

## Towards inclusive urban accessibility: framework and methodology for urban transport inclusiveness assessment – The Case of Xiong'an New Area



Image: Deloitte (<https://www.weforum.org/agenda/2019/01/want-a-more-inclusive-society-start-with-mobility/>)



**Zhaowen Liu**

PhD Researcher

Faculty of Civil Engineering and Geosciences

Delft University of Technology

[z.liu-8@tudelft.nl](mailto:z.liu-8@tudelft.nl)

**Co-authors:**

Martin de Jong  
([w.m.jong@law.eur.nl](mailto:w.m.jong@law.eur.nl))

Nikki Brand ([A.D.Brand@tudelft.nl](mailto:A.D.Brand@tudelft.nl))

Marcel Hertogh  
([M.J.C.M.Hertogh@tudelft.nl](mailto:M.J.C.M.Hertogh@tudelft.nl))

Liang Dong ([liadong@cityu.edu.hk](mailto:liadong@cityu.edu.hk))

1. Towards inclusive city: frameworks and practices
2. Transport disadvantage and social exclusion
3. Measurement of transport disadvantage/inclusiveness
4. The Case of Xiong'an New Area

# 1. Towards inclusive city: frameworks and practices

- ❖ Well-accepted definition of **inclusive city**:



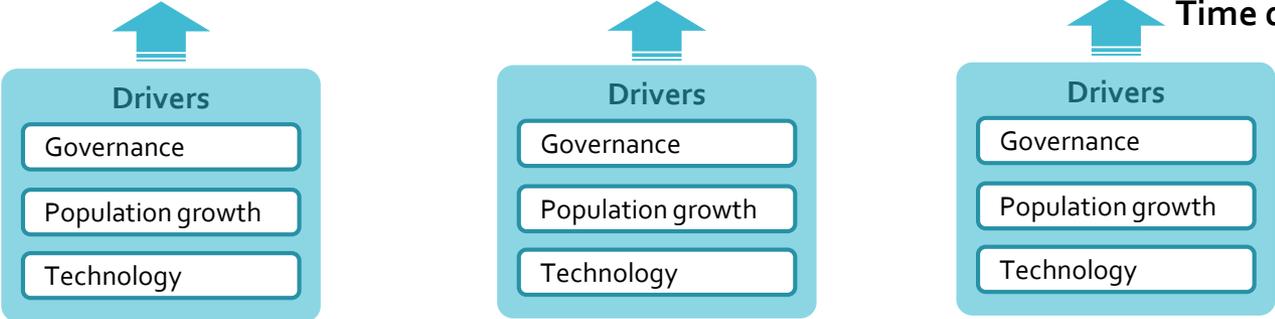
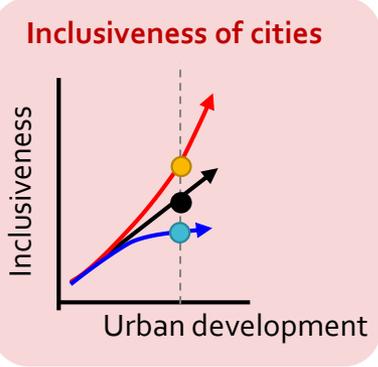
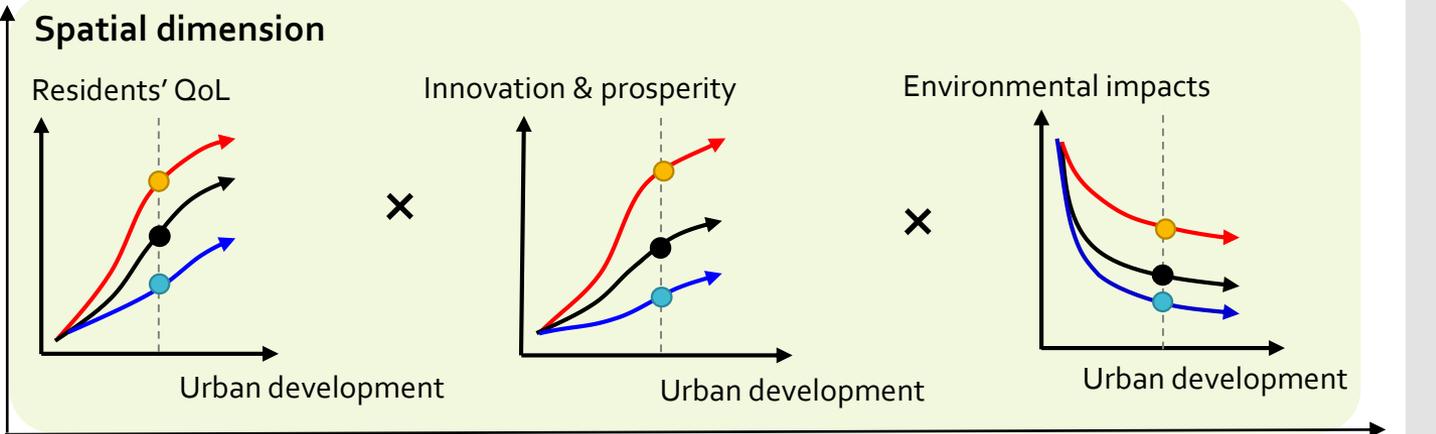
“A place where everyone, regardless of their economic means, gender, race, ethnicity, or religion, is enabled and empowered to fully participate in the social, economic, and political opportunities that cities have to offer.”  
(UN-Habitat, 2001)

