SF 61: Open city data

Fr	B	C	NY	S	T	Total
4	8	7	9	9	5	42

Beispiel:
The key field of open city data describes urban approaches to make data that arise in the city system freely available to city dwellers and third parties with the assistance of information and communication technologies. In this context, several cities studied as part of the City: Insights research project showed that this process of making data available was oriented towards current development and development that was oriented towards sustainability.

It is, for example, a matter of presenting key energy-specific data of buildings on appropriate platforms. The city of **Copenhagen**, for instance, maintains a database of building-specific energy consumption and publishes the results of all public buildings on a website. Similar kinds of platforms are available, for example in **Tokyo**, or, as in the case of Singapore, are in development. The city of Tokyo even goes a step further and publishes the recorded emission values of buildings as well as the certification results of the sustainability analysis that has to be performed for all buildings.

The efforts of building owners and cities engaged in environmentally sustainable development are thus disclosed. In addition, the publication of these data strongly influences the image of the owners and local companies, which should incite them to optimise the ecological sustainability of their buildings.

1. Differentiated description of the key field

Providing citizens and local businesses with city-related data has always been part of sustainable urban policy, as this ensures transparency and makes participation possible. The technological developments in the field of information and communication technologies have, in the last few decades, led to the growing digitisation of cities. Nowadays, large amounts of digital city data accrue, such as the data relating to all administrative processes, urban construction projects or, as shown in the example, the energy consumption data of urban buildings. In this way, information and communication technologies have contributed to a certain flood of data, but they can also be used for dissemination and user-friendly processing.
In this intersection, discussing what information can be made available to citizens and businesses and used in the interests of sustainable urban development falls with the remit of cities. Pure information services (e.g. about energy consumption values) or services such as through open GIS may fall into this category.
In addition, approaches aimed at seeking the active participation of users (keyword: user-generated content) or allowing the execution of (administrative) matters are increasingly being encouraged.
At the heart of all these possible activities, however, there must be an urban strategy for dealing with open data, one that also takes sustainable aspects into account.

2. Reference to sustainability:

Open data approaches should above all primarily make urban and entrepreneurial processes more transparent for residents and customers . If need be, social participation is ensured through the use of open data platforms.
In this way, the population's acceptance of urban projects can also be increased, which, from an economic point of view, is also of great interest to cities and companies.
Ultimately, if they are part of a city-wide strategy, open data approaches can be used to achieve other objectives. One possible example of an ecological nature has already been given, that of energy consumption platforms.

3. Relevance to industrial sectors?

Mobility	Low
Energy:	Medium
Production & logistics:	Low
Security:	Medium
ICT:	High
Water infrastructure:	Low
Buildings:	Medium
Governance:	Medium

Brief description of the high level of importance:
The key field is primarily concerned with providing data with the assistance of information and communication media. Its importance for this industry sector is, therefore, assessed as high. Furthermore, in the coming years, one can expect many developments whose implementation will also affect the ICT sector.

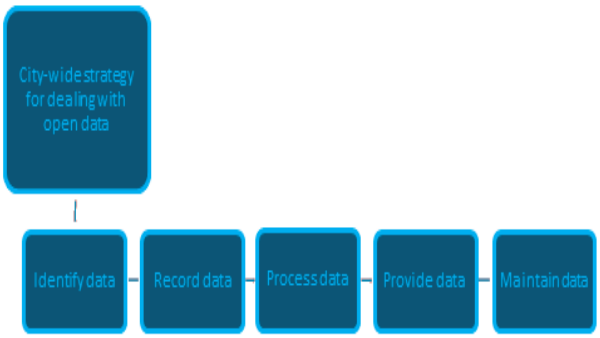
4. Impact (positive & negative)

Besides the already stated impact on sustainable urban development, the following positive effects can accordingly be expected:
- Increased transparency of urban and business processes
- Improved participation of the citizenry
- Forcing of the city-wide development goals (e.g. sustainable development)

In addition, the following adverse effects can be expected:
- Cities are being confronted with an increased workload because decisions regarding the data to be published must be made and, moreover, data preparation, provision and maintenance can sometimes cost a lot of time and money.

