



# Knowledge sharing and learning for replicating low carbon Smart Cities: A journey towards creating Sustainable Futures

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## Rationale

- Cities are complex: consume over two-thirds of energy and more than 70% carbon emissions (C40 Cities, 2018).
- EU Smart Cities agenda offers new horizons for low carbon innovations.
- 'Lighthouse' cities piloting low carbon solutions
- 'Follower' cities need to replicate.
- Little or no cooperation between initiatives in cities.
- Sharing knowledge and learning from best practice is paramount for replication.
- Unique opportunity to share knowledge and use synergies (Chourabi et al., 2012).



## Knowledge Sharing and Learning

- Knowledge sharing can facilitate learning among organisations.
- Knowledge sharing is the conduit through which solutions are transferred (Janus, 2016).
- Organisational effectiveness is built upon employees' knowledge, their involvement is crucial for smart cities.
- Knowledge sharing in cities is a challenge for technological and procedural replication.
- Effective management of tools supporting smart city initiatives can ease replication (Dayan et al., 2017).

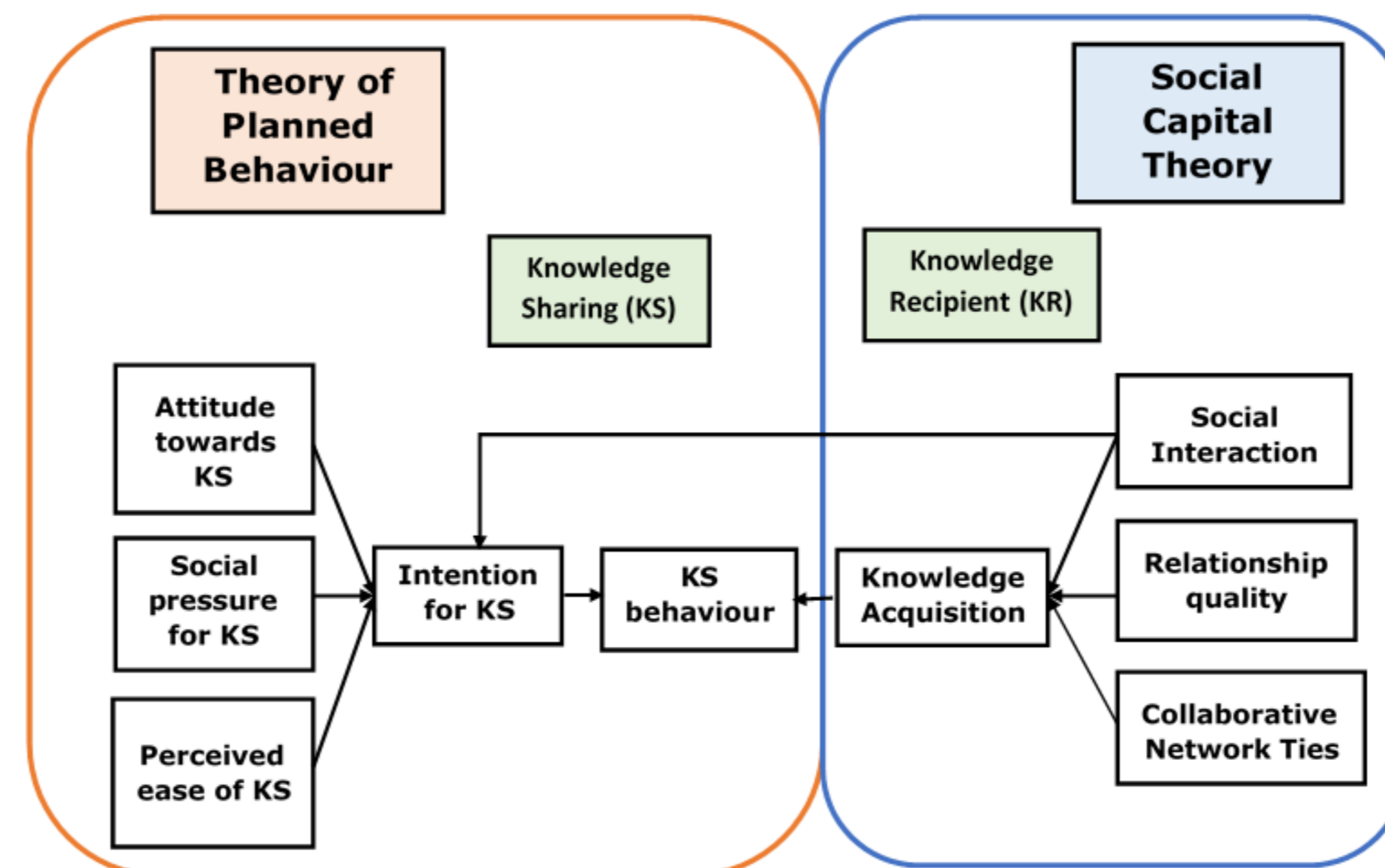
## Research Aim

To explore how cities share knowledge and learn from each other for replication of best practice in low carbon innovations as part of their Smart City journey.

