

PANEL 2 SUMMARY



Image 1: Panel discussion session (from left to right) – Professor M. Jae Moon, Dr Bree Trevena, Professor Heng Chye Kiang, Dr Xie Litian, Professor Filip Biljecki, Dr Felicity Chan, Professor Christoph Hoelscher

1. Public-private-people partnerships are key to the success of people-centric solutions.

“We should be able to pass down a city that is better and more beautiful, to our next generation.”

- Professor M. Jae Moon

The key objective of people-centric planning and design is to consider people's preferences and facilitate collaboration throughout the process; only then can the solutions effectively meet the needs and demands. To facilitate this process, several panel speakers suggested that government agencies need to take a proactive role in creating an environment that is conducive for such collaborations.

“It is not so much of asking ‘What would you like to see?’, but ‘What are the kinds of experiences that you want to have.’”

- Dr Bree Trevena

Dr Bree Trevena's keynote address emphasised on the importance of participatory policies in city planning, especially as economic, environmental, and social trade-offs become more apparent. She highlighted that while technology addresses the "what" and "when," it is the lived experiences of citizens that provide the "why" to complex city issues. One notable example of this was ARUP's study on the spatial factors influencing residents' emotions towards a space – the study found that lighting conditions in cities

evoke different emotions, and these insights translated into an understanding of how spatial design impacts the individuals' everyday living experience.



Image 2: People-centric planning and design impacts everyone's everyday living experience (from Dr Bree Trevena's presentation slides)

Professor M. Jae Moon concurred with this sentiment, highlighting that planning and design ideas need to be linked with reality for solutions to match people's needs. In his keynote address, Moon discussed the evolution of South Korea's smart city concept – from focusing on digital technology creation, to employing a human-centric sustainable, and service-oriented approach. To do this, a comprehensive policy package had been launched (where?) to foster public-private-people partnerships to meet local needs. Some of the notable examples mentioned include an IoT-based Smart Garbage Can with CCTV monitoring and the analysis of citizens' policy e-suggestions, and the use of machine-learned epidemiology for real-time detection of foodborne illnesses in other countries.

The panel noted that while such engagements are ideal, its execution can be challenging due to varying perspectives and priorities among stakeholders, making the engagement process laborious and time-intensive. During the moderated panel discussion, Professor Christoph Hoelscher discussed the need for ample time and extensive conversations when engaging with city experts, government bodies, and practitioners, to align their research. To enhance collaborative efforts, he emphasised that stakeholders need to adopt a long-term approach to their collaboration, and researchers should also demonstrate their value by identifying aspects that practitioners may not have considered, particularly in terms of creating digital tools for data collection and providing valuable research insights. Professor Heng Chye Kiang concurred on the value of co-creation during collaborations, citing the effective use of wearable technology and walk-around interviews in collecting data and insights on residents' needs prior to the planning and design for Paya Lebar Airbase (PLAB), such as mobility patterns and spatial usage trends by demographic profiles. While laborious, this process was essential to the genesis of the overall planning approach and served as a platform for ground-up organizations to be engaged in the planning process.

2. People-centric solutions need to be integrative in nature – transecting between different disciplines and domains

To optimise impact and outcomes, people-centric solutions should be integrative across domains and disciplines. This approach is also prudent, as it can help reduce wastage, missteps, and duplication of efforts. Dr Xie Litian discussed the collaborative efforts between the Urban Redevelopment Authority (URA) and the Land Transport Authority (LTA) to launch SimSG, a project improved the data modelling capabilities and foster a more robust planning ecosystem by incorporating Singapore’s land use plan and transportation plan. The project gave rise to two applications – the Ground Sensing App (GSA), which provided visualised information on current transport conditions, and the Land Use and Transport Integration (LUTi) App, which allowed for quick testing of transport impact from various land use scenarios.

