



Human Smart Cities

A general overview

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Introduction: the Smart City

"Smart City": One Expression, Many Meanings

- Smart City = City using technology and IoT?
- Smart City = City using technology and IoT to become richer?
- Smart City = City using technology and IoT without a negative impact on people?
- Smart City = City using technology and IoT to improve people's life?

The Smart City

Smart City: a definition

A city (or other human settlement) using various methods to efficiently improve quality of life and well being of the people living, working and visiting it.

Human Smart City

A city where citizens participate in the development of solutions to make the city smarter.

Improvement of smart cities

To improve smart cities, there is the need for a tool showing the current *smartness* of the city and its *strengths/weaknesses*.

The Smart City Wheel

The Smart City Wheel

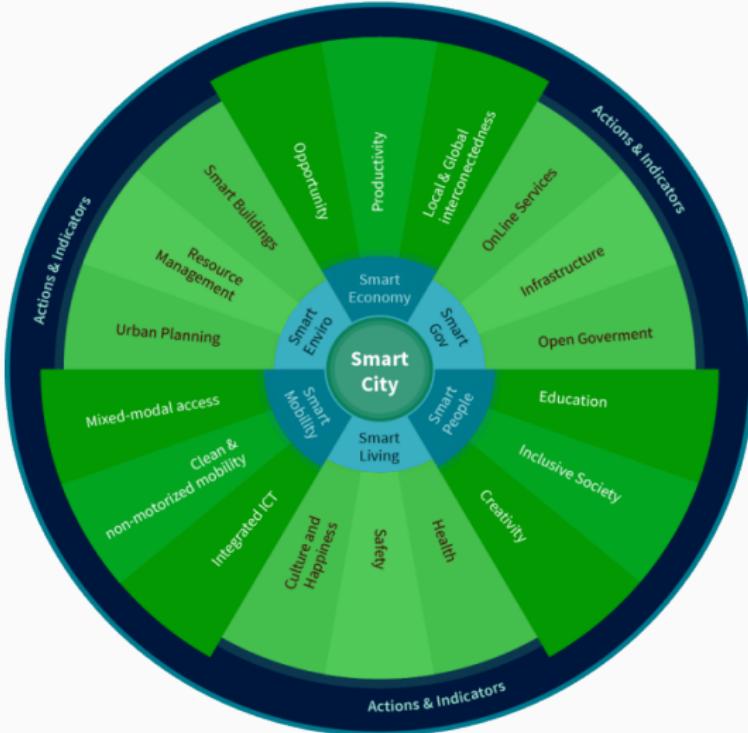


Figure 1: The Smart City Wheel: A framework helping to understand the main components of a smart city [2].

The Smart City Wheel

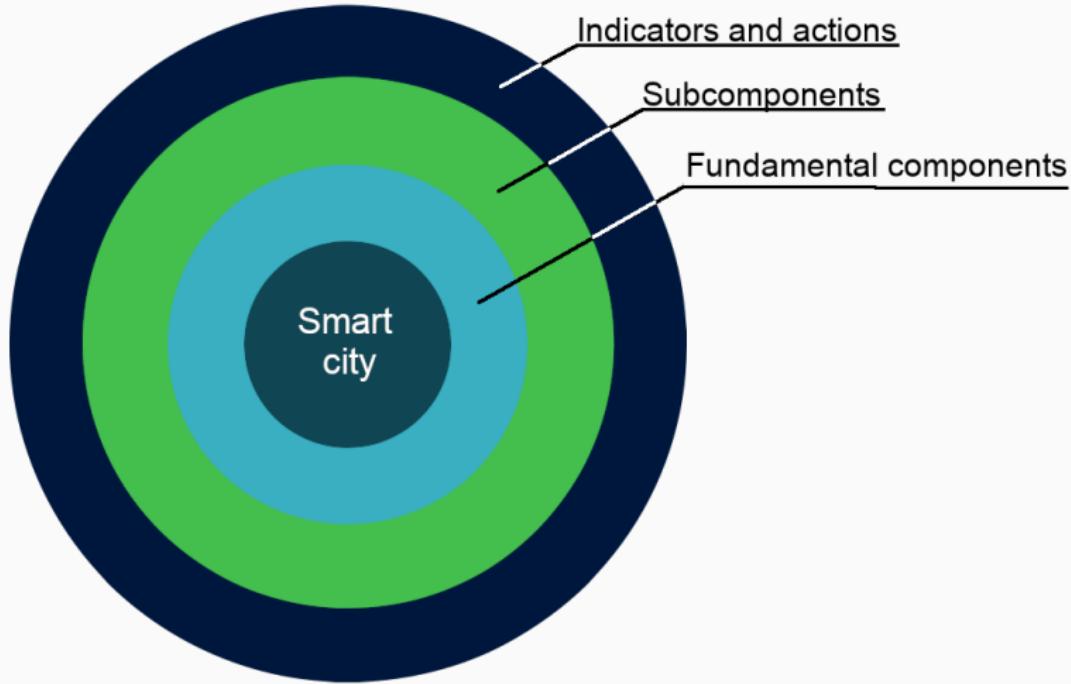


Figure 2: Different levels of the Smart City Wheel.

