

MEDIA RELEASE

S\$6 MILLION FUNDING FOR BUILT ENVIRONMENT ACCELERATOR PROGRAMME TO BRING MORE INNOVATIONS TO LIFE

- *16 challenge statements from 14 industry stakeholders for innovators to solve*
- *Facebook to be among the official sponsors for the first phase of the programme*

Singapore, 22 February 2019 – The Built Environment Accelerate to Market Programme (BE-AMP) was officially launched this morning by Minister for National Development and Second Minister for Finance, Mr Lawrence Wong. This is an initiative by the Building and Construction Authority (BCA), supported by Enterprise Singapore, and JTC Corporation (JTC), which aims to bring inventors and companies together to fast track the entire innovation process to solve real world industry challenges.

2. A S\$6million funding support will be provided for the development and commercialisation of innovative solutions through Enterprise Singapore's Gov-PACT initiative. Local SMEs will receive up to 70% of the qualifying project cost, while local non-SMEs will receive up to 50%. Beyond funding support, Enterprise Singapore is working closely with BCA to connect solutions providers, including startups, to companies in the Built Environment sector seeking innovative solutions for their current needs. JTC will offer relevant spaces in selected buildings and estates to collaborators to test-bed and/or pilot their new solutions. In addition, Facebook is one of the sponsors for the first phase of BE-AMP and will provide a shortlisted winner with a prize, a mentorship programme and the opportunity to work with Fortis Construction as they build Facebook's data centre in Singapore.

3. 14 industry stakeholders have been identified as demand drivers, also known as Challenge Statement Owners (CSO), for this programme. These are industry firms and public agencies which are seeking solutions for various aspects of the building lifecycle and they were given the opportunity to present their challenge statements to potential solution providers. A total of 16 challenge statements were revealed, spanning across a wide range of topics including smart project management and facilities management, construction manufacturing and fabrication, building inspections, knowledge management and data capture, and construction safety.

4. BCA CEO, Mr Hugh Lim said, “Research and innovation plays an important role in boosting the transformation of our built environment sector. Our BuildSG transformation office has regular engagements with the Trade Associations & Chambers (TACs) and industry stakeholders, and some have given feedback that innovation in the sector often does not progress beyond the first prototype or pilot-testing due to the lack of support and follow-through for full-scale development and adoption. This accelerator programme will help to bridge the current gap between solution seekers and providers. By attracting and matching more innovators to industry firms, we aim to accelerate our drive toward an advanced and integrated sector with progressive and collaborative firms.”

5. Following the launch of BE-AMP and the release of the first set of challenge statements today, solution providers and innovators are invited to submit their proposals by 12 April 2019. Innovators may apply for either (1) the Accelerate Solution Development phase or (2) the Market Development phase, depending on the technical maturity of the solution proposed.

6. For the Accelerate Solution Development phase, innovators have up to five months to develop their solutions. Their solutions will be showcased to potential investors at the International Built Environment Week (IBEW) in September this year, during its ‘Demo Day’ event. In the later Market Development phase, challenge statement owners will work closely with innovators to further refine their solutions for downstream adoption. The entire process for Market Development could take up to 18 months.

7. Mr Michael Yap, Managing Partner, TNB, the appointed accelerator for BE-AMP, said, “Months before this launch, we held a series of engagement sessions with industry stakeholders to elicit their challenges that could potentially be solved through this accelerator programme. The response was most encouraging as many of them were forthcoming in sharing their problems and developing the challenge statements. Some stakeholders shared the same sentiment towards a certain issue and are looking forward to hear from solution providers. This is a good sign as it means there is already a demand for a solution and potential for commercialisation. We are excited to embark on this journey with the built environment sector to transform the way they build.”

8. Firms with ready innovations were also invited to showcase at the event, providing them a platform to link up with potential clients and partners, to adopt or further develop their product. One such firm is POD Structures Pte Ltd which developed the Precision Alignment Lifting Equipment (PALE) for hoisting and installing modular building components like Prefabricated Bathroom Units (PBUs) and a lightweight, rapidly deployable modular building system.

9. Said Eunice Koh, Assistant Chief Executive Officer, Enterprise Singapore, “Gaining early access to industry problem statements which customers are prepared to pay to solve will help our startups and companies develop commercially-relevant solutions. This market-led innovation approach enables them to work closely with the industry, fine-tune their solutions and scale up both locally and overseas in a shorter timeframe. ESG’s financial and non-financial support through Gov-PACT will contribute to a more vibrant innovation ecosystem in the construction sector.”

10. JTC’s Assistant Chief Executive Officer, Mr Heah Soon Poh, said, “As a BE-AMP partner, JTC will offer relevant spaces in selected buildings and estates to collaborators to test-bed and/or pilot their new solutions. With the opportunity to test the feasibility of their ideas in a large-scale real world environment, companies can accelerate the market deployment process and develop their track record.”

11. About 370 stakeholders comprising developers, builders, consultants, trade associations and chambers (TACs), innovators, incubators, accelerators, and regulators have signed up for the event. They were keen to learn more about the programme and how they could benefit from it. Interested parties can find more details about this programme at the BE-AMP website (www.tnb.vc/BEAMP) .

