Pipes at NMS Enkplatz © Bojan Schnabl

Factsheet

Data platform "smartdata.wien"

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gemeinsam g'scheiter

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Project context

Measuring data is an important tool for understanding processes, developments and indicators. Data management is a major challenge for a city, but it is also at the heart of a smart city.

In the course of Smarter Together, an open-source data platform was developed to make the long-term sustainability of the project's successes measurable. The platform creates an urban infrastructure for data collection and exchange between public and private partners.

Smarter Together measures

In the course of the Smarter Together project submission (2015), European Commission representatives expressed the wish that Vienna should create and use a data platform. It was agreed that Vienna should use EU project funds in an exploratory phase to develop an innovative solution with the potential to meet future needs within the city. Based on this, the following activities were carried out within Smarter Together:

- screening of existing urban databases with an international focus over a 1-year period
- creation of a central data management system

- establishment of an open-source data platform based on FIWARE
- use of this same platform as a real-time interface for energy and mobility data and for project monitoring and evaluation
- installation of monitoring and metering infrastructure in buildings
- participation of 7 Smarter Together teams in the 2018 ICT Challenge (2 apps presented, 2 Smarter Together winners).

Boosting the process

Smarter Together served as a pilot project to test both the overall data management system and its individual components.

What is FIWARE?

The smartdata.wien urban data platform established by Smarter Together uses the open source FIWARE platform. This allows for autonomous urban data management and has great potential for expansion.

FIWARE was developed as an EU project. As it is an open source platform, it is not dependent on large manufacturers. Furthermore, FIWARE's Context Broker (a central element of the FIWARE architecture) was accepted by the EU as a building block of its Connecting Europe Facility.

Both the platform and the data remain the property of the City of Vienna.

Use of the data platform in the monitoring process

Within the Smarter Together project, numerous measures were taken for the sustainable development of buildings and mobility. To assess their impact, an Integrated Monitoring Methodology (IMM) connected to the data platform was implemented as part of a participatory process with the city stakeholders.

In this process, data is collected from local monitoring infrastructure (for buildings and mobility) and transmitted via the energy management system of MA 34 to the central administration office of MA 01. This in turn uploads the data to the data platform. The data retrieval and analysis is ultimately carried out by AIT.
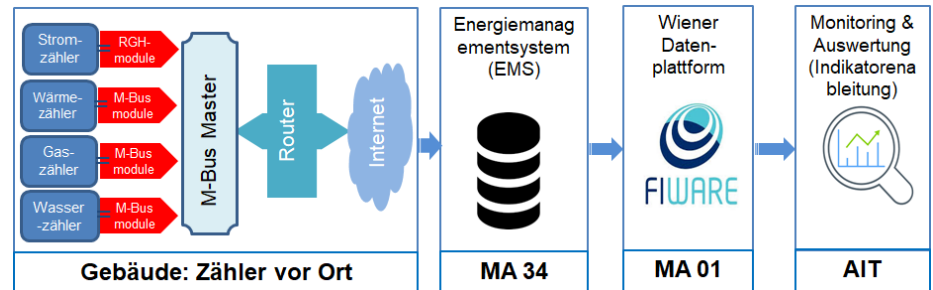
The data platform used in the project, with its connectors, standardised interfaces and use of standard protocols, creates considerable added value for future monitoring and standardisation of monitoring in the city.

International activities

The City of Vienna is a member of the Open & Agile Smart Cities network (OASC) and takes account of minimal interoperability mechanisms (MIMs) on its data platform. The aim is to achieve interoperability of all members' systems based on minimal common standards.

The staff of the MA 01 carried out intensive international peer-to-peer research work. This ensured that internal city resources could carry the project forward sustainably.

Smarter Together participated with FIWARE in numerous conferences, including the 2018 ICT Challenge, at which 6,000 participants and 7 Smarter Together teams were present.

Schematic Flowchart © City of Vienna / AIT

Lessons Learned

The involvement of future users, including municipal stakeholders within the City of Vienna administration, and the 1-year screening phase were essential for the success and sustainability of the project.

Replication

The smartdata.wien data platform has already been formally integrated into the systems of the City of Vienna (MA 01) and used for the IoT. The first sets of measurement data from the project are already being imported and can be accessed online here: https://smartdata.wien.

The platform will also be used by the City of Vienna in the future.

Holistic thinking about data management

- In a first step, the City of Vienna carried out an intensive screening of existing solutions by its own staff. In this way, Smarter Together did not chew up a finished product on the open market that would necessarily have had inherent follow-up costs for further use.

- By involving the staff at an early stage, the necessary human resources were developed at the same time, which are important for the sustainable use of a data platform.

- In the end, the decision was made in favour of the FIWARE open source modular system, which is funded by the EU.

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