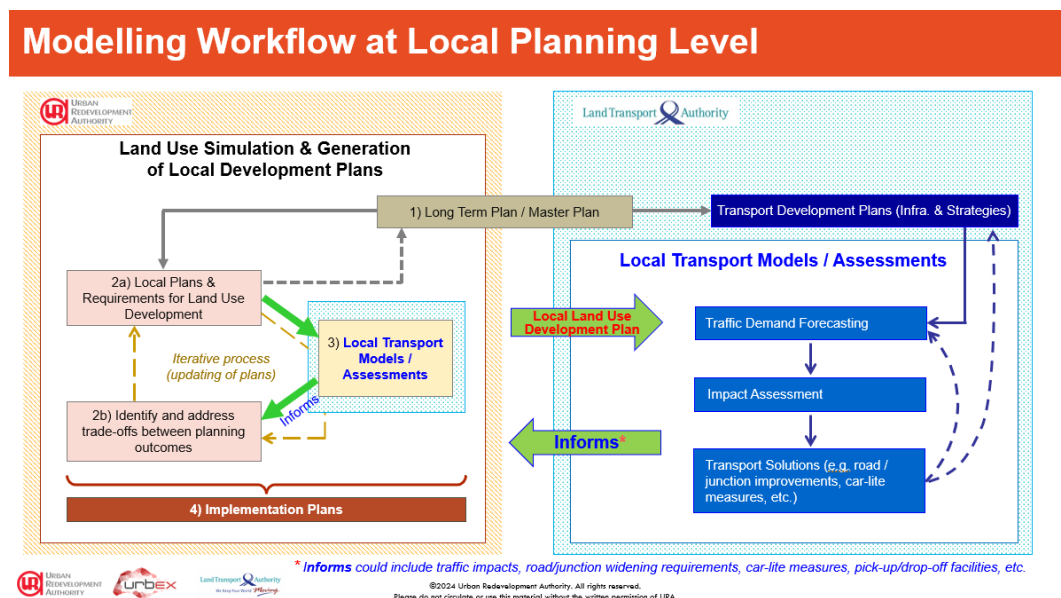


Image 3: Collaboration between URA and LTA (From Dr Xie Litian’s presentation slides)

“We all know that designers, users, and buildings form a triangle, but [what is] not really established are the elements of how designers feel about the users, [and] how they understand what the users need.”

- Professor Christoph Hoelscher

Adopting an interdisciplinary approach also helps in the translation of research insights into practice. In Professor Christoph Hoelscher’s presentation, he emphasised on the importance of Architectural Cognition in the understanding of designer-building-user interface and highlight that combining design intuition with scientific evidence can empower architects and planners in creating innovative and liveable spaces.

3. Translational Research

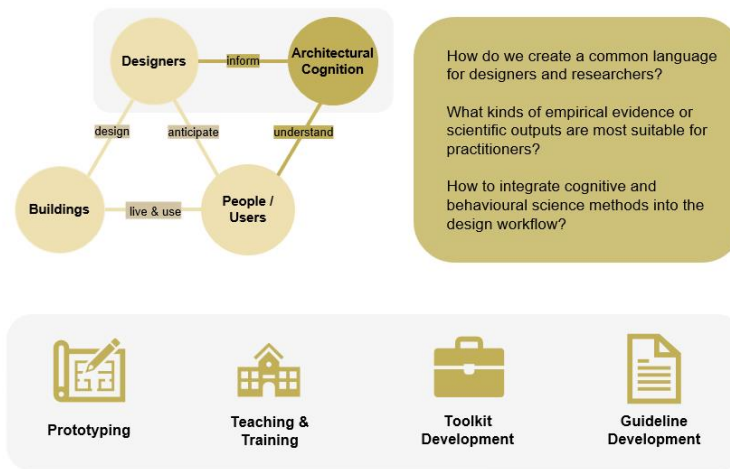


Image 4: Translation of research insights into practice (from Professor Christoph Hoelscher's presentation slides)

Interdisciplinary approaches come with challenges, particularly in aligning the various stakeholders as issues intersect across domains of knowledge and expertise. Dr. Xie Litian shared his experience from Singapore's development of SimSG, emphasising the necessity for different agencies to align towards a common vision. To this end, the collaboration was based on a long-term plan guiding Singapore's development for the next 40 to 50 years.

3. Data collection and research methodological considerations are the key challenges in people-centric research studies.

"There is quite a lot of things to ponder if we are intentional about a people-centric city that (not only) cares about the meaning that people put into the environment, but also cares about the kind of quality of the spaces they live in."

