Cities are becoming digital, thanks to the urban data platforms that enable it

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A new study covering eighty European cities and their efforts to exploit data to monitor and improve city infrastructure shows an increasing use of data in cities. Improving city operations, enhancing environmental sustainability, informing decision-making and a wish to spur innovation and new services are mentioned by cities as main reasons for setting up urban data platforms.

Urban data platforms (UDPs) enable digital technologies to integrate data flows via open standards within and across city systems used by both the public and private sector. For example, platforms can share raw data streams or show 3-D visualizations of how underground piping, bus lines, thermal grids, environmental data and a wide range of other information is connected.

During the COVID-19 pandemic, the potential of urban data platforms has also come to the forefront in many cities. Data from citizen self-sharing of data, traffic sensors or Wi-Fi hotspots can be used to track the effectiveness of social distancing, and to keep apart from other people when in public. Urban data platforms and the digital twin of cities could be used to bring such

data together and visualize it to the different stakeholders.

Erasmus Centre for Data Analytics (ECDA) led the study and has published a blog post in which the researchers behind it, Dr. Marcel van Oosterhout, Dr. Haydee Sheombar, Julia Amelie Holst, Dr. Tobias Brandt, Prof. Eric van Heck, provide the key results. The work has been done by ECDA as part of the EU-funded project RUGGEDISED with support from the European Innovation Partnership on Smart Cities and Communities (EIP-SCC).

The study shows an uptake in the adoption of urban data platforms and 70 percent of the cities are now using open standards to develop their platforms. The importance of building trust between the private and public sector is also highlighted as crucial if cities are to make more use of data in their own "clouds."

Svetoslav Mihaylov, policy officer smart mobility and living for the European Commission, says, "The study has created a comprehensive landscape of the current deployments and plans for urban data platforms in the EU and comes to evaluate the results of the intensive seven-year work performed at the EIP SCC and the Smart City Lighthouse projects. It allows us to highlight the progress in comparison with a similar 2015 study and what still remains to be done. The study comes at a crucial moment when we are defining our actions and commitments for the next framework program within the Horizon Europe and the Digital Europe Programme as well as the accompanying Joint, Boost, Sustain initiative of the EU cities and communities."

More open data in cites will unleash potential

The increase in urban data platforms opens up the possibility to empower all participants in the cities' ecