

Brought by Degrees: A Focus on the Current Indicator of Lean ‘Smartness’ in Smart Cities

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AGENDA



Research Question



Methodology



Definition of Smart Cities



Indicators of Smart Cities



Concluding Discussion

Research Questions



Research Question 1 - What are current indicators exist to gauge whether a city is smart?



Research Question 2 - How can these indicators be applied to demonstrate smartness within a city?

Definition of Smart Cities

- No universally accepted definition
- Deakin and Al Waer (2011)
 - Extensive range of digital and electronic technologies
 - Usage of ICT to change lives in urban areas
 - Widespread use of technologies at government level
 - Use technologies to bring people together and enhance knowledge

Theory

- Deakin and Al Waer (2011) - Four Factors of Smart Cities
- Triple bottom line in the context of Smart Cities (Bosch et al., 2017)

Smart Cities and Lean



OPTIMISATION



GOOD RESOURCE
MANAGEMENT



CREATE VALUE



WASTE
REDUCTION

How to Define a Smart City

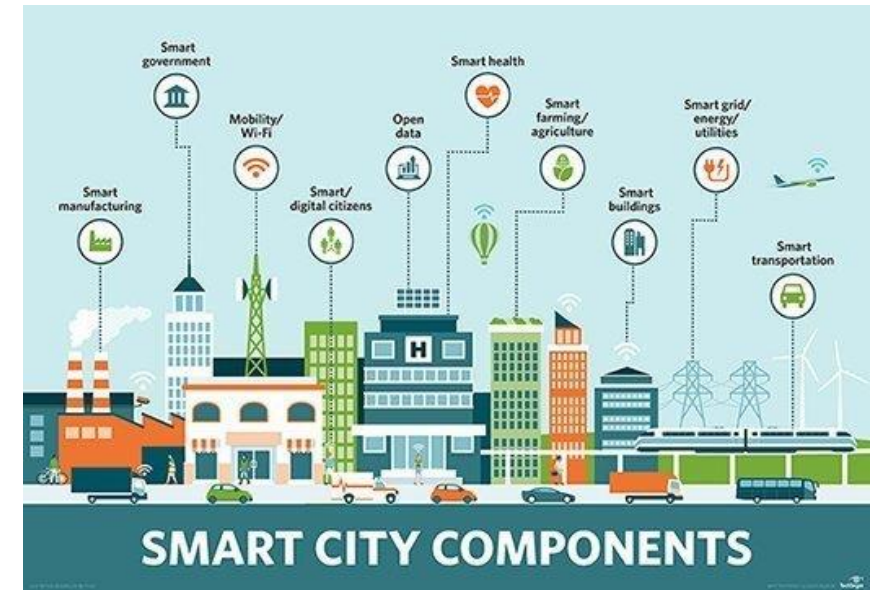
Socially smart	Technologically smart	Environmentally Smart
<p>Citizen Participation</p> <p>Educated and upskilled citizens</p> <p>People-Centred Processes</p> <p>High quality of life and consideration of well being</p> <p>Technologically engaged citizens</p> <p>Smart Governance</p>	<p>Feasible technological infrastructure</p> <p>Well managed and utilised data</p> <p>Possibilities to learn from smart systems</p> <p>Safety and resource management a priority</p> <p>Respect for data, privacy and well being</p>	<p>Initiatives to lower the carbon footprint</p> <p>Utilise data and technology to reduce emissions on roads and in buildings</p> <p>A more environmentally considerate society based on improved resource management and security</p> <p>Focus on quality of life in a more sustainable society</p>

Indicator Commonalities

Smartness Categories	Thematic Area	Indicators
Socially smartness	Civic Engagement Quality of Life Wellbeing	Public participation, Citizen centred city development, Easy to use digital engagement, Smart Governance Services access, Improvements to health, Increased mobility, Infrastructure Happiness, connected services, change management
Technologically Smartness	Flexible Technology Utilisation Data Defined Application	Adaptive to changing needs, multi-use data, accessible technology Define usage, respect for privacy Stakeholder relevant, data plan, citizen access to technology and data
Environmentally smartness	Optimisation/Tradeoff Waste Management Sustainable Thinking	Ongoing reappraisal of infrastructure, constantly adjustment to resource use Recycling, building adaption and reuse, Citywide waste plan Reducing emissions, advanced public transport infrastructure, microgeneration, renewable energy

In Conclusion...

- Cities can be can more or less holistically smart
- How to improve the indicators
- Not all Smart Cities are created equal



THANK YOU!

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know more, please
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