- ❖ Focus was changed from reducing urban poverty to exclusion and inequality issues;
- ❖ Models are developed to conduct empirical evidence-based research.

UN-Habitat, 2001. Inclusive Cities Initiative: The Way Forward. Nairobi: UN Habitat.  
[https://www.unhabitat.org/downloads/docs/2115\\_40209\\_inclusive\\_cities\\_WHD.doc](https://www.unhabitat.org/downloads/docs/2115_40209_inclusive_cities_WHD.doc).

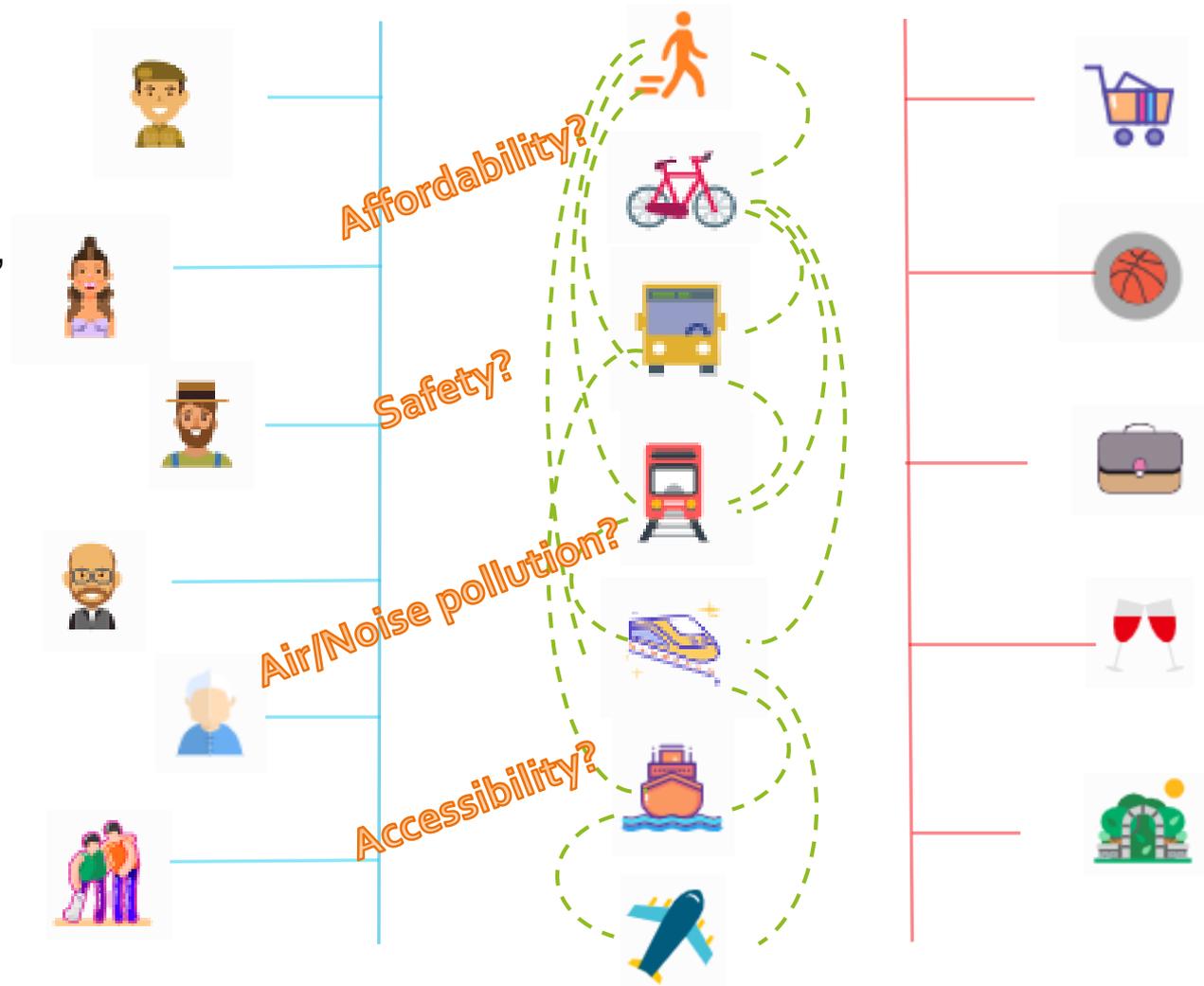