## Research Objectives

- Review literature on knowledge management and organisational learning.
- Examine factors and underlying mechanisms mediating the relationship between learning and knowledge sharing for replicating low carbon Smart Cities.
- Explore barriers/challenges to knowledge sharing and learning across cities.
- Develop a framework for replicating low carbon Smart Cities for local authorities.

## Conceptual Framework



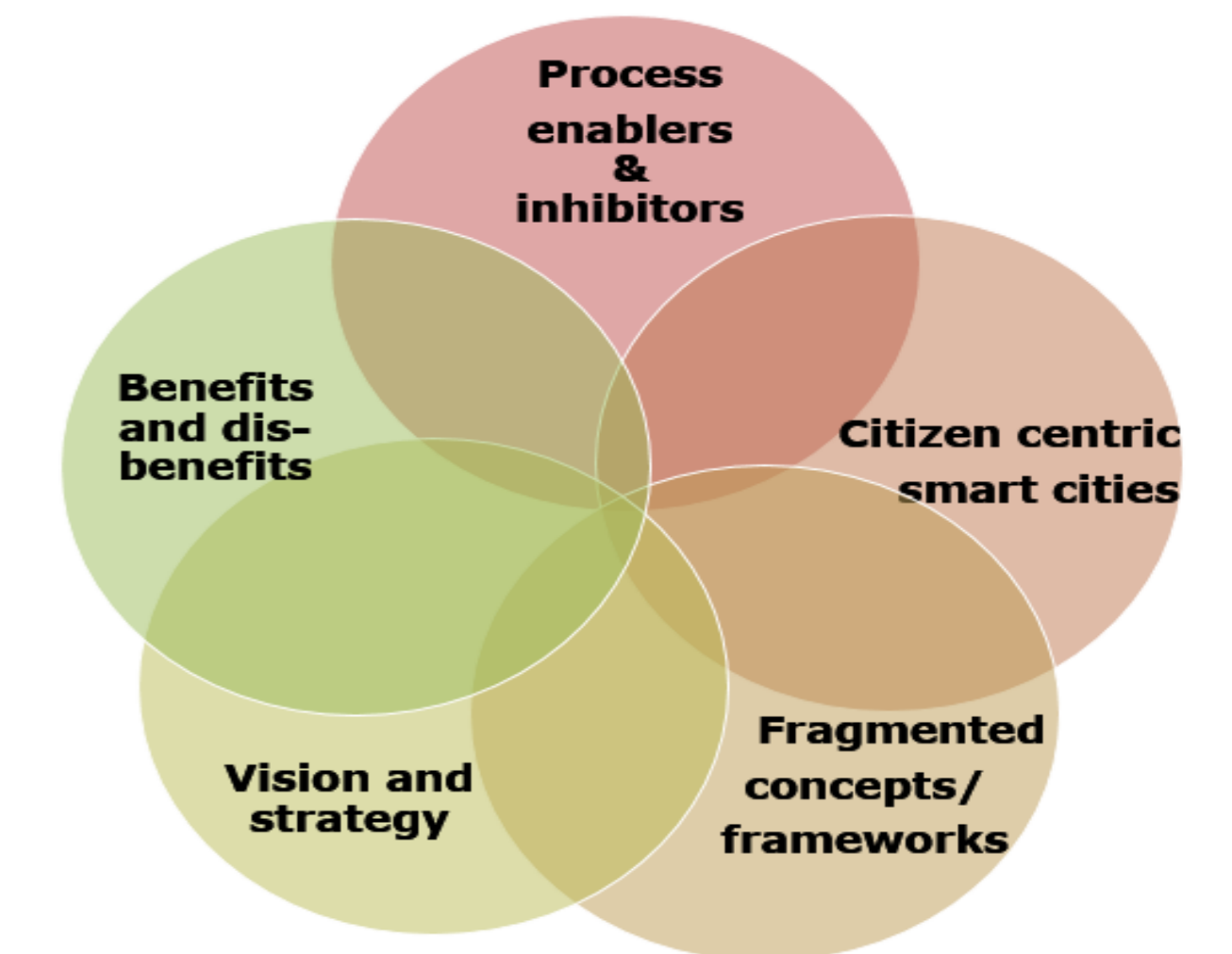
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## Research Methodology

- Multidisciplinary research
- Systematic literature review
- 125 ABS scholarly articles reviewed
- Mixed methods research study
- Questionnaire survey to identify knowledge sharing factors
- Interviews to explore knowledge sharing practices and barriers in cities

## Smart City Themes



## Work in Progress

- Data collection with the help of an online questionnaire survey
- Semi-structured interviews with local authorities
- Data analysis and academic publications

## References

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C40 Cities, (2018) Why Cities, Available at: [https://www.c40.org/why\\_cities](https://www.c40.org/why_cities) [Accessed: 23/10/2018]

Dayan, R., Heisig, P. and Matos, F. (2017) Knowledge management as a factor for the formulation and implementation of organization strategy. *Journal of Knowledge Management*, 21 (2), pp. 308-329.

Janus, S. S. (2016) Becoming a Knowledge-Sharing Organization: A Handbook for Scaling Up Solutions through Knowledge Capturing and Sharing, International Bank for Reconstruction and Development /The World Bank.