

## Annex C: Factsheet on BCA-IMDA Common Digital Platforms Grant Call

### What is Integrated Digital Delivery?

1 Integrated Digital Delivery (IDD) refers to the use of digital technologies to integrate work processes and connect stakeholders working on the same project throughout the construction and building life-cycle: namely, from design, to off-site fabrication, to on-site assembly and construction, and finally to operations and maintenance.

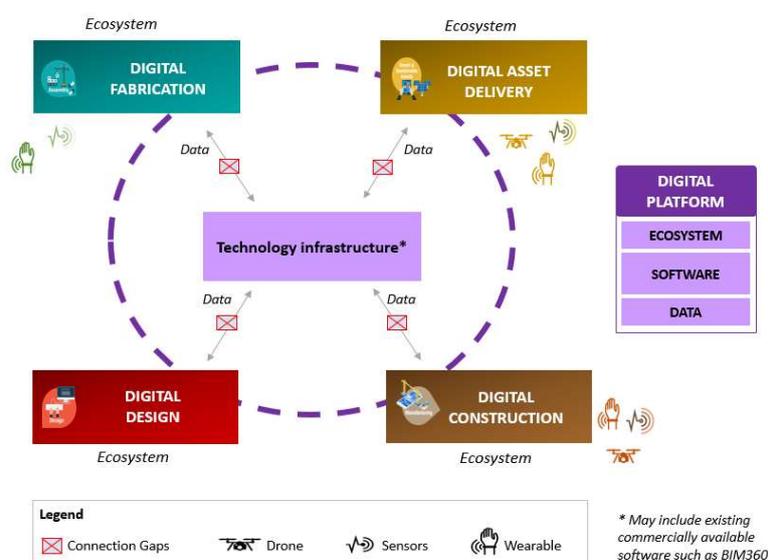
2 IDD is one of the key thrusts in the Construction Industry Transformation Map (ITM), and is aligned to the nation's efforts in transforming its construction industry by creating a highly-skilled workforce trained in use of the latest architecture, engineering, construction and operations technologies.

### IMDA Joint Grant Call for Development of Construction Digital Platforms

3 In support of the Integrated Digital Delivery (IDD) thrust, IMDA and BCA launched a joint S\$4 million technology grant call in November 2018.

### Construction Digital Platforms

4 A digital platform comprises three fundamentals – the integration of an ecosystem, software and usage of data. With a relevant business model, the digital platform can help companies digitalise and benefit from the digital platform itself.



1) Requirements of a construction digital platform:

- The proposed construction digital platforms should support the integration of at least one aspect of the IDD that addresses a problem or a challenge in the built environment.
- It must enable interoperability of data through established open data formats commonly adopted in the built environment.
- It should enable firms to collaborate, and allow innovative solutions and other third-party solution providers to plug in through open application programme interface (APIs).
- The ability of computer systems or software to exchange and make use of information / data

2) Proposals for construction digital platforms:

- Singapore-based technology firms are encouraged to submit proposals that will identify new business models, develop new revenue streams, and create greater business opportunities for the built environment.
  - Technology firms will be able to collaborate with built environment practitioners to develop technology-enabled business models and construction digital technologies together.

### **Delphi Digital Platform for the Construction Industry**

5 Digital platforms are to create value by facilitating exchanges between two or more interdependent groups<sup>6</sup>. Typically, such platforms aggregate ecosystems of end-users and producers (demand and supply) to transact with each other through technology. This enables increased information sharing, enhances collaboration, drives innovation in new products and services, and encourages growing network effects in a Digital Economy.

6 In an industry where there is a lack of capitalizing on data usage, lack of interconnectivity between different solutions platform, and interoperability issues due to current isolated systems, IMDA and BCA has awarded the development of a

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<sup>6</sup> ["Five Ways to Win with Digital Platforms"](#), Accenture, 2016

Construction Digital Platform to Delphi Pte Ltd, a joint venture between Hubble Pte Ltd and Aurum Investments Pte Ltd.