5. Implementation measures:

The basis of all activities when dealing with open data should be a city-wide strategy that has to deal inter alia with the clarification of the following questions:
• What objective is being pursued by the provision of open data?
• For which target groups are the data published?
• Which department of the administrative apparatus is responsible for implementing the open data strategy and what powers does it have
Based on this, appropriate data can be identified and their collection, processing, provision and maintenance can be initiated.



Of course, all the essential measures for data collection, storage, analysis, and preparation must also be implemented from the IT point of view; this also includes taking data protection requirements into account. These measures are heavily dependent on the type and origin of the data, and cannot be generally defined at this point.

6. Actors: Who can shape things?

It is primarily cities themselves that are responsible for whether and to what extent they wish to provide their citizens with city-related data. If cities show interest in this and push ahead with a municipal open data strategy, a variety of potential partners which could support the cities with their implementation of this then come into question. They may include municipal or regional companies as well as private enterprises that can provide assistance with the technical implementation.
However, citizens or appropriate stakeholders can also be of great importance when introducing open data systems. On the one hand, they can support the release of certain information and thus act as initiators of open data approaches and, on the other hand, this group has to be included in the design of open data platforms in order to provide information in as user-centred a way as is possible.
If concrete objectives are pursued with open data strategies, technical experts of the topics concerned should be involved in the development of objectives and tasks.

7. Prerequisites:

The city administration must demonstrate a fundamental willingness to pass on information and data to the public and local businesses. Only if a political will supports the implementation of comprehensive open data approaches can the anticipated expenses be borne by the city.

Furthermore, the constant technological advancements in information and communication technologies place great demands on the actors involved. In this context, the technology-friendly attitude of the municipal administration, politics and society appear to be of central importance to allow potential technical innovations simple entry conditions (e.g. automated data acquisition and provision, and smart metering systems).
In addition, data protection issue positions in particular must be taken into account, since many data sets for open data solutions contain sensitive and personal or business-related data that have to be protected. The protection of personal rights regarding informational self-determination is a prerequisite for the implementation of open data approaches.

Structurally, extensive cooperation networks need to be created to define, for example, uniform standards for the exchange and collection of data.

8. Obstacles/barriers:

As already outlined under the impacts of the key field, the expected workload for municipalities constitutes a fundamental obstacle. Comprehensive strategies can only be implemented when there is a political will towards transparency and citizen participation or the social pressure is so strong that additional costs in favour of open data approaches can be justified.
A further problem arises when the external data of local actors is to be provided. If no legal provisions oblige them to publish data, companies are often not willing to divulge proprietary information without any apparent benefit. In this context, however, cities do have a chance to influence companies by means of certain incentives (see Special features/remarks).
Furthermore, from the perspective of dealing with the data, two key problem areas arise. Firstly, related data of different public bodies or companies are often held in completely different formats and levels of detail. In the interests of a uniform representation of information, however, standards need to be developed that enable steady and uniform acquisition, processing, provision, and maintenance. In addition, when dealing with urban data, all the data protection guidelines have to be observed, guidelines which define various constraints such as with regard to the disclosure of personal information.

9. Indicators:

In order to be able assess how pronounced this key field is in a city, the following indicators may be used:
- Is an urban open-data strategy already in place?
- Age/topicality of the urban information provided digitally
- Proportion of administrative procedures that citizens can carry out digitally expressed in %
- The presence of civic participation platforms (in this case numbers of posts and users, number of decision-making processes actually „influenced", etc.)

10. Special features/remarks:

Basically, in Europe, the decision-making power of the administrative authority at city level is not sufficient to officially force private companies to release information. For this purpose, as in the case of energy consumption data in Copenhagen, national regulations that legally specify their provision are required.
If no such statutory regulations exist, cities can still try to persuade external actors to engage in open data platforms. A first step would be the release of their own urban data. In addition, platforms can publish data of great social interest and use them as leverage to obtain information from all other players and, possibly, introduce measures to remedy recognisable deficits.