The Smart City Wheel Components

Smart Environment

describes how a municipal government manages the built and natural environment to improve livability for citizens and visitors.

Smart Mobility

focuses on increasing the efficiency and service quality of urban transportation to enhance the use and adoption of new mobility solutions as well as to increase people mobility through efficient mobility management and targeted infrastructure investments.

Smart Economy

describes all actions aimed at transforming and strengthening a municipality's economy.

The Smart City Wheel Components ii

Smart Living

aims at increasing quality of life for residents and visitors by following an inclusive strategic approach – across all age groups and demographics.

Smart People

aims at transforming the way citizens interact with the public and private sector. The creation of social and digital inclusion through smart forms of education for all age groups and demographics are a fundamental aspect of "Smart People".

Smart Government

is about strengthening the connections and interactions between the government and all stakeholders - citizens, businesses and other organizations of the civil society - within a municipality.

Human-centered Alternative Models

The Human Smart City Wheel

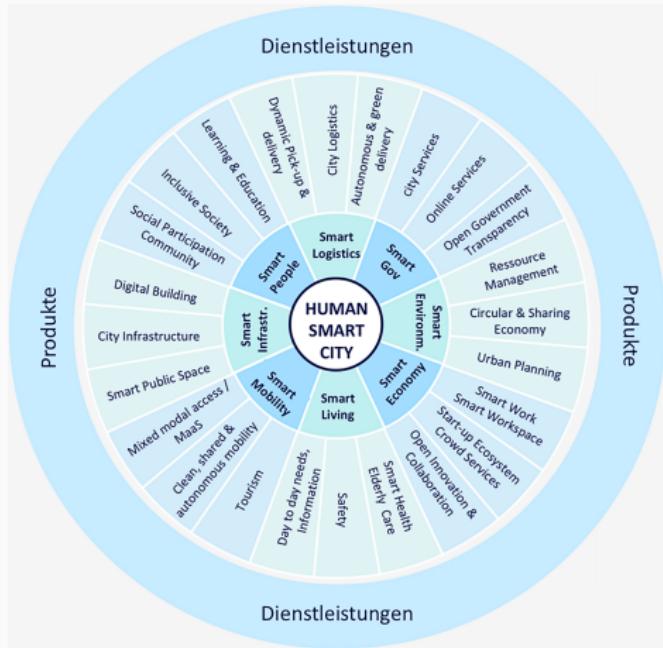


Figure 3: The Human Smart City Wheel: An extension of Cohen's wheel [3].

The Happy Cities Hexagon

By Boyd Cohen & Hob Adams



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@HobJAdams

www.happycityhexagon.com

Figure 4: The Happy Cities Hexagon: A framework describing the fundamental factors for citizens' happiness in cities [1].

Happy citizens projects require citizens to be involved in the process from the beginning.

Last years' projects

Jingle Jungle Maps

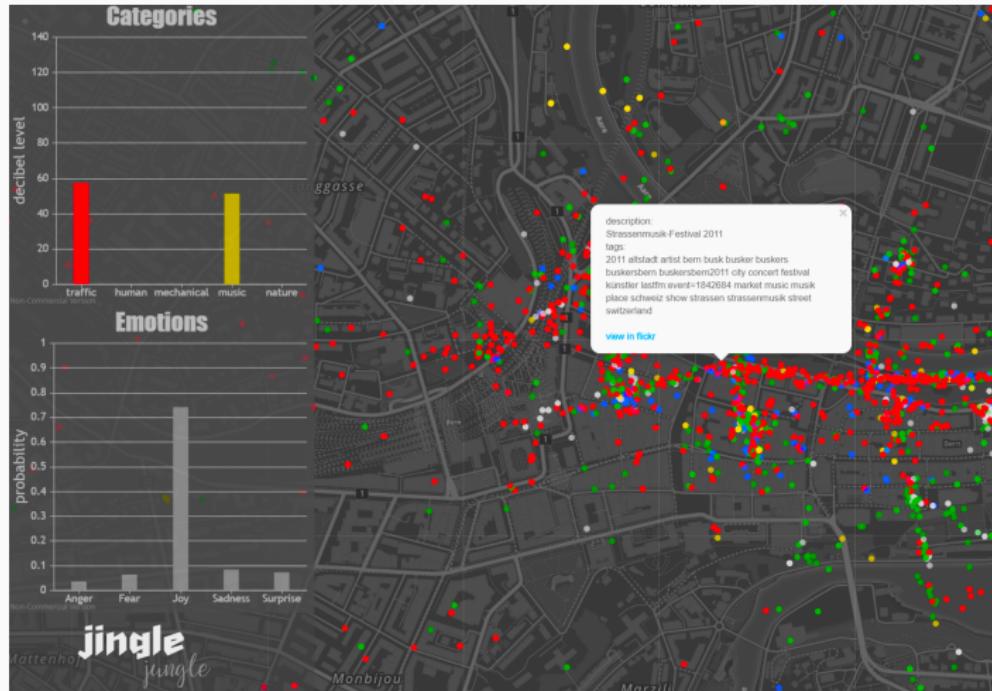


Figure 5: Analysis of social media data to estimate the noise landscape (type of sound, sound levels, ...) of a city.

