ul>
Quantity Surveying	Specialist Diploma in Interior & Landscape Design
Nanyang Polytechnic	Specialist Diploma in Lean Construction
<ul> <li>Electrical Engineering with Eco-Design</li> </ul>	Specialist Diploma in M & E Coordination
<ul> <li>Spatial Design (formerly Space and Interior Design)</li> </ul>	Specialist Diploma in MEP Modularisation
Architecture (formerly Sustainable Architectural Design)	<ul> <li>Specialist Diploma in Underground Construction</li> </ul>
	Specialist Diploma in Virtual Design & Construction (VDC)
Ngee Ann Polytechnic	
Clean Energy Management	Ngee Ann Polytechnic
Electrical Engineering	<ul> <li>Diploma (Conversion) in Facility Management</li> </ul>
Environmental & Water Technology	Specialist Diploma in Sustainable Facilities Management
<ul> <li>Hotel &amp; Leisure Facilities Management</li> </ul>	<ul> <li>Specialist Diploma in Electrical Design &amp; Operation</li> </ul>
Mechanical Engineering	
Real Estate Business	Singapore Polytechnic
Diploma in Design (formerly Sustainable Urban Design &	Advanced Diploma in Building Automation & Services
Engineering)	Specialist Diploma in Energy Efficiency and Management

Eligibility
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# ITE Scholarship

cholarship		
		ent with at least a two-year bond with the sponsoring firm company
	er graduation	
Year	Stage 2 programme (3 years)	
	Sponsoring firm will:	
1	- provide the graduate with a structured On-Job	Training
	- pay the ITE graduate a minimum basic salary	
	Sponsoring firm will:	
2	<ul> <li>2 - sponsor the graduate for BCA-approved part-time training course</li> <li>- pay the ITE graduate a minimum basic salary of \$\$2,050</li> </ul>	
(optional	Sponsoring firm will:	
•••	- sponsor the graduate for BCA-approved part-time training course	
year)	<ul> <li>pay the ITE graduate a minimum basic salary</li> </ul>	of S\$2,350
ncentives		
ncentive to	sponsor:	
	5	heir bond) within 3 years of completion of bond or Stage 2
programr \$7,000 re	,000 training grant (unlocked for use upon completion of t me etention incentive 1 year after completion of bond or Stag	heir bond) within 3 years of completion of bond or Stage 2 e 2 programme
<ul> <li>Up to \$3,</li> <li>programme</li> <li>\$7,000 response</li> </ul>	,000 training grant (unlocked for use upon completion of t me	
Up to \$3, programm \$7,000 re uilt Enviror Full-Time I	,000 training grant (unlocked for use upon completion of t me etention incentive 1 year after completion of bond or Stag	

Singaporean Citizens and Singaporean Permanent Residents (collectively known as Singapore Residents)
'N' level / 'O' level graduates, ITE students in built environment Nitec/Higher Nitec courses

Good CCA records

**Postgraduate Sponsorship (Part-time)** provides existing built environment professionals with opportunities to upgrade their skills and knowledge by pursuing part-time postgraduate courses at local institutions. Postgraduate sponsorship recipients will have 70% of their course fees subsidised and will serve a one-year bond with the sponsor company.

Built Environment Courses	
BCA Academy / University of Florida (UOF)	Singapore Institute of Technology
<ul> <li>Master of International Construction Management with Major in Construction Productivity</li> </ul>	Master of Engineering Technology (Civil Engineering)
<ul> <li>Nanyang Technological University</li> <li>Master of Science (Civil Engineering)</li> <li>Master of Science (Environmental Engineering)</li> <li>Master of Science (International Construction Management)</li> <li>Master of Science (Mechanical Engineering)</li> </ul>	<ul> <li>Master of Engineering Technology (Sustainable Infrastructure Engineering-Building Services)</li> <li>Singapore University of Social Sciences         <ul> <li>Master of Human Capital Management</li> </ul> </li> </ul>
<ul> <li>National University of Singapore</li> <li>Master of Science (Building Performance and Sustainability)</li> <li>Master of Science (Environment Management)</li> <li>Master of Science (Geotechnical Engineering)</li> <li>Master of Science (Integrated Sustainable Design)</li> <li>Master of Science (Civil Engineering)</li> <li>Master of Science (Electrical Engineering)</li> <li>Master of Science (Environmental Engineering)</li> <li>Master of Science (Mechanical Engineering)</li> </ul>	Eligibility Singapore Citizens and Singapore Permanent Residents* who are applying for the part-time built environment postgraduate courses * Male applicants must have completed or be exempted from full- time National Service

Undergraduate Sponsorship (Part-time) allows sponsoring firm to upgrade and retain their high-potential Singaporean employees, whom the firms wish to groom to take up higher management and professional roles in the built environment. Sponsored undergraduates will have 70% of their course fees subsidised and will serve a two-year bond with the sponsoring firm.

