

## Cities as urban data laboratories

Urban areas are rich sources of data which could be used to improve the urban areas itself. Having an 'Urban Data Labs' in a city where different data streams (for example electricity usage, waste removal, public transport usage, availability of parks, wealth distribution) can be combined can allow for inter- and transdisciplinary research which can directly feed back into the city. In Urban Data Labs the focus will not just lie on 'observing' the city, but on experimentation and intervention together with the urban stakeholders (such as citizens, businesses, NGO's, municipalities). There are however also objections to such large-scale data collections: ethical barriers for collecting data from private citizens, safety of data from hackers, institutional frames which don't allow for collaborations between data sources, legal barriers which don't allow for data collection, etc.

This session tackles questions surrounding this topic. It draws from examples of cities and research performed on using data in cities. It also aims to look at the questions of how can cities build and utilize intelligence, also making it available to researchers, while also looking at and accounting for how accessibility to data influences and interacts with citizens perceptions?

### Programme (10.00 – 12.00)

10.00 – 10.15	Introduction into the topic	Colette Bos
10.15 – 11.00	2 examples of cities and how they deal with urban data	<ul style="list-style-type: none"> <li>- City of Riga, Mārtiņš Menniks</li> <li>- Suzanne Hold Ballard</li> </ul>
11.00 – 11.40	3 groups of discussions (each city joins one group) - 3 questions on flipcharts - 2 sessions of 20 minutes	<i>Which areas of urban life should not be included in large scale data collection?</i>  <i>How can public and private sector effectively work together?</i>  <i>What's the best of interaction between urban data hubs and citizens?</i>
11.40 – 12.00	Discussion	Panel with speakers <i>Moderator: Colette Bos</i>

### **What should not be the subject of data collection?**

*Moderator: Will Brown, University of Amsterdam*

#### *Introduction:*

Contemporary urban life is one characterised by the sheer amount of data produced. Individuals produce data through how they travel, through communicating and, increasingly vis-a-vis the internet of things, by simply using the various utilities that have become commonplace in the home. This vast quantity of data has a multiplicity of uses, especially within the paradigm of sustainability and greater efficiency and is so entwined within urban infrastructures, that questions concerning which areas of urban life should be sensed to produce data are rather limited. Thus, the question of which areas, if any, should not be used to produce data, is a fruitful endeavour. Through answering this question, we seek to uncover the ethical issues concerning urban data collection and the

ownership of such data, whilst also interrogating what should remain sacrosanct and therefore, free of data collection in the urban realm.

*Discussion:*

### **How can public and private sector effectively work together?**

*Moderator: Frieda Crooy, Platform31 and JPI Urban Europe Secretariat*

Both public and private sector have a lot to gain from creating urban data hubs and both need the other in doing so effectively. How to ensure a relationship in which both public gains (such as a more sustainable urban mobility system or a better life-style for citizens) and private gains (such as creating sensor infrastructures needed to gather data and using and selling data for better customer fit) and also the public risks (loss of privacy or detours from public values) and the private risks (too innovative a business to start in, too small market) are in balance. This questions thus goes into how to work between the tension between public and private interests and to balance these.

*Discussion:*

*Because the groups consisted of four people per session, it was possible to sit around a table and have a discussion and see to it that everybody had their share in the conversation, by actively involving participants who kept silent in the first place.*

- The legal aspects of data sharing are a barrier for cooperation between the private and public sector. Collecting the data is also a legal issue. Intellectual property rights play a role in this as well. There are legal problems, but also perceived legal issues. Who stores the data, owns the data. Data collected by private entities are not available for research, which is a pity, for it takes social scientists to implement findings that the data deliver. This also applies to data gathered by municipalities.
- Not all gathered data are used: a lot of knowledge is put on the shelf. Therefore it is of great importance to decide if and what data you would want to collect because of the impact on these structural decisions on the long term.
- The example of Mārtiņš Menniks (City of Riga) where the city collected data without precisely setting a target for the use of the data is an example of how public and private sector could have worked together. It turns out that the services offered by the private company are more successful than the services the city initiated. The time, efforts and money the city spent on their own projects, might have been better spent by involving the private company, fund their work and “pay them off” so the services they offer are freely available for the citizens.

*Conclusion:*

- The best way to enable the public and private sector together is:
  - Start a joint project from the very beginning.
  - Involve representatives from the municipality, private entities, research and citizen representatives.
  - Set clear and feasible goals.
  - Divide tasks and funding.
  - Formalise the cooperation by setting up a covenant that is signed by all stakeholders.

**What’s the best of interaction between urban data hubs and citizens?**

*Moderator: Colette Bos*

*Introduction:*

If data gathered in a urban data hub is relevant for public value and collected from individual citizen behaviour and choices, should this data also be publicly and freely available for all citizens? This question goes into whether and how citizens can be informed about, have access to, or interact with urban data that is generated.

We will discuss the example of air quality:

The phenomenon of poor air quality is something which has impacted the urban realm ever since the industrial revolution and, despite the drive for greater environmental sustainability, the level of air quality still impacts urban populations. However, the quality of air is often invisible to the human eye, and thus relies on the use of digital sensors and data to highlight this entity which, as portrayed by the wealth of scientific knowledge on the impact of poor air quality upon individual standards of living, is a major factor in urban prosperity. Therefore, with an eye to highlighting localised standards of air quality, how should data on air quality be disseminated to the general public to ensure both greater awareness at a public level, as well as a positive environmental impact?

*Discussion:*

- Air quality is an issue that many cities/research organisations are involved in. It is an interesting example because it brings many different topics together. These topics are shortly summarized below:
  - Citizens participation
  - Data ownership
  - Data quality
  - Data presentation
- Citizens participation
  - Air quality is something that is of influence on all lives of all citizens, but often not high on priority lists of both citizens and local governments
  - Citizens themselves can also be the source of information by providing input on air quality through sensors
  - Lots of apps in different cities for knowing the air quality, but do they use it and does this actually influence people's behaviour?
  - Does it work for an issue as air quality to focus on individual responsibility and behaviour (like an app does) or should it be included in wider municipal policy and planning?
    - For example urban planning that discourages car use, by making car use inconvenient. Or is this 'punishing citizens?'
- Data ownership
  - Who owns the data, who has a stake in using the data and who can make a profit from this data?
  - Especially when data is collected by citizens, the main view of the group is that the data should remain open and public
  - Municipalities simply always have the money to make the data themselves (i.e. pay for sensors and maintain databases)
  - Finding a party that has a stake can help to move things forward:

- Example: a public transport company paying for air quality sensors for a municipality because if they could prove that air quality was bad in certain areas, car use would be restricted and public transport would become more popular in those areas.
- Data quality
  - Good quality data is expensive (sensors, analyses, databases)
  - Citizens data gathering can be limited in quality, which can make it difficult to base conclusion on
- Data presentation
  - Has a lot to do with citizens participation: can the data be presented in such a way that this engages more citizens?
    - Difficult balance between understandable presentation and oversimplification (losing too much information)