

**WELCOME ADDRESS BY MR HUGH LIM, CHIEF EXECUTIVE OFFICER OF BUILDING AND
CONSTRUCTION AUTHORITY AT THE BCA-REDAS BUILT ENVIRONMENT AND PROPERTY
PROSPECTS SEMINAR 2020 ON 8 JANUARY 2020**

Mr Zaqy Mohamad

Minister of State for National Development and Manpower

Mr Lee Fook Sun

Chairman, Building and Construction Authority

Mr Chia Ngiang Hong

President, Real Estate Developers' Association of Singapore

Distinguished guests

Ladies and Gentlemen

Introduction

1 Good morning and a happy new year to everyone! Welcome to the BCA-REDAS Built Environment and Property Prospects Seminar 2020! We have been organising this milestone event with our long-term partner, REDAS since the 1990s to usher in each new year, and share with industry our assessment of the sector's prospects and business opportunities. Before that, let me highlight our collective achievements in the past year that have brought us closer to realising our shared vision under the Construction Industry Transformation Map.

Design for Manufacturing and Assembly (DfMA)

2 Firstly, the industry has made steady progress in the wider adoption of Design for Manufacturing and Assembly, also known as DfMA. For 2019, the DfMA adoption rate improved to 30%, up from 22% in 2018, and our cumulative site productivity has improved to more than 17% since 2010.

3 This would not be possible without the strong and sustained support by private and public sector developers, such as Frasers Property, CEL Development, Hong Leong Investment Holdings, HDB, to name a few. City Developments Limited (CDL) is another forerunner in our DfMA journey. The success of their first and voluntary Prefabricated Prefinished Volumetric Construction or PPVC

project, the Brownstone Executive Condominium, have paved the way for subsequent PPVC projects such as the Tapestry and Whistler Grand.

4 While the industry is making steady progress towards our 2020 target of 40% DfMA adoption rate and 20% site productivity improvement, there is more to be done, if DFMA is going to become the mainstream mode of construction for Singapore.

5 We have therefore been progressively reviewing the buildability framework to reflect that DfMA should become the default way of building, to address the challenge of sourcing enough skilled manpower, which even larger, more populous countries in our region have encountered. Last month, we enhanced the buildability framework to require very large (25,000 sqm and above) residential (non-landed) developments to meet a higher buildable design score through adopting more advanced DfMA technologies. These developments account for about half of the total GFA at industry level. To encourage more innovative solutions from the industry, alternative design solutions will also be accepted but they must meet the stipulated productivity outcomes. On this note, I would like to encourage firms to tap on the Building Innovation Panel or BIP whose scope we have expanded since last January, to provide in-principle acceptance for all innovative building solutions ahead of their project implementation. This will nicely complement the more flexible buildability framework we have introduced.

6 To meet this strong upcoming demand for DfMA, we have also catered more sites in Singapore for Integrated Construction and Prefabrication Hubs or ICPHs to build up the supply capacity. The 4th and 5th ICPHs by Soilbuild and Teambuild have been operational since last year and the 6th ICPH by Hong Leong-Sunway is slated to be in operation by 2022. Last month, we released 2 more ICPH-sites at Jalan Gali Batu, for tender. I would like to invite our industry to participate in these tenders for the ICPHs, not just to build up supply capacity to match the growing demand, but also to deepen design, engineering and manufacturing capabilities in DfMA technologies here in Singapore. Given the challenges in attracting skilled labour in many regional markets, we are confident that expertise in DfMA will give Singapore firms an opening in overseas markets as well.

Green Buildings

7 We are also committed to making green buildings a priority for Singapore. By the end of 2019, we have greened over 40% of our total gross floor area, half way toward our long-term goal of having 80% green buildings by 2030.

8 Indeed, we see growing traction from developers in adopting green building. An independent consultancy study had validated that Green Mark buildings reap nett positive savings throughout their lifecycle with the energy savings far outweighing the upfront investment cost. The lifecycle cost savings are commensurate with the Green Mark rating. For instance, a Green Mark Platinum non-residential building could attain a lifecycle Net Present Value, or NPV savings of about \$225 per sq metre of gross floor area, about 2 times the NPV savings of a Green Mark Gold Plus building and 4 to 5 times the NPV savings of a Green Mark Gold Building. This provides a strong business case for developers and operators to achieve the highest Green Mark rating available.

9 The findings of this consultancy study further encourages our collective ambition of pushing the boundaries of building energy performance towards Super Low Energy (SLE) standards and challenging our sector to design and deliver buildings that are at least 60% more energy efficient than 2005 standards. To date, there are 17 GM – SLE buildings and we have recognised forerunners such as Samwoh, NTU and NUS under 2019’s inaugural GM-SLE Awards.