- Dr Felicity Chan

Most of the studies presented include mixed methodologies, combining quantitative and qualitative research methods. In the moderated panel discussion, Dr Felicity Chan highlighted that part of the challenge lie in collecting substantive qualitative data, as the process for data-collection is labour and time-intensive. Yet, she argued that this process is essential to understand the reasons behind people's behaviours and perceptions.

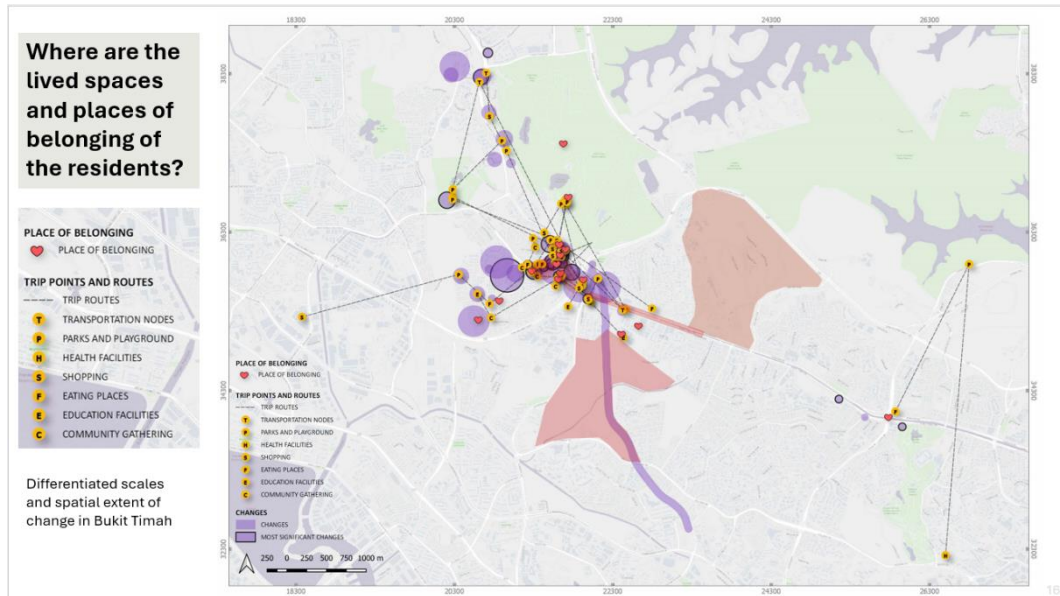


Image 5: Mapping urban residents' experience in neighbourhoods (from Dr Felicity Chan's presentation slides)

Dr Xie Litian and Professor M. Jae Moon concurred, and further elaborated that for data-collection processes to be robust, quantitative research methods should be complemented with qualitative methods to provide a deeper understanding of the observed phenomena. They emphasised that researchers and city planners need to breach the gap between quantitative and qualitative data by complementing data-driven insights with engagement tools that capture diverse residents' views.

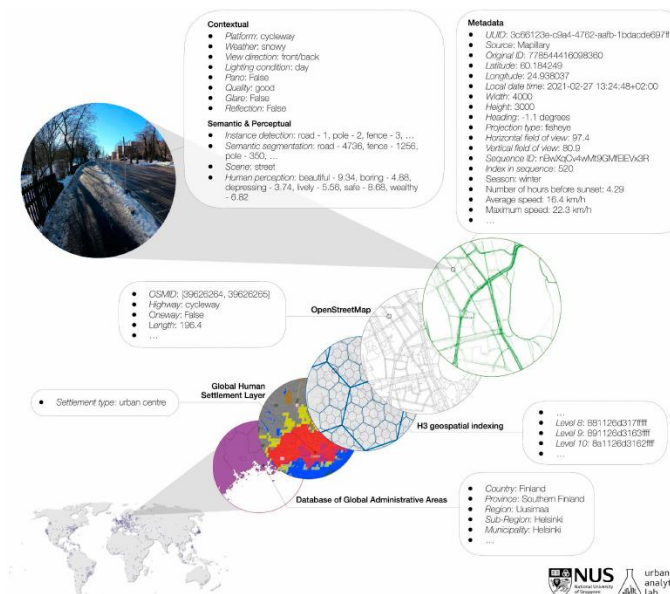


Image 6: Process and dataset characteristics when mapping Street-view imagery (from Professor Filip Biljecki's presentation slides)

