Proposed construction innovative technology for showcasing in the Construction Innovation and Technology Application Centre (CITAC)

Part A:

Title of Technology:	
Subject Area: e.g. Productivity, sustainability, safety, others (pls specify)	
Exhibition Category: (e.g. A1, B2 etc, see note)	
Name of Proposer, relevant organization and contact phone and email:	

Part B:

(1) Need (e.g. problem facing, need of construction industry/of particular trade)
(2) Technology (e.g. description of solution to the problem/need of the industry/trade)
(3) Benefits (e.g. in terms of productivity, safety and health, environment, manpower and cost saving etc for the industry/trade)
(4) Status (e.g. used in foreign country, approved by local government, tried in few local projects, owner of intellectual property right, if any)

(5) Barriers (e.g. government approval problem, intellectual property right problem, no track records/trials in local use)
(6) Approximate procurement time and cost of adopting the proposed technology (e.g. time and cost for supply, installation, testing and commissioning; intellectual property cost etc.)
(7) Points of contact (e.g. relevant government, organizations, manufacturers, suppliers, local agents)
(8) References (e.g. websites, publications, brochures attached)

(9) Provision of exhibits for display in CITAC [Please state the preferred way o f provision to CIC, e.g. at no cost, on loan, reimbursement by CIC of necessary expenses (with cost estimation), rental (with price indication), sales (with price indication)]

Note: The exhibition area is divided into the following 5 categories (i.e. 5Is) with the sub-categories:

(A) **Industrialisation** to encourage off site construction and to uplift the productivity

- A1 Prefabricated Prefinished Volumetric Construction (PPVC), modular construction or prefabrication components
- A2 Innovative materials to reduce weight or use of materials (e.g. light weight floor/walls)
- A3 Innovative materials to enhance sustainability (e.g. recycled materials)
- A4 Innovative manufacturing/ construction process (e.g. Nano technology, 3D concrete printing)
- A5 Innovative supply chain or logistics management (e.g. Radio-frequency identification devices for construction purposes)
- A6 Innovative design and construction process (e.g. Design for Manufacture and Assembly)
- A7 Others

(B) **Informatisation** to efficiently create, capture or process data which will enhance productivity with higher precision and predictability

- B1 Building Information Modelling (BIM)
- B2 Surveying and sensing tools (e.g. Unmanned Aerial Vehicle (UAV), Light Detection and Ranging (LiDAR), photogrammetry etc)
- B3 Augmented Reality (AR), Virtual Reality (VR), Mixed Reality and alike
- B4 Safety warning system
- B5 Other innovative sensing technologies for Internet of Things (IoT) and Big Data Analytics

B6 Mobile Apps for construction purposes

B7 Others

(C) **Intelligentisation** to enhance the productivity through the use of intelligent human-machine interface

C1 Manual handling auxiliary equipment (e.g. exoskeleton, lifting arm etc.)

C2 Construction and collaborative robots (e.g. drilling, welding, painting, inspection, etc)

C3 Others

(D) **Integration** to enhance the stakeholders' collaboration

D1 New arrangement for contracts, procurement, and supply chain management (e.g. NEC, Integrated Project Delivery, etc)

D2 Radio Frequency Identification (RFID) or BIM enabled integration process

D3 Others

(E) **Infinity** are emerging innovations for materials, products, process or services which are still in research and/or infancy stage but may assist in uplifting the future productivity

E1 Innovative composite materials (e.g. cementitious composite)

E2 Innovative waterproofing system

E3 Innovative backfilling system

E4 Others