Enclosed

Annex A – [Factsheet on the Built Environment Accelerate to Market Programme \(BE-AMP\)](#)

Issued by the Building and Construction Authority on 22 February 2019

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 - Factsheet on the Built Environment Accelerate to Market Programme (BE-AMP)

1. The **objective** of the Built Environment – Accelerate to Market Programme (BE-AMP) is to build up a vibrant eco-system of innovators to support the transformation of the Built Environment Sector.

Phases in BE-AMP

2. The BE-AMP consists of **2 phases**.

a. **Phase 1: Accelerate Solution Development Phase**

Under Phase 1, the solutions are "fast-tracked" to meet the needs of the industry. These needs will be identified by the industry stakeholders who will also act as the challenge statement owner (CSO¹) throughout the programme. This phase is expected to take up to five months. During this solution development, regulators will also be consulted to identify possible bottlenecks that could impede the solution adoption.

The outcome of Phase 1 is a minimum viable product (MVP²).

¹ CSOs stands for Challenge Statement owners. CSOs are Industry Stakeholders who proposed challenge statement(s) to address their near-term organisational challenge(s).

² A minimum viable product is the most pared down version of a product that can still be released. An MVP has 3 key characteristics; i) enough value that people are willing to use

With an MVP, shortlisted innovators³ will then showcase their solutions at the “Demo Day”. The interests of stakeholders (industry players, value chain players, venture companies) are consolidated in order to solicit support for downstream solution refinement, pilot deployment and technology investment for the subsequent “Market Development” phase.

b. Phase 2: Market Development Phase

Under Phase 2, CSOs are engaged with innovators to drive further solution refinement, test-bed the technology through a pilot and build up low level manufacturing capabilities to facilitate downstream adoption. This phase aims to grow demand for the solutions and provide a sustainable business model. This phase may take up to 18 months to yield results.

Thematic Challenges

3. The proposed themes for the first cycle of BE-AMP includes the following:
 - a. **Streamlining construction delivery processes** through Integrated Digital Delivery (IDD), Smart Assets, Maintainability and Design for Manufacturing and Assembly (DfMA) solutions. Possible solution areas are:
 - i. IDD solutions to improve productivity in DfMA and Integrated Construction Prefabrication Hubs (ICPHs) processes
 - ii. Integrated solutions for Maintainability and Quality related activities
 - iii. Smart assets management solutions
 - iv. DfMA solutions in building design
 - b. **Advancing construction technologies** through Robotics, 3D Printing and Advanced Materials. Possible solution areas are:
 - i. Development of new capabilities in 3D Printing for Integrated Construction Prefab Hubs (ICPH)
 - ii. Integrated Robotics solutions for onsite and offsite work

or buy it initially; ii) demonstrates enough future benefit to retain early adopters; iii) provides a feedback loop to guide future development.

³ *Innovators are solution providers who solve challenge statement(s) proposed by CSOs.*

Program Accelerator

4. BCA has engaged **TNB Accelerator Pte Ltd** to co-organise the programme.

TNB Accelerator will:

- a. Surface and consolidate challenges of industry and transform them to challenge statements which are relevant and of interests to the innovation community.
- b. Bring in innovations (locally, regionally and globally) that fit the challenge statements
- c. Help innovators to shape their business models
- d. Provide access to innovation network to drive innovation development and adoption (*e.g. potential solution providers, investors, VCs, production facilities, and market for solutions*)

Proposal Evaluation

6. During proposal submission, innovators may apply for either (1) Accelerate Solution Development or (2) Market Development, depending on the technical maturity of the solution proposed.

Evaluation for Accelerate Solution Development phase would focus on technological offering of the innovators while assessment for the Market Development phase would include both technological offering and financial capability of innovators. Innovators who wish to apply directly to the market development phase must fulfil the following criteria:

- Have a fully functional prototype to demonstrate on Demo Day
- Confirmation from the CSOs to test-bed/pilot the solution
- Demonstrate that the company is capable of funding the full project via means such as investments, revenue or capital

If the potential innovators fail to meet one or more of the above criteria, they will be further assessed on a case-by-case basis.

The evaluation of the proposals for each Phase 1 and 2 is expected to take around 9 – 12 weeks, including the assessment for funding support.

Funding Support

5. Enterprise Singapore has a funding scheme to support shortlisted and eligible local innovators. Funding quantum would vary for local-SME⁴ and local non-SME innovators. To qualify as local SMEs, the companies must fulfil the following criteria:

- Registered and operating in Singapore
- Have minimum of 30% local shareholding
- Have group annual sales turnover of not more than S\$100 million or group employment of not more than 200 employees

Local SMEs that are shortlisted to participate in the programme will be provided with funding support of up to 70%⁵ of the qualifying project cost, capped at S\$30,000 for phase 1 (Accelerate Solution Development Phase) and capped at S\$250,000 for phase 2 (Market Development Phase).

Examples of qualifying and non-qualifying cost are:

Qualifying Cost	Non-Qualifying Cost
<ul style="list-style-type: none">• Manpower• Equipment and Software⁶• Professional Consultancy	<ul style="list-style-type: none">• Maintenance• Warranty• Common Office Equipment

Foreign companies are invited to participate. To qualify for government funding, foreign technology providers are required to co-develop the solution with Singapore SMEs.

⁴ SME refers to Small & Medium Enterprises

⁵ Local non-SMEs can be funded up to 50% of qualifying project cost, subjected to the same funding caps for both phases

⁶ Equipment and software are supported at up to 50% for local SMEs and up to 30% for local non-SMEs