

Lecture Report:

Urban Innovations in the city

MND Function Room
16 February 2017



“What I would to see is that the local scene is more adventurous in testing new technologies that are available and have great potential not just for cool new architectural forms, but also for forms that actually mean something and are driven by environmental factors. If we tap on sources like big data and so on, these can become part of the architectural and urban design proposition that we make for Singapore and beyond in the future.”

- Professor Thomas Schroepfer

The game-changing potential of 21st century approaches to architecture and urban design was underlined at a CLC lecture by WOHA co-founder Richard Hassell and Singapore University of Technology and Design (SUTD) professor Thomas Schroepfer.

Glimpses of how a city can be made more sustainable, liveable and self sufficient were shown through the lens of innovative projects such as WOHA’s SkyVille housing project, the multi-use Kampung Admiralty and SUTD’s adaptable exhibition pavilion utilising parametric design.

To fully tap into this potential and pioneer urban innovation in Singapore however, different approaches to governance and regulations may need to be formulated.



“There are a lot of exciting urban design possibilities in the interweaving of sustainable infrastructure through our environment,” said Hassell. “Going beyond architecture and into urban planning, sustainability issues are much more efficient (when dealt with) at a national level.

“Singapore already has one of the most integrated public sectors in the world. We could evolve even further by considering that by putting things together, you can achieve a whole that is more than the sum of its parts.

“Every (government) agency has their own Key Performance Indicators (KPIs), but agencies can identify common (social and community goals) and embrace them even if they are outside their individual KPIs. That’s a real challenge because a lot of our thinking and organisation and systems are set up as 20th century-style production lines, where components are separated and optimised on their own.”

Hassell pointed to Kampung Admiralty, currently being constructed, to show how different community uses can be brought together, enhancing each function. For example, shared social spaces between eldercare and childcare facilities help both communities interact and bring about a better quality of life for both.

“Innovation and potential risk has to be aligned closely with the client’s needs and direction. The HDB came to us (for the SkyVille project) and said they were interested in the future of public housing. The end result was one of experimenting and seeing which direction they could take public housing in, and they were highly engaged and excited about the outcome.”

- Richard Hassell

Professor Schroepfer spoke about innovations including algorithmic and parametric-based design methods opening up realms of possibilities in architecture and urban design.



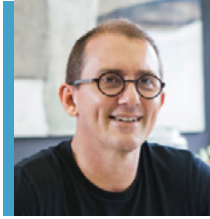
He detailed how SUTD’s winning entry for a community space in Dhoby Ghaut Green was later adapted into a pavilion housing exhibition domes for the Future of Us exhibition.

“Why we could (translate the original design into a different context and size) so fast was because the project, from the get-go, was driven by a computational parametric model that allows you to change the parameters. The whole structure would essentially magically adjust to the different conditions that it sits in,” said Schroepfer.

“The design, prefabrication and construction efficiency, effectiveness and accuracy that we were able to achieve testifies to the great potential of advanced computational design for architecture. I think this allows for whole new paradigms of exploration, not only to achieve innovative aesthetics and environmental responses, but also resource efficiency and precision.”

About the Speakers

Speaker:



Mr Richard HASSELL
Co-Founding Director, WOHA

Richard Hassell is the co-Founding Director of WOHA, an internationally-acclaimed architectural practice based in Singapore. He graduated from the University of Western Australia in 1989, and was awarded a Master of Architecture degree from RMIT University, Melbourne, in 2002. He has lectured at universities around the world, and served as an Adjunct Professor at the University of Technology Sydney, and the University of Western Australia.

Speaker:



Prof Thomas Schroepfer
Professor and Associate Head of Pillar
Singapore University of Technology and Design

As an Architecture and Sustainable Design professor and author, Professor Schroepfer's work investigates the increasingly complex relationship between design and technology in architecture. His research and design projects relate to advances in environmental strategies, structure and form, performance and energy, computer simulation and modelling, digital fabrication and building processes. He previously held visiting professorships at Massachusetts Institute of Technology, Swiss Federal Institute of Technology and National University of Singapore.

Moderator:



Mr Michael Koh
Fellow, Centre for Liveable Cities

Michael was previously the Head of Projects and Design at SC Global, a property developer in Singapore, overseeing both overseas and in-country development projects. Prior to SC Global, Michael has 25 years of experience in the public service including 7 years as CEO of the National Heritage Board and 4 years concurrently as CEO of the National Art Gallery. He was also the former Director of Urban Planning & Design at the Urban Redevelopment Authority where he spearheaded the planning and urban design of the new mixed use Downtown at Marina Bay, revitalisation of Orchard Road as a shopping street and creation of an arts and entertainment district at Bras Basah Bugis.

About CLC

The Centre for Liveable Cities was set up in 2008 by the Ministry of National Development and the Ministry of the Environment and Water Resources, based on a strategic blueprint developed by Singapore's Inter-Ministerial Committee on Sustainable Development. Guided by its mission to distil, create and share knowledge on liveable and sustainable cities, the Centre's work spans three main areas - Research, Capability Development, and Knowledge Platforms. The CLC Lecture Series is a platform for urban experts to share their knowledge with other practitioners. For more information, please visit: <http://www.clc.gov.sg>