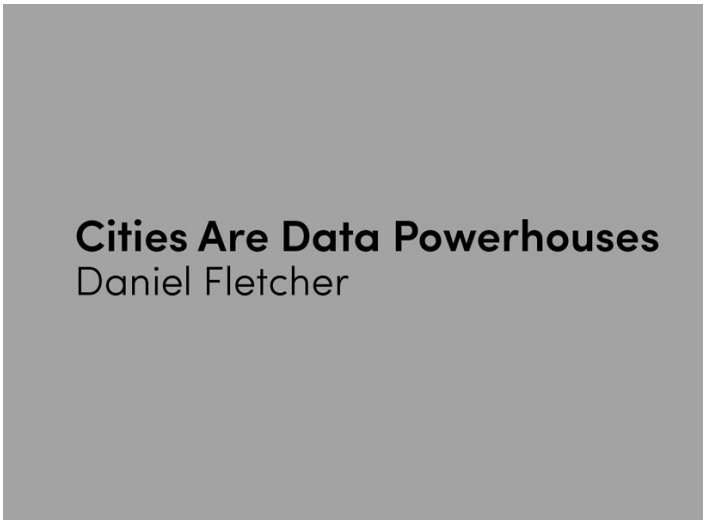
urbanNext Lexicon



CITIES ARE DATA POWERHOUSES

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Leveraging the value of data is one of the pillars of the deep digital transformations that every industry is experiencing to stay competitive in an increasingly global and connected society. Cities are no exception, and they are playing an important role in the data revolution, while striving to provide better services and competing to attract investment, business, talent and visitors.

Thanks to Cloud technologies, Big Data, and the Internet of Things (IoT), now we can capture, store, interpret, and distribute geolocated data in real time in a much more efficient and cost-effective way. As cities deploy sensors that measure all kinds of events and our smartphones get filled with apps that track our behavior on the street, added to the records generated by municipalities in their daily activities, the amount of data available becomes overwhelming – and the case studies more interesting.

Getting value from data

Still, technology and data are only a part of the equation, acting as facilitators to take better-informed decisions and support specific policies, actions and goals. Data strategies are being applied successfully in every urban field, from mobility, health, urban planning, environment or security, to purely city operations. For example:

- Detecting mobility patterns to decide on new infrastructures or measures to promote public transport.
- Predicting high air pollution episodes to implement mitigation actions.
- Improving urban planning decisions by spotting real estate trends and social needs.
- Understanding how visitors and tourists behave in the city to improve their travel experience.
- Helping firefighters access building hazard data when heading to attend emergencies.
- Testing residents' reactions to proposed policies.

Open Data, an unstoppable trend

According to the Open Data Institute (ODI), founded by Tim Berners-Lee in 2012, "Open Data is data that anyone can access, use or share." By making their data available, many cities are fostering their innovation ecosystems, thus creating an indirect return of value. Startups and established

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companies make use of these and other data sources to provide new services.

Moovit and Citymapper use the data provided by the departments of mobility to provide users with suggested combinations of public transport to reach a desired destination. Real Estate Big Data companies, such as Tercero B (Spain), combine their own data with datasets from the cadastre, the Office for National Statistics (INE), and other government agencies to advise their clients on where to invest.

We are still in the infancy of public-private data partnerships. There are still concerns about the legitimacy of opening government data to private organizations, augmented by potential security and privacy issues. Finding the right balance between massive data use and the preservation of individual rights will lead to endless opportunities. Estonia, a role model in the data economy, guarantees its citizens the right to know and decide who accesses and uses their personal data. Even in the case of public administrations!

The City Dashboard, breaking the data silos

Cities with traditional governance structures are likely to have departments that generate and collect data for their own use, not sharing it with other city departments and agencies. The existence of these data silos is often cited as one of the key barriers to deploying successful data strategies.

New York City, Chicago, Los Angeles and Mexico City, just to name a few, are exciting examples of cities that have broken data silos by encouraging city departments to share their information. The result: City Dashboards that provide a real-time overview of what is happening in the city, displayed on a map.

Closing the circle: the collaborative citizen

Bi-directional communication channels, which not only inform citizens but also provide them with the opportunity to contribute relevant data to city managers, are essential today.

Some of the most thriving cities have taken this idea even further: Helsinki, Amsterdam, Barcelona or Melbourne are empowering their residents by redefining their role as collaborators and co-creators in the definition of certain policies and services.

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Managing expectations

The International Open Data Conference (IODC), a global event in which organizations from both the public and private sectors showcase their achievements in data use, included a singular and engaging session in its 4th edition (Madrid, October 2016). Under the title “My Best Open Data Fail”, five speakers and a moderator discussed Open Data initiatives that did not turn out as expected. Failure was described in terms of little or no use of the published data, or the inability to complete the project. In summary, the key causes of these data fiascos were:

- Lack of a data culture on the supply side or the demand side.
- Irrelevance of the data published.
- Lack of technical or data skills.
- Data sets not updated after publishing.
- Security concerns.

Fostering a culture that accepts failure and learns from it is a desired practice in a discipline that is still young and evolving rapidly. We are still far from being able to emulate the behavior and capacity of the human brain in an affordable way. Advanced data techniques, such as Artificial Intelligence and Machine Learning, provide new ways to automate decisions by learning from the past, but these are not solutions that can be replicated out of the box for everyone. In the most common scenarios, to obtain value from data we must still first know what the questions are!

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