# Urban inclusive development framework

## Outcomes



## 2. Transport disadvantage and social exclusion

- ❖ Traditional analysis of social exclusion (housing, education and health);
- ❖ Relationship between mobility and social exclusion has got more and more attention;
- ❖ Aspects of traffic inequality become broader (physical fitness, skills, family burden, economic poverty, geographical attribution).



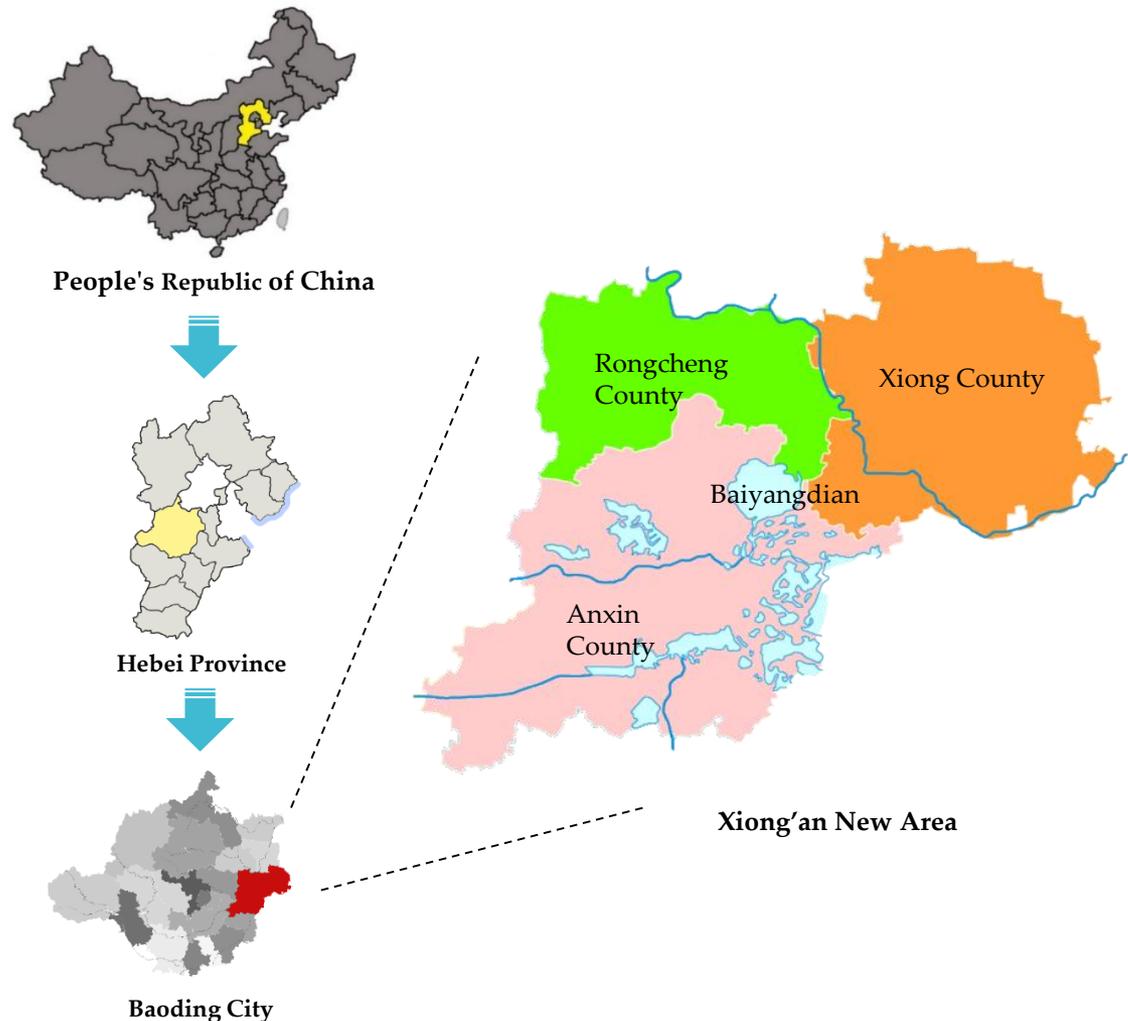
### 3. Measurement of transport disadvantage/inclusiveness

