Annex A: IMDA's Advanced Digital Solutions (ADS) under SMEs Go Digital

Introduction

1 Funding support for Advanced Digital Solutions (ADS) under the SMEs Go Digital programme, was announced as part of the Resilience Budget 2020 to help enterprises deepen their digital capabilities, strengthen business continuity measures and build longer term resilience. Solutions supported under ADS address common enterprise-level challenges at scale, help enterprises to adopt cutting-edge technologies and enable enterprises to transact more seamlessly within or across sectors.

2 The target enterprises to be supported include both large enterprises and Small and Medium Sized Enterprises (SMEs), with SMEs to make up 80% of the enterprises supported.

Funding Support

- **Support level:** Enterprises can receive up to 80% funding support for the qualifying costs of digital solutions.
- **Qualifying costs:** Funding support can cover the costs of hardware, software, infrastructure, connectivity, cybersecurity, integration, development, enhancement and project management. The programme will also cover the cost of deploying these solutions (e.g. acquisition, subscription, lease, transaction, training and professional services like programmers and project managers).

Call for Proposals for Integrated Robotics and Automation Solutions

3 BCA and IMDA are calling for solution providers to submit proposals for Integrated Robotics and Automation Solutions to help enterprises in the built environment sector.

4 The proposals should include solutions to streamline construction specific tasks through digitalisation, robotics and automation, with the objectives of minimising physical interactions, reducing manual operations and integrating digitalisation into business operations. These solutions should also enable enterprises to sustain and transform their businesses amid the COVID-19 pandemic and prepare them to be more resilient in the long run.

5 IMDA and BCA aim to support project leads that are able to deploy Robotics and Automation Solutions to help enterprises in the built environment sector alleviate the manpower shortage constraint and improve productivity on-site and off-site, in a scalable and cost-effective manner.

6 Enterprises can visit https://www.imda.gov.sg/advanceddigitalsolutions to find more information on the ADS support; and other solutions relevant for the built environment sector that are already or soon to be supported under ADS, ranging from construction safety, materials procurement and sustainability for building management.

Annex B: Built Environment Living Laboratory Framework (BE LLF)

Background

1 Technology innovation will be a key enabler for built environment firms to strengthen their competitiveness and help navigate the new normal in a post-COVID-19 future. To do so, firms need to be aware of the opportunities available to test out new and innovative solutions that could benefit the built environment.

2 The Built Environment Living Laboratory Framework (BE LLF) is a platform to facilitate the test-bedding of innovative proposals in living laboratories, such as designated areas within Punggol Town and Jurong Lake Gardens. The BE LLF seeks to strengthen partnerships between the public and the private sector and will open up opportunities to harness and trial new, emerging technologies as we continue to develop cities for tomorrow.

How the BE LLF can assist

3 The BE LLF aims to help firms and technology solution providers in three ways:

a) First, a "one-stop" shop will be available for firms to submit innovative test-bedding proposals. The "one-stop" service will be administered by BCA, and is open to all BE firms and technology solution providers. This provides firms a single touchpoint to submit and process their proposals, without having to approach multiple agencies on their own.

b) Second, proposals that demonstrate merit and acceptable risk will be expedited for test-bedding in living laboratories. Any innovative test-bedding proposal that is ready for deployment and beneficial to the built environment could be accepted under the BE LLF.

c) Lastly, firms will receive support to navigate regulatory clearance processes, and where necessary, a 'regulatory sandbox[1]' could be introduced for proposals facing regulatory issues. This will provide firms greater confidence to continue innovating and enable them to build up their track record.

4 Through the BE LLF, firms will be able to gain access to Government living laboratories to testbed their innovation and receive assistance from MND agencies to ensure smooth deployment of the proposals at the living laboratories. All built environment firms with promising proposals are encouraged to submit their proposals to the LLF "one-stop" shop. More details on the BE LLF and how to submit a proposal to BE LLF can be found at https://www1.bca.gov.sg/buildsg/be-llf.

[1] Regulatory sandboxes create "safe spaces" where firms may be granted temporary regulatory waivers to test their innovative solutions.

Annex C: Building Innovation Panel (BIP)

1 With the aim to facilitate expedient multi-agencies evaluation and in-principle acceptance of innovative solutions, BCA, in collaboration with MOM, SCDF, PUB, LTA, NEA and URA, formed the Inter-agency Building Innovation Panel (BIP)[2] in 2011.

2 Through this collaborative panel, relevant regulatory agencies come together to collectively review the innovative solutions prior to deployment in actual projects. The BIP process accords green lane processing status to plan submissions involving innovative methods, processes, technologies and materials in construction projects accompanied by in-principle acceptance (IPA) certificate from BIP.

3 To transform the Singapore's built environment sector towards a more productive model, BCA has identified a few key strategic trusts including the Design for Manufacturing and Assembly (DfMA)[3] approach to raise construction productivity under Singapore's Construction Industry Transformation Map (ITM).

4 To date, BIP has issued IPAs for two R&A solutions, 52 Prefabricated Prefinished Volumetric Construction (PPVC) and, 46 Prefabricated Bathroom Unit (PBU) systems for adoption in local projects.

5 The BIP was enhanced in Jan 2019 with efforts to bring on board more innovative solutions (e.g. sustainable construction materials, R&A) that will improve Singapore's built environment.

6 R&A solutions were identified as the enablers to enhance the productivity improvement in DfMA and help to build a higher skilled and productive workforce.

For more information, please visit https://www1.bca.gov.sg/buildsg/productivity/building-innovation-panel.

[2] BIP consists of seven regulatory agencies (BCA, MOM, SCDF, PUB, LTA, NEA and URA) to review regulations related to the built environment sector. Potential end-users such as HDB and JTC are invited to provide their views on the proposed innovation.

[3] Design for Manufacturing and Assembly (DfMA) is a key pillar of Singapore's Construction Industry Transformation Map (ITM). It is a game-changing method of construction which involves construction being designed for manufacturing off-site in a controlled environment, before being assembled on-site. More information on DfMA is at https://www1.bca.gov.sg/buildsg/productivity/design-for-manufacturing-and-assembly-dfma