Built Environment Courses	
	National University of Singapore
BCA Academy / University of Newcastle	Civil Engineering
Construction Management (Building)	Mechanical Engineering
BCA Academy / Singapore University of Social Sciences	Singapore University of Social Sciences
Building and Project Management	Bachelor of Human Resource Management
BCA Academy / Singapore University of Social Sciences /	
Singapore Polytechnic	Eligibility
<ul> <li>Facilities and Events Management</li> </ul>	Singapore Citizens and Singapore Permanent Residents* who are applying for the part-time built environment undergraduate courses
Nanyang Technological University	
Electrical and Electronic Engineering	* Male applicants must have completed or be exempted from full-
Mechanical Engineering	time National Service

Diploma Sponsorship (Part-time) provides existing built environment professionals with opportunities to upgrade their skills and knowledge by pursuing part-time diploma courses at local institutions. Diploma sponsorship recipients will have 70% of their course fees subsidised and will serve a one-year bond with the sponsoring firm. **Built Environment Courses Republic Polytechnic BCA Academy Construction Engineering** International Human Resources Management ٠ Electrical Engineering & Clean Energy • **Facilities Management** Eligibility Geo-Spatial Information and Technology Singapore Citizens and Singapore Permanent Residents\* who are applying for the part-time built environment diploma courses **Ngee Ann Polytechnic** Building Services & Fire Safety \* Male applicants must have completed or be exempted from full-Electrical time National Service Mechanical Singapore Polytechnic Interior Design Mechanical Technology **Power Engineering** Measurement & Contract Administration

**Building Specialist Sponsorship** is offered by BCA in collaboration with industry firms, to attract, upgrade and retain Singapore Residents in jobs at the specialist, supervisor and foreman level of higher value-adding trades in the built environment sector.

#### BSS(Foreman/Supervisor/Specialist Development/Crane Operations)

Sponsoring firm will pay minimum monthly basic salaries of \$1,850 (first year), \$2,100 (second year) and \$2,300 (third year).

For lift specialists recruited under the Lift & Escalator sector, sponsoring firm will pay either minimum monthly or monthly gross salaries of \$2,100 (first year), \$2,500 (second year) and \$2,900 (third year).

**Incentive** to employee if the employee meets 75% class attendance for the approved course and attempts all assessments/exams therein for the preceding 1 year of employment and training:

- 1st year: \$6,000 incentive payable in 2 instalments
- 2nd year: \$3,600 incentive payable in 2 instalments
- 3rd year: \$2,400 incentive payable in 2 instalments

**Incentive** to employer if the employer meets all sponsor related obligations to the employee:

- 1st year: \$5,000 incentive at year end
- 2nd year: \$5,000 incentive at year end
- 3rd year: \$5,000 incentive at end of BSS programme

Eligibility	у
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Foreman/Specialist Development	Supervisor/Principal Specialist Development
Singapore Resident who is a new entrant or the firms' existing employee who possesses less than 3 consecutive years of experience in the built environment sector; and fulfil entry requirements for the following programmes:	Singapore Resident who is a registered CoreTrade Foreman or possess minimum 3 years of relevant experience or firms' existing employees who has worked in built environment sector for past 3 years; and fulfil entry requirements for the following programmes:
<ul> <li><u>Plumbing Track:</u></li> <li>Nitec in Technology, Facility Technology (Air-Conditioning and Refrigeration)</li> </ul>	<ul> <li><u>Structural Track</u>:</li> <li>National Building Qualification (NBQ) and</li> </ul>

Electrical Track:	Higher National Building Qualification (H.NBQ) offered at the
<ul> <li>Nitec in Technology, Facility Technology (Mechanical &amp;</li> </ul>	BCA Academy
Electrical Services)	
<ul> <li>Nitec in Technology, Facility Technology (Vertical</li> </ul>	Plumbing Track:
Transportation)	<ul> <li>National Building Qualification (NBQ) and</li> </ul>
Nitec in Mechatronics	Higher National Building Qualification (H.NBQ) offered at the
Nitec in Technology, Electrical Technology (Power &	BCA Academy
Control) programme	
	Electrical Track:
	<ul> <li>National Building Qualification (NBQ) and</li> </ul>
	Higher National Building Qualification (H.NBQ) offered at the
	BCA Academy
	Higher Nitec in Facility Management
	Higher Nitec in Technology (Mechatronics Engineering)
	Work Learn Technical Diploma in Mechanical & Electrical
	Services Supervision
	Work Learn Technical Diploma in Vertical Transportation
	Diploma in Engineering (Power Engineering)

#### **BSS (Crane Operations)**

For 3-year single stage programme

• Singapore Resident who is a new entrant or experienced crane operator who possess valid licence of a particular crane operation type <u>or</u> licence which has expired for more than 5 years

Sponsored for 2 different types of Crane operation courses offered at the BCA Academy:

- Crawler Crane Operation Course
- Mobile Crane (Truck Mounted) Operation Course
- Tower Crane (Saddle Jib) Operation Course
- Tower Crane (Luffing Jib) Operation Course