- ❖ 230 indicators from SDGs (**transport supply-oriented**) (UN, 2015)
- ❖ 4 basic types of accessibility measures:
  - (1) infrastructure-based
  - (2) location-based
  - (3) person-based
  - (4) utility-based;
- ❖ Broader indicators including traffic-related pollution, safety and health etc.

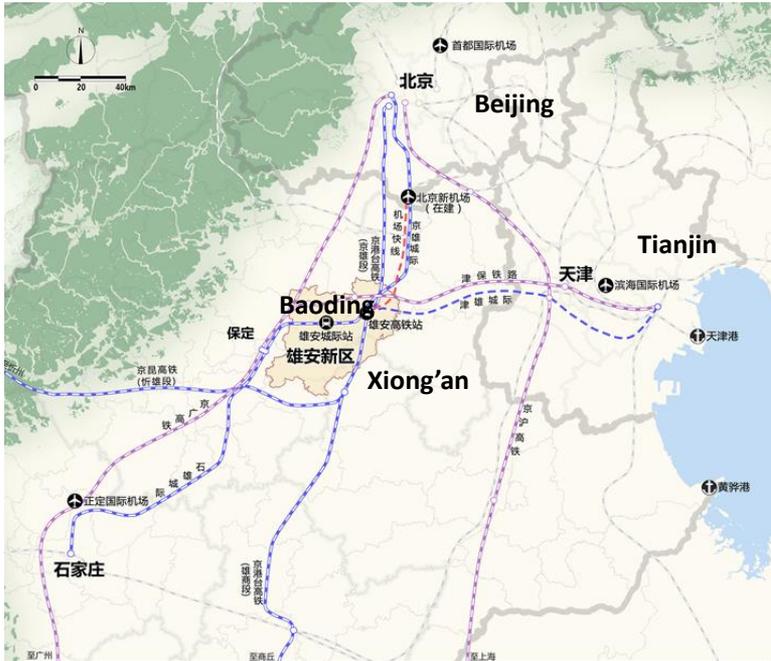


## 4. The Case of Xiong'an New Area – Overview on Xiong'an

- ❖ **Location:** 105 km Southwest of Beijing, 105 km West of Tianjin
- ❖ **Consists** of three counties— Xiong County, Anxin County, and Rongcheng County, as well as more than 60 villages.
- ❖ **Population:** 1,407,100 in June 2017.
- ❖ **Urbanization rate:** relatively low (42%), and the regional economy is weaker than the average level of Hebei Province.
- ❖ **The main function:**
  - (1) serving as a development hub for the Beijing–Tianjin–Hebei (Jing-Jin-Ji) economic triangle
  - (2) noncapital functions of Beijing are expected to be relocated here, including some state-owned enterprises, government agencies, and research and development institutions.