Dr Filip Biljecki highlighted that another limitation of data-collection vis-à-vis people-centric research, is that the data collected may not be wholly representative of the entire

population, due in part to data privacy concerns or biases in Artificial Intelligent (AI) models used. These limitations may hinder the comprehensive representation of a city’s population. He cited his experience of developing large-scale surveys for street-view imagery recognition, illustrating how different demographics, such as age and ethnicity, can influence people's perceptions of images. He emphasised the importance of recognizing demographic variances in people’s perceptions and considering these differences when developing models for large-scale surveys, particularly in a people-centric context.

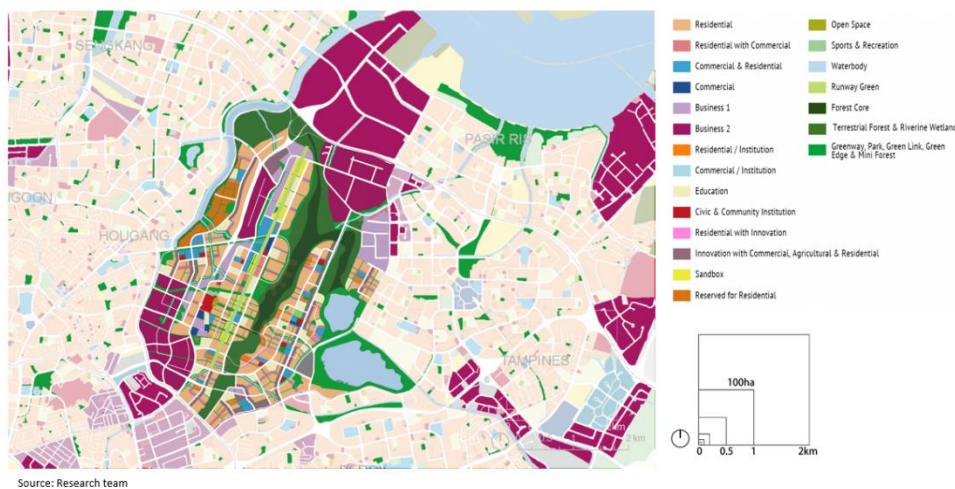
4. People-centric planning and design have a positive impact on the strategies to mitigate climate change

“We tried to create in this future city of Paya Lebar... which is regenerative, inclusive, with complete neighbourhoods, and that is resilient.”

- Professor Heng Chye Kiang

Cities that are people-centric, are also often found to be associated with being climate resilient. Professor Heng Chye Kiang presented the approach for Paya Lebar Airbase (PLAB) and introduced the “Band Concept” planning model, which aimed to provide a diverse mix of uses that would enhance the town’s self-sufficiency. Envisioning an inclusive and complete neighbourhood, the plan incorporates green and blue spaces, 17-meter-wide pedestrian streets with cycling networks, minimal road space, and amenities for work and eldercare. The project's success lies in situating service areas—civic, commercial, and educational—within a five-minute walk from residential buildings. To enhance the liveability and promote walkability of the area, PLAB also implemented tools to mitigate the Urban Heat Island (UHI) effect, utilise shade analysis, and leverage natural ventilation for environmental resilience. Heng emphasised that adopting a health-centric approach in the planning and design of neighbourhood environments will have downstream impact on climate and social resilience.

The Band Concept | At The Master Plan Scale



Source: Research team

3. DESIGN APPROACH & ANALYSIS

Image 7: Application of the “Band Concept” at the Masterplan scale (from Professor Heng Chye Kiang’s presentation slides)

During the moderated panel discussion, Professor Christoph Hoelscher concurred with that view and highlighted how efforts towards sustainable mobility can help to build climate resilient cities. He discussed the importance of 15-minute cities, and how planning and design approaches that support active mobility can aid in minimising vehicle emissions, while promoting physical and mental well-being through walking and cycling activities.



Image 8: Group photo of presenters for Panel 2 (from left to right) – Professor M. Jae Moon, Dr Bree Trevena, Professor Heng Chye Kiang, Dr Xie Litian, Professor Filip Biljecki, Dr Felicity Chan, Professor Christoph Hoelscher