

MEDIA RELEASE

BUILT ENVIRONMENT INDUSTRY TRANSFORMATION MAP TO FACILITATE INTEGRATION AND COLLABORATIVE BREAKTHROUGH ACROSS ENTIRE VALUE CHAIN

Singapore, 6 September 2022 – The refreshed Built Environment Industry Transformation Map (ITM) (see **Annex A**) will help stakeholders within the sector collaborate more effectively across the value chain, said Mr Desmond Lee, Minister for National Development and Minister-in-charge of Social Services Integration, at the opening of the International Built Environment Week (IBEW) 2022.

2 The Construction ITM and Real Estate (Facilities Management) ITM, previously launched as two separate ITMs in 2017 and 2018 respectively, have been amalgamated into one Built Environment ITM to transform the Built Environment (BE) sector through the three key stages of a building's life cycle - from planning and design, construction, to operations and maintenance.

3 “Building on the progress of the ongoing transformation, the Built Environment ITM is a timely refresh, as it recognises the need for greater collaboration amongst BE stakeholders as well as the shifts that have been made in technological advancements, sustainability efforts and longer-term structural trends,” said Mr Liam Wee Sin, Future Economy Council (FEC) Urban Systems (US) Cluster Co-Chair.

4 “In formulating the Built Environment ITM, we have engaged more than 2,500 partners from the industry firms, Trade Associations and Chambers (TACs), Government agencies, unions, Institutes of Higher Learning (IHLs) and students to gather inputs on the proposed new strategies and initiatives. Going forward, it is vital

that firms and individuals continue to upskill themselves as we push ahead in our transformation efforts”, said Mr Tan Kiat How, Senior Minister of State, Ministry of National Development and Ministry of Communications and Information, FEC US Cluster Co-Chair.

Integrated Planning and Design (IPD) to Foster Greater Collaboration

5 One of the key transformation areas is on Integrated Planning and Design (IPD), where stronger collaboration across the building life cycle can optimise resources. This will build on our existing efforts for Integrated Digital Delivery (IDD), which allows project stakeholders to collaborate with one another through digital platforms. Design considerations for the building’s entire life cycle, including Facilities Management (FM), are factored in at the design stage, enabled by digitalisation, Common Data Environment (CDE) standards and progressive procurement.

6 Under the refreshed BE ITM, BCA expects to increase the IDD adoption rate by Gross Floor Area (GFA) for new developments from 34% today to 70% by 2025. The BE ITM also encourages the industry to move towards collaborative contracting (see **Annex B**) where contracting parties, including the builder and facilities management firm, work together towards shared project goals at the start of the project. Seven Government Procuring Agencies have identified nine upcoming projects to pilot collaborative contracting. Contract Management consultants such as Turner & Townsend, WT Partnership, AECOM and Threesixty are also supporting this effort by providing advisory services to private sector clients.

Advanced Manufacturing and Assembly (AMA) to Increase Use of Automation

7 The second key transformation area is through Advanced Manufacturing and Assembly (AMA), to enhance the efficiency of the supply chain and construction process by mainstreaming Design for Manufacturing and Assembly (DfMA). This has helped firms reduce their reliance on foreign manpower and raise productivity. Moving forward, BCA targets to increase the DfMA adoption rate by GFA from 44% today to 70% by 2025. Under AMA, more off-site production will be done in a factory environment with greater adoption of automation. By improving the quality of work and working environments, including at the construction site, the industry hopes to attract and retain

talent in the sector. The shift from a project-based building approach to a modular, product-based one also enables industry firms to reap greater economies of scale.

8 At the same time, BCA is also working with stakeholders to establish new Integrated Construction Parks (ICPs) across Singapore (see **Annex C**). In ICPs, construction facilities such as aggregate terminals, aggregate storage yards, Ready-Mix Concrete (RMC) batching plants and precast plants will be co-located for greater synergy across the entire supply chain. The first ICP in Jurong Port will progressively begin its operations later this year.

Sustainable Urban Systems (SUS) to accelerate Decarbonisation Efforts

9 The third key transformation area, Sustainable Urban Systems (SUS), will facilitate the ramping up of decarbonisation efforts in the industry for a more sustainable and liveable Built Environment. SUS aims to achieve low emissions buildings and districts with efficient building management enabled by Integrated, Aggregated and Smart FM.