# 4. The Case of Xiong'an New Area – Transport development

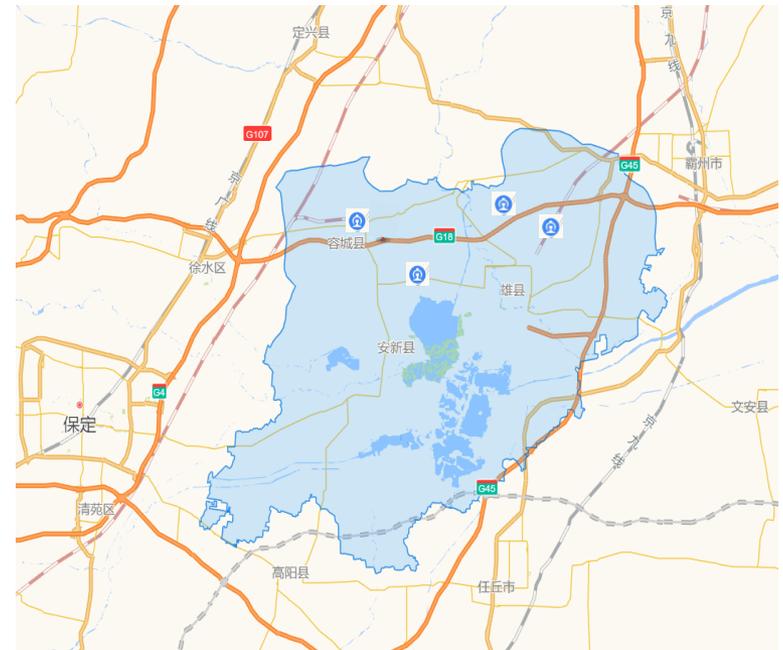


- Current railway
- Planned railway
- New intercity railway
- Reserved airport express
- High-speed rail/intercity station
- Airport
- Port

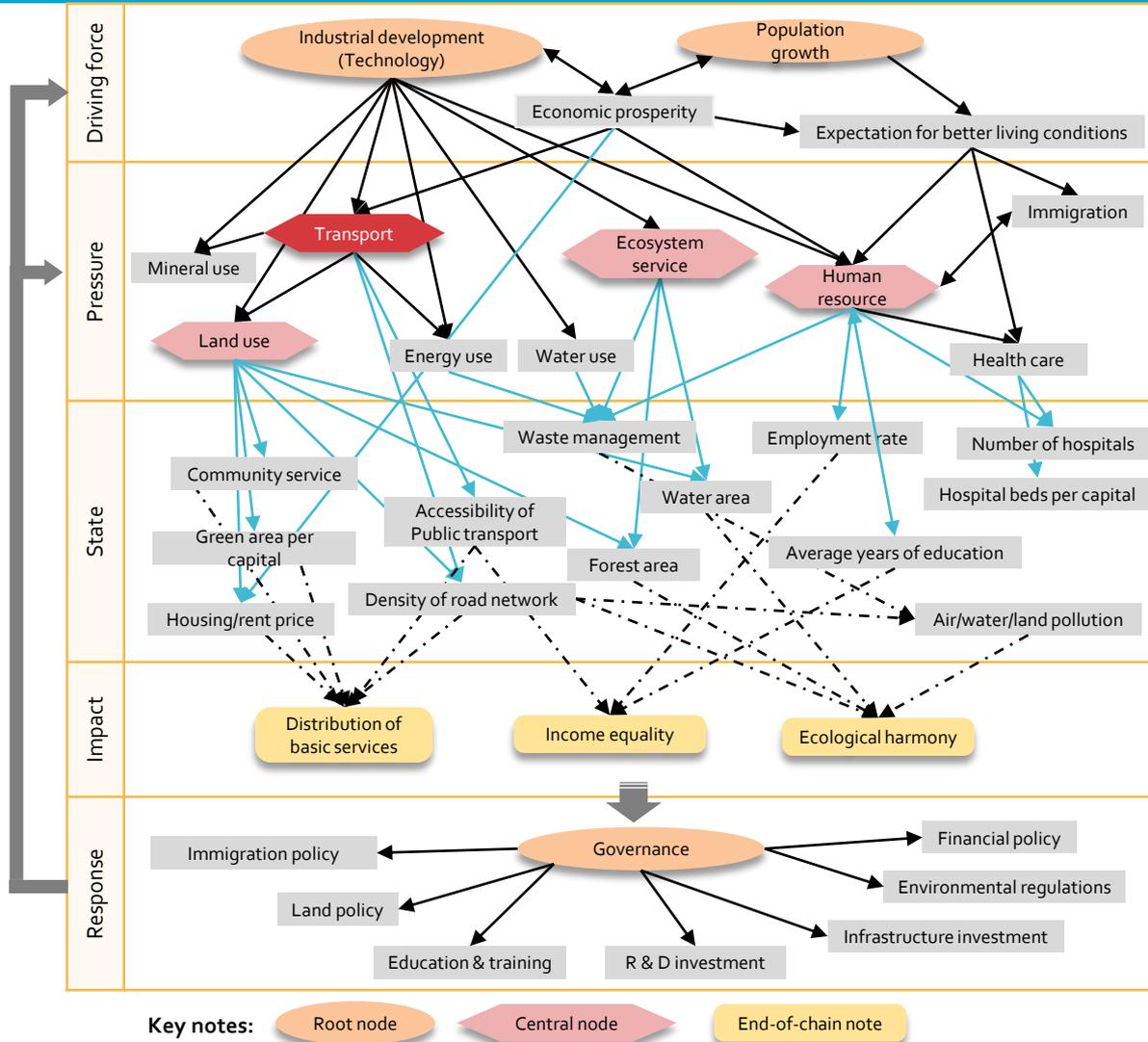
**Xiong'an High-Speed Railway Station** with a total construction area of about 470,000 m<sup>2</sup> will become **the largest high-speed railway station in Asia.**