Traffic visualization in cities

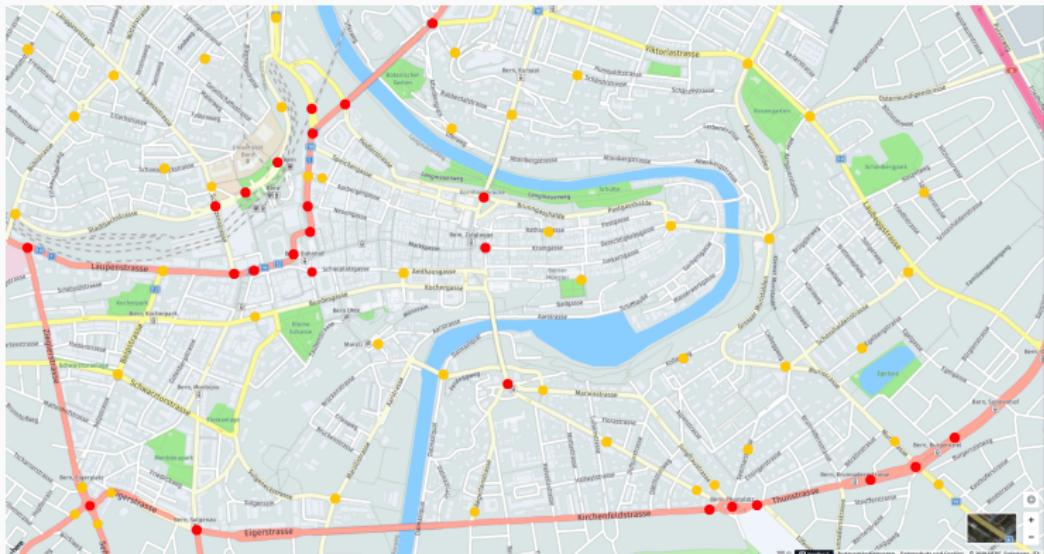


Figure 6: Analysis of different techniques for traffic data visualization for different scenarios.

Smart shopping



Figure 7: Prototype of a shopping assistant using indoor location tracking to help people find what they need.

Citizen Data In Human Smart Cities: Can Everybody Win?

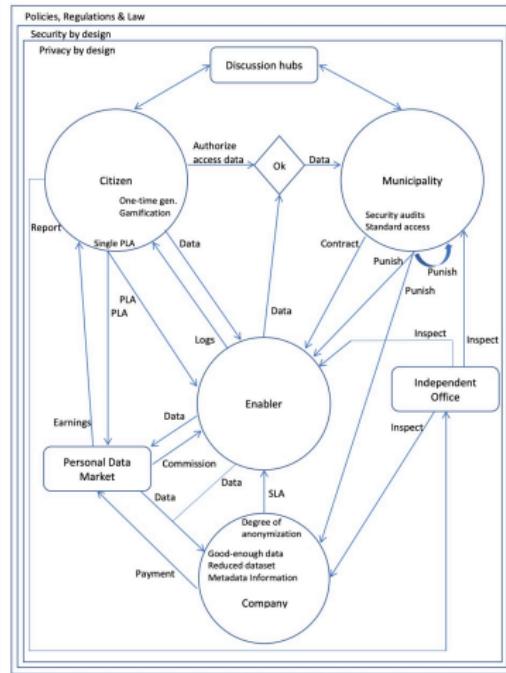


Figure 8: Framework regulating the collection and use of citizen data in such a way to maximize the profits of all involved actors, especially citizens.

Efficient Cooling Methods for Cities

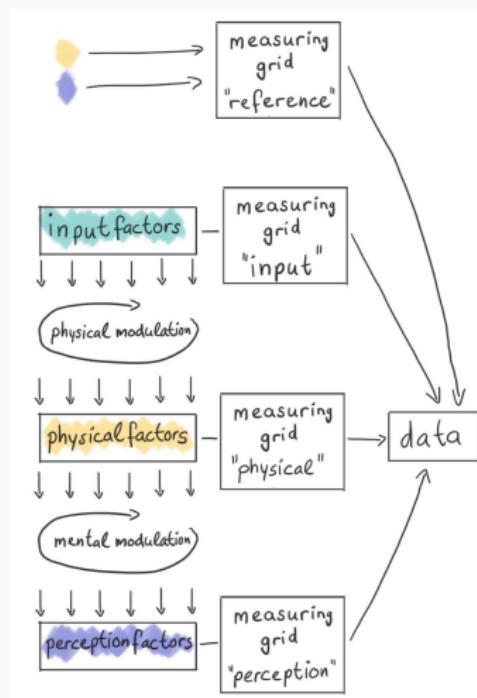


Figure 9: Proposal of a methodology to effectively measure effects of measures to cool cities.

Conclusion

Conclusion

- What is a smart city, and why it matters
- Utility of Smart City Wheel in different contexts
- Everyone (**me, you**, people, companies and institutions) can contribute to make a city smarter!

Questions?

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