Open Innovation Call, Singapore: CapitaLand Sustainability X Challenge (CSXC)

Launch: November 2020
Grand Finale: 11 June 2021
Aim of the Open Innovation Call

CapitaLand Sustainability X Challenge (CSXC) called for proposals across the globe to make buildings more climate-resilient and resource-efficient. There were three overall aims of the call:

- **Open collaboration** – Access to both local and global markets with expert mentoring on strategy and approach.

- **Launch pilots** – Pilot, test and implement innovations within CapitaLand's buildings located across more than 230 cities in over 30 countries, with project funding of S$50,000 per winner.

- **Transform the built environment** – Implement forward-looking solutions for shopping malls, offices, serviced residences and other asset classes in the built environment globally.
The challenge statements and themes

The CapitaLand Sustainability X Challenge was a global platform to advance innovation and collaboration in sustainability within the built environment. Through the CSXC, CapitaLand aimed to source for emerging solutions/technologies globally to solve sustainability challenges worldwide within these statements and themes:

» **Low carbon transition**
  - How might we achieve onsite clean energy solutions for existing buildings?
  - How might we achieve significant reduction in energy consumption for existing buildings?

» **Water conservation & resilience**
  - How can we adopt new ways of water management in existing properties in order to detect abnormalities in the water usage pattern and/or leakages?
  - How might we reduce potable water usage in existing buildings with water harvesting and/or recycling methods?
The challenge statements and themes

- **Waste management & circular economy**
  - How might we better segregate at source for recycling or treatment?
  - What is a viable circular economic solution that CapitaLand can introduce to manage resources and waste across its properties and construction sites?

- **Healthy and safe buildings**
  - How might we improve indoor air quality (IAQ) to enhance wellness of users in our existing buildings?
The Challenge

November 2020: Launch of Open Innovation Call

270 submissions received from 25 different countries

11 June 2021: Grand Finale and Winner Announcement, key notes by

- **Ms Grace Fu**, Minister for Sustainability and the Environment of Singapore,
- **Mr Lee Chee Koon**, CapitaLand’s Group Chief Executive Officer
Danish participants

- Photocat A/S
- Danish Energy Management
- PurCity
- LED iBond

Access Cities provided one-to-one support for the Danish companies’ submissions to the call as well as expert mentoring for the overall finalists.
The finalists

- A portable, self-powered energy generator cum chiller which can generate clean energy and cool air affordably for buildings using ambient heat or waste heat – by **g-EN Pte Ltd from Singapore**

- A water treatment process utilising photon vibration frequency technology to treat cooling tower water without the use of chemicals or power, achieving 60% to over 90% water savings and 1% to over 5% energy savings – by **Climatec Corp Pte Ltd from Singapore**

- An insulating glass retrofit technology that reduces heat gain inside a building, reducing the energy consumption used to heat or cool the building by up to 40% – by **INOVUES Inc from the USA**

- The use of innovative construction materials for curtain wall with around 10 times less embodied carbon, and enhanced heat and wind resistance – by **Taichu Global Materials Co Ltd from China**

- A smart waste bin which uses artificial intelligence, robotics and multiple sensors to sort waste with around 90% accuracy to facilitate better recycling efforts – by **CleanRobotics Inc from the USA**

- An indoor air disinfection solution that reduces virus survivability by over 99% within seconds – by **ARID Builders Pte Ltd from Singapore**
The Danish participants established a strong connection with CapitaLand, the largest real-estate player in the region.

Besides the Open Innovation Call, CapitaLand is also on the constant lookout for innovative solutions for their many ongoing projects, and this opens opportunities for the Danish SMEs.

The Danish participants through the process, where they also received good amount of guidance, coaching and insights into the needs of the market, have been able to sharpen their pitches, clarify their positioning and now have a more compelling story to engage the ecosystem.
Outcomes of the Call 2/3

Besides the Open Innovation Call, two of the Danish participants, PurCity and LED iBond, also participated in the hand-held support, where both companies got very good traction.

PurCity partnered up with a major player in Singapore and was invited to apply for a pilot project to showcase its solutions.

LED iBond received interest from an urban farming player where its solutions was being tested out in the vertical farm in Singapore.
Outcomes of the Call 3/3

- Through their involvement in the Open Innovation Call, the Danish participants are better positioned to get into the Singapore market.
- They have gained good exposure and can reference their experiences and learnings gained through the process.
Jury

- Mr Lee Chee Koon, Group Chief Executive Officer, CapitaLand Group
- Ms Goh Swee Chen, Independent Director and Chairman of Sustainability Council, CapitaLand Group
- Mr Rohit Sipahimalani, Chief Investment Strategist and Head, South-East Asia, Temasek
- Dr Cheong Koon Hean, Chair of the Centre for Liveable Cities (MND) and the incoming Chair of the Lee Kuan Yew Centre for Innovative Cities (Singapore University of Technology and Design)
- Mr Rushad Nanavatty, Managing Director, Urban Transformation, RMI
- Dr Chris Luebkeman, Head of Strategic Foresight, ETH Zurich.
Organizing Partners

- CapitaLand
- Access Cities (Strategic Partner):
  - Quercus Group
  - EIT Climate-KIC
Access Cities

Access Cities is a Global Alliance for Sustainable Urban Development. Access Cities is currently running in New York City, Munich, Singapore, and the two Danish cities of Copenhagen and Aarhus.

The program aims to solve city problems through multi-stakeholder challenges and open innovation, as a way of accelerating technology and solution knowledge sharing between cities, and to offer better testing opportunities for vendors.

Access Cities is funded by the Danish Industry Foundation and co-financed by the project partners State of Green, the Confederation of Danish Industry, Quercus Group, EIT Climate-KIC, the City of Copenhagen and the City of Aarhus.

See more at www.accesscities.org.
Project partners

State of Green
Confederation of Danish Industry
QUERCUS GROUP
Climate-KIC
INDUSTRIENS FOND
CITY OF COPENHAGEN
CITY OF AARHUS