Together with Baiyangdian Station, Baigou Station, and the planned Xiong'anWest Station, Xiong'an will become **the densest region for high-speed railway stations in the world.**

- (1) “four verticals and two horizontals” high-speed railway network will be built to realize 30 min to Beijing and Tianjin;
- (2) Various subway lines, bus rapid transit (BRT), and express roads between the core area and the surrounding villages are planned;
- (3) “Public transport + bicycle + walking” travel pattern and reach 90% of the modal split.
- (4) Instantaneous response and intelligent decision-making transport system.



# 4. The Case of Xiong'an New Area – Matching transport services with diverse needs



## ❖ Features of Xiong'an's transportation design goals:

1. **High-density** high-speed railway stations, roads, and BRT lines;
2. Combined with 5G network, artificial intelligence, block-chain, Internet of Things, and other **high-technologies**;
3. **High proportion of green travel pattern** consists of public transport, biking and walking;
4. Form a 30min economic circle with Beijing, Tianjin, and Hebei.

## 4. The Case of Xiong'an New Area – Matching transport services with diverse needs

### ❖ Potential social-exclusion issues:

- 1) The layout of transport infrastructures tends to shape the spatial distribution of urban economic clusters, eventually resulting in **fragmented urban development**.
- 2) High-level public services come at **high charges**, and therefore the diverse needs and consumption capacities of different income groups need to be evaluated.
- 3) For the design of service facilities, the ability of people in different age groups and educational backgrounds to **accept new technologies** is to be taken into consideration.
- 4) The advanced transportation facilities are mainly designed to meet the needs of high-income groups commuting frequently between Xiong'an and surrounding big cities. While the negative effects of **noise and air pollution** are shared by all residents.

### ❖ Conclusion and implications:

- 1) In the planning of transport systems, attention should be paid not only to advanced facilities, but also to the affordability and convenience of all users. (**Broader indicators**)
- 2) In order to reach a consensus on the concept of inclusive development, governments should widely consult with **local communities involved** in particular projects before making decisions.



Thank you for listening!

[https://www.researchgate.net/profile/Zhaowen\\_Liu3](https://www.researchgate.net/profile/Zhaowen_Liu3)

<https://www.linkedin.com/in/zhaowen-liu-721496183>

**Presenter:**

Zhaowen Liu

PhD Researcher

Faculty of Civil Engineering and  
Geosciences

Delft University of Technology

[z.liu-8@tudelft.nl](mailto:z.liu-8@tudelft.nl)

**Co-authors:**

Martin de Jong

([w.m.jong@law.eur.nl](mailto:w.m.jong@law.eur.nl))

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([A.D.Brand@tudelft.nl](mailto:A.D.Brand@tudelft.nl))

Marcel Hertogh

([M.J.C.M.Hertogh@tudelft.nl](mailto:M.J.C.M.Hertogh@tudelft.nl))

Liang Dong

([liadong@cityu.edu.hk](mailto:liadong@cityu.edu.hk))



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A handwritten signature in black ink, reading 'Charlotte Gardini', written in a cursive style.

Charlotte Gardini, Conference Manager