10 Under SUS, BCA will continue with existing efforts to meet our “80-80-80 in 2030” targets set under the latest edition of the Singapore Green Building Masterplan. BCA will also aim for a more ambitious target of 80% of public buildings adopting Smart FM by 2030, and set a new target for 40% of private buildings by GFA to adopt Smart FM by 2030. Announced earlier this year, the \$30 million Integrated Facilities Management (IFM) and Aggregated Facilities Management (AFM) Grant for firms which wish to adopt IFM/AFM will be open for applications from 6 September 2022 (see **Annex D**). To date, about 10 companies have expressed interest in applying for the grant.

Greater Industry Leadership in Transformation

10 As we embark on the Built Environment ITM, there is also a need to adopt a more ambitious approach in transforming the value chain as a whole, and push for best-in-class outcomes in projects. Developers and sector leaders are beginning to recognise the pivotal role they play in transforming the industry by running and developing a capable supply chain. To this end, BCA has been developing the Growth and Transformation Scheme (GTS) to pilot this value chain approach. A set of outcomes for

the GTS has been developed with inputs from the industry over the past year to support these strategic alliances (see **Annex E**).

11 Lastly, in recognition of projects that have embodied the transformation goals of the ITM, the newly launched Built Environment Transformation Award recognises firms and industry practitioners who have honed their capabilities to build projects that exemplify productivity, digitalisation and sustainability (see **Annex F**). This year's winners include The Tapestry, PSA Liveable City, Eunoia Junior College as well as JTC's 1 and 7 North Coast developments in Woodlands North Coast.

12 BCA will continue to engage the industry to accelerate transformation efforts and gather feedback on the new initiatives under the Built Environment ITM. Those who have embarked on transformation efforts have seen the immense downstream benefits that they can derive such as when they procure responsibly, which in turn ensures that their projects can be delivered quickly, at higher quality, and more sustainably. Together with large firms and SMEs, we will work towards an advanced and integrated Built Environment sector, comprising progressive and collaborative firms, offering quality jobs and led by a competent Singaporean core.

Issued by the Building and Construction Authority on 6 September 2022

Enclosed:

Annex A: Factsheet on Built Environment ITM

Annex B: Factsheet on Collaborative Contracting

Annex C: Factsheet on Integrated Construction Parks

Annex D: Factsheet on Integrated Facilities Management (IFM) and Aggregated Facilities Management (AFM) Grant

Annex E: Factsheet on the Growth Transformation Scheme

Annex F: Factsheet on Built Environment Transformation Award

About BCA

The Building and Construction Authority (BCA) champions the development and transformation of the built environment sector, in order to improve Singapore's living environment. BCA oversees areas such as safety, quality, inclusiveness, sustainability

and productivity, all of which, together with our stakeholders and industry partners, help to achieve our mission to transform the Built Environment sector and shape a liveable and smart built environment for Singapore. For more information, visit www1.bca.gov.sg.

About International Built Environment Week (IBEW)

The International Built Environment Week (IBEW) is organised by BCA International, a wholly owned subsidiary of the Building and Construction Authority, in partnership with RX Singapore. Widely regarded as the most comprehensive event on the built environment in the Asia Pacific, the IBEW is the ideal platform for the global community to converge and share knowledge, exchange experiences and explore business opportunities. For more information, visit the official website at <https://www.ibew.sg/>.

BEX ASIA

[BEX Asia](#) continues to serve as a launch pad for transformation in areas of sustainability, energy efficiency, productivity, and smart solutions that would propel the industry forward. The trade exhibition also provides an ideal platform to foster partnerships. At least 5 Memorandums of Understanding (MoUs) offering a good mix of collaboration areas from digitalisation to standards and technology developments will be inked over the three days, along with a variety of activities like BE Demo Day and awards ceremonies.

ITM 2025

The Future Economy Council (FEC) was set up in 2017 to support the growth and transformation of Singapore's economy for the future, including the development and implementation of the Industry Transformation Maps (ITMs). ITMs are sector-specific roadmaps to drive industry transformation, support the growth of our enterprises, and help Singaporeans take up quality jobs and seize opportunities. Co-created by the Government, industry stakeholders, and unions, each ITM covers areas such as productivity, internationalisation, innovation, digitalisation, resilience, sustainability, and jobs & skills. To address the systemic shifts arising from the COVID-19 pandemic and other changes in the global economy, the FEC has embarked on ITM 2025, to refresh all 23 ITMs (including the BE ITM) to address the challenges and opportunities for Singapore, our businesses, and our workers.

An initiative under:

