

## C. Roundtable Sessions

The Roundtable Sessions at WSBE17 Hong Kong echo with the conference theme “Transforming Our Built Environment through Innovation and Integration: Putting Ideas into Action”. Roundtable 1 emphasises “Ideas” on emerging trends and forward-looking principles to transform the built environment. Roundtable 2 focuses “Actions” and practice-focused viewpoints on leading the changes to drive the sustainable built environment.

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### **ROUNDTABLE 1**

Topic: Emerging Perspectives for Transforming the Build Environment

The construction and real estate sector faces multiple challenges that the solutions today may not be optimal for the future. The knowledge of emerging trends is thus indispensable for the development of innovative and integrative solutions to transform the built environment.

A group of international industry experts and representatives from various stakeholder groups will gather to stimulate a vibrant dialogue to discuss how the emerging perspectives relate to the topics of high-performance building, deep building renovation, sustainable neighbourhood and community empowerment.

### **SESSION CHAIR**

Thomas LÜTZKENDORF, Director, Centre for Real Estate and Head of Chair, Sustainable Management of Housing and Real Estate, Karlsruhe Institute of Technology (KIT), Germany

### **SPEAKERS**

#### **Topic: Winning the Battle against Climate Change**

TAI Lee-siang, Chair, WorldGBC

### **ABSTRACT**

WorldGBC represents a body of diverse building industry players seeking to overturn the threat posed by Climate Change. This presentation provides an outline of the main strategies and thrusts of the relatively young global organization. In addition, Lee Siang will share from his experiences, both as an architect and urban planner, the holistic principles to unlock the potential of traditional wisdom and ground up efforts to achieve total sustainability. In particular, he will focus the discussion on strategies in cities – the highly urbanized future of mankind.

#### **Topic: An Emerging Trend of Green Building Development in China**

WANG Youwei, Chairman, China Green Building Council

#### **Topic: How to Create High Real Estate Value with Sustainable Urban Planning**

Serge SALAT, President, Urban Morphology & Complex Systems Institute

#### **Topic: Towards Buildings as Active Agents in Low Carbon Cities**

Arno SCHLUETER, Professor, Architecture and Building Systems ETH Zurich; Principal Investigator, Future Cities Laboratory, Singapore ETH Centre

### **ABSTRACT**

#### **Towards Buildings as Active Agents in Low Carbon Cities**

For future-proof cities, buildings need to evolve from passive consumers to active agents in the urban fabric, balancing and trading energy, resources and fostering comfort, indoors and outdoors. This poses challenges on many ends which needs to be overcome to transition towards a more sustainable building stock. We can call them the Three Grand Challenges:

#### **Dealing with complexity**

Future efficient buildings employ sophisticated building systems to ensure efficient operation, energy generation and occupant comfort. These systems span across different domains, over the entire building lifecycle. Increased

complexity not only means a higher risk of false installation, malfunction and improper operation, it also means different skillsets of people that design, plan build and operate buildings. The challenge therefore is: how do we address the increasing complexity in our designs, our processes and adapt the skillsets of people involved in the building process?

### **Human-in-the-loop**

With all technology, we sometimes forget that buildings are actually made for humans. Energy efficiency is therefore nothing without maintaining or even improving occupant comfort and human well-being. Whereas we understand well the building and systems physics, the occupants, their stochastic behavior and differencing preferences remain as a challenge. How can we design, build and operate environments that that respond, adapt and thus learn from the humans it is inhabited by? Furthermore, as buildings are artefacts with very long lifecycles, how do we design buildings and buildings systems that are flexible, expandable and fit for change?

### **New Models**

Knowledge without realistic chance of implementation has not impact. We are beyond just technological solutions. The solutions we develop must take into account the specificities of the built environment such as the large scale, long lifecycles and risk aversion. This requires an understanding of its fundamental economic mechanisms in order to leverage and eventually change them. The grand challenge is to make efficient systems economically viable. This calls for new business models that leverage cross-benefits, that leverage the lifecycle, that control and mitigate risk in order to create economic incentives for implementing new approaches on a large scale.

### **Topic: Disruptive Innovations Transforming Sustainable Built Environment**

Bryant LU, Vice Chairman, Ronald Lu and Partners