7 Delphi will deploy a cloud-based digital platform that will offer a suite of digital services to allow even the smallest contractor to manage a project end-to-end from the time he receives 2D or 3D drawings from the architect until the end of the construction phase. The contractor will be able to send specifications to and collaborate with fabricators, mechanical and electrical engineers, sub-contractors, suppliers, and supply chain players on a single unified platform. This digital platform will help participants overcome problems such as a lack of interconnectivity between different technology solutions and other interoperability issues.

8 Beyond contributing to the digitalisation of the construction sector, the Hubble Digital Platform is envisaged to catalyse the growth of the technology industry catering to the construction sector. The onboarding of currently manual and paper-based projects on to the digital platform will create new opportunities for technology companies to diversify their markets and capabilities and customer base. As the platform will be built on open standards, new and existing third-party technology service providers such as quantity surveyors, M&E consultants, DfM consultants, can offer their own digital products and services on the platform. It is hoped that the platform will expand beyond Singapore, and support the export potential of our local technology industry.

9 Another objective of this digital platform is the development of data products that can be used by different types of built environment related companies. Similar to how financial houses package and sell insights to the investor community, it is hoped that the platform will be able to generate and sell insights to the construction community to help them better prepare to meet market demands. For example, Delphi will develop AI algorithms to understand how much materials and manpower will be required for specific building types. Such information can help contractors to bid for projects more accurately, and help suppliers to manage inventory better.

10 As one of the early adopters of Delphi's digital platform, IMDA and BCA will work closely with Delphi to ensure that the platform is open and that it meets the needs of the construction sector. Woh Hup Pte Ltd, one of Singapore's largest privately-owned construction and civil engineering specialists, is committed to be one of the early adopters of the Hubble Digital Platform, to pilot three projects - Kim Chuan Depot, Parksuites, Nyon@Amber – during the initial development and testing phases.

### **Industry Quote**

11 "The construction industry undertakes large and complex projects with massive amount of data generated, most of which goes uncollected. We want to change this. We seek to transform the construction industry with the data it generates. The aim is for the Hubble platform to play an integral role as the central data repository for the entire construction industry - where data is collected, stored, and utilised for optimisation and monetisation. We envision the Hubble platform to be the Bloomberg of construction where organisations across the entire Integrated Digital Delivery value chain such as property developers, architects, contractors, and facilities managers - can collaborate, share, transact, and monetise their data. We will begin our endeavour by focusing on the pre-fabrication and pre-casting segment of the industry, which involves complex coordination across multiple stakeholders and where the most material and cost data will be collected," said Lin Shijing, Founder & CEO, Hubble Pte Ltd

12 "Woh Hup believes that a Construction Digital Platform will hugely benefit the whole industry. The Hubble platform will provide a seamless, integrated channel for data collection, data analysis and data sharing, where stakeholders are able to aggregate their own practices with other members within the industry. This open process will allow individual organisations to learn from each other, and facilitate accelerated growth for them and for the industry as a whole. We are excited about this opportunity to work with IMDA, BCA and Hubble to transform industry practices for the better," said, Yong Derong, Executive Director, Woh Hup (Private) Limited.

### **About Delphi**

13 Hubble Pte. Ltd and Woh Hup Pte. Ltd. via their investment arm Aurum Investments Pte. Ltd. have entered into a joint venture with Delphi Pte. Ltd. to develop a Construction Digital Platform (CDP) for Singapore's construction industry.

14 Hubble is a Singapore technology company focused on the Construction industry. Founded in 2016, Hubble has bootstrapped and grown rapidly – with consecutive years of profitability - to become one of the leading technology start-ups in the Construction industry. Hubble was recognised as one of the 15 most promising start-ups (out of 400 nominations) in the SG TechBlazer Competition in 2018 and selected to represent Singapore in the 2018 Asia Pacific ICT Alliance Awards (APICTA Awards) competition in Guangzhou, China.

15 Woh Hup is one of Singapore's largest privately-owned construction and civil engineering specialist with a 2500 strong workforce generating annual revenues of \$1 billion. Woh Hup will be entering this joint venture via Aurum. Aurum is a Singapore-based multi-million-dollar venture capital fund wholly owned by Woh Hup Holdings Pte Ltd. With an aim to identify and invest in 2 - 3 human centric proptech startups every year, Aurum hopes to empower change and facilitate growth for business, professionals, individuals and its investments across the region.