21-year-olds bag first prize for Singapore's first climate-focused hackathon

- *Inaugural climate-focused hackathon crowd-sourced innovative and cost-effective green building solutions to mitigate climate change.*

- *The hackathon attracted a wide range of participants with the youngest at 13 years old and the oldest at 63, among which about half of them are students.*

6 September 2016 – A team of four 21-year-old participants emerged as the top winner of the inaugural Climate Innovation Challenge (CIC), the first climate-focused hackathon jointly organised by the Building and Construction Authority (BCA); JTC; and National Climate Change Secretariat (NCCS), Strategy Group, Prime Minister's Office.

The top-winning team designed a smart socket that aims to create greater awareness among office workers about how their actions affect energy consumption and ultimately shape energy-saving habits in the office environment. The smart socket can be easily toggled on and off with the use of RFID[1] tag enabled staff passes. Users of the "Smart Electronic Tracking Socket" will be sent a text message if any of the switches connected to the smart socket are not turned off (e.g., after office hours). Users can also compare their energy use and compete to be the lowest energy consumer.

Inspired by his observations at home, Justin Soh, 21, who is the leader of the top-winning team said, "I came up with this idea based on my personal experience at home. Among my three brothers and me, I have the habit of turning off my laptop's switch while my brothers will leave it on overnight. It would be nice to be able to modify the socket and make it personal so that it becomes everyone's responsibility to help save electricity and the environment," he added.

The first runner-up, a team of BCA Academy students and lecturer, designed a system that uses remote sensors to monitor building systems, and prompts facilities managers when maintenance is required (see Annex A for information on the top three winning ideas).

Held at JTC LaunchPad @ one-north from 12 to 14 August 2016, the inaugural CIC saw the gathering of some 140 participants to brainstorm green solutions for non-residential buildings and outdoor spaces. The hackathon, which aimed to crowd-source innovative solutions to mitigate climate change, attracted a wide range of participants with the youngest at 13 years old and the oldest at 63. Among them, about half are students.

This hackathon was organised to promote and drive the green building movement, and to achieve the nation-wide target of greening 80% of all buildings in Singapore by 2030. The greening of Singapore's buildings is a key component of the nation's Climate Action Plan, which amongst others, seeks to reduce its emissions intensity [2] by 36% from 2005 levels by 2030. By leveraging technology and data analytics, hackathons are good platforms to identify potential solutions that may push the frontiers towards the ambitious targets.

The hackathon is also part of the government's efforts to spur low carbon innovation and encourage collective climate action, both of which are key pillars of the Singapore's Climate Action

Plan. Through such events, the agencies hope to crowd-source innovative solutions to mitigate climate change.

The seven cash prizes amounted to $20,000. The top three winning teams developed information and communications technology (ICT) solutions to monitor energy use, alert users or building operators to energy inefficient operations, and automatically turn off devices when not in use.

Mr Ang Kian Seng, BCA's Group Director of Environmental Sustainability, who was one of the judging panellists for CIC, said: "This inaugural hackathon saw a spectrum of interesting ideas developed by passionate participants from all walks of life. Indeed, we should embrace such disruptive and game-changing technologies to change the way we build. It is useful to tap the creative juices of the public especially the young to co-create innovative ideas that help the community and benefit the built environment sector. We believe this hackathon was beneficial in raising awareness and underscoring the importance of climate change issues."

JTC, co-organiser of the hackathon, believes CIC 2016 provided a viable platform to crowd-source innovative ideas that improve building and estate management. With the integration of work, live, play and learn elements in next-generation mixed used estates, JTC recognises the need for innovative solutions that enable these elements to co-exist sustainably.

One of the judges during CIC, Mr Anil Das, Director of JTC's Innovation Programme Office, said, "We are always on the lookout for sustainable urban solutions. This is because companies and businesses will benefit if we can improve the way we design, build and manage our industrial buildings and estates. Apart from working together with government agencies, universities and start-ups, we also use our open innovation calls to solicit new ideas that can be test-bedded in our buildings and estates."

Another judge, Mr Ho Hiang Kwee, NCCS' Lead Technologist, said: "I am heartened to see our young people combine their passion for technology and climate change action to develop solutions to reduce energy consumption and greenhouse gas emissions. We hope that the hackathon has spurred the community's interest in creating innovative solutions that will not only benefit Singapore but also help address the global challenge of climate change."

Mr Desmond Lee, Senior Minister of State for Home Affairs and National Development will be giving out prizes to the hackathon winners at the International Green Building Conference (IGBC) Welcome Reception at the Marina Bay Sands Expo and Convention Centre on 7 September 2016.

The winning ideas will be on exhibit at Marina Bay Sands Level 3 from 7 to 9 September 2016 and at the Green Living Expo from 9 to 11 September 2016.

Enclosed:
AnnexA

Jointly issued by: Building and Construction Authority, JTC Corporation and National Climate Change Secretariat, Strategy Group

1 Radio-frequency Identification (RFID) can be used to automatically identify and track tags attached to objects
2 Emissions Intensity is defined as greenhouse gas emissions per $GDP