Integrated Digital Delivery (IDD)

10 Digitalisation continues to be a key transformation focus area and Integrated Digital Delivery, or IDD, has proven to be a game changer for the sector. By the end of 2019, there were 35 public and private sector projects piloting IDD, and we are making steady progress towards our 2020 target of piloting 40 to 60 IDD projects and building up IDD capabilities in 150 to 180 firms. These IDD projects cover a wide range of project types, including infrastructure projects such as LTA’s Kim Chuan Depot, and several are pushing for IDD adoption up to the FM stages, such as PSA’s Tuas Port Maintenance Base, and CapitalLand’s Rochester Commons mixed development. Minister of State for National Development and Manpower, Mr Zaqy Mohamad, will subsequently share how some of these projects have benefitted from IDD adoption.

11 As part of our efforts to develop an IDD ecosystem with enabling solutions and standards, BCA and IMDA have awarded Delphi the first technology grant call to develop a Construction Digital Platform. This platform, which is built on open standards, would enhance interoperability across various IDD and BIM softwares, enable seamless exchange of data, and more importantly promote deeper and wider collaboration across the industry.

BuildSG Transformation Fund

12 These achievements in DfMA, Green Building and IDD are themselves a testament to the BuildSG national movement, which represents our joint commitment to transform the way we build Singapore. Beyond the setting up of the one-stop transformation office, BuildSG, we have

announced the BuildSG Transformation Fund, or BTF, early last year, bringing together the various incentive schemes to support Built Environment firms in technology adoption, research and innovation efforts and workforce development and upgrading. I welcome more of you to approach the BuildSG office with your transformation plans and needs. They will work with you to achieve your transformation outcomes and assist you to tap on the BTF.

International Built Environment Week (IBEW) 2019

13 It is also in line with this collaborative spirit that we successfully hosted the inaugural International Built Environment Week or IBEW in partnership with 12 TACs, including REDAS, as a pinnacle event involving the entire Built Environment value chain. More than 12,000 industry professionals over 50 countries attended the event and learnt about best practices, exchanged ideas and explored business opportunities, facilitating more than SGD300M worth of deals.

14 The IBEW also featured BE Connect, a premier business platform that brought together Singapore urban solution providers and 80 overseas developers covering master-planning, engineering, energy efficiency services, DfMA, BIM consultancy and other urban solutions such as greenery. With SGD30M worth of deals facilitated, it was a strong first showing for the new platform, and speaks well of the growing regional demand for Singapore firms' capabilities! I recall during the week, a senior leader from a neighbouring country, whom we offered to arrange a visit to an ICPH, remarked, "I don't need to see it. If it's a Singapore firm, I know they can get the job done."

15 We will build on the success of the inaugural IBEW, with a focus on Innovation for this year's edition. Our proposed 2020 IBEW tagline will be "Innovation: Powering Sustainable and Smarter Cities". We look forward to all of you joining us from 1st to 4th September 2020, so please book those dates, and do consider exhibiting or hosting site visits at the firm-level as well!

Research and Innovation (R&I)

16 As suggested by this year's IBEW theme, one of our key focus in the new year will be to step up the industry's research and innovation efforts to power our next bound of transformation and bring about further advancements in DfMA, digitalisation and green buildings.

17 To this end, the proposed Built Environment Technology Alliance, or BETA is intended to be a technology adoption and innovation platform for members to tap on shared resources and facilities, bringing together Built Environment firms and solution providers. As BETA is a

membership-based alliance, firms will have to join to access the benefits. Member firms can look forward to tapping on BETA catalyst funding to co-develop technologies for specific needs. There would also be a mechanism to address regulatory concerns early to facilitate more rapid downstream deployment. BETA will assist smaller firms with their technology and innovation planning and provide business networking opportunities amongst members.

18 I encourage our leading firms – developers, consultants and builders - to participate in BETA's programmes. BETA will enable firms to stay ahead of the curve as you translate your technology and innovation investment into enterprise-level capabilities, enabling firms to be more competitive at home and abroad.

Conclusion

19 The next 5 to 10 years holds many exciting possibility and opportunities. The key to unlocking them lies in our ability to enhance partnership and harness the synergy of collaboration, breaking the notion that our industry is a fragmented one. On this note, I would like to acknowledge and thank REDAS for hosting this event with us. I look forward to working with all of you to change we way we build Singapore, together. Thank you and have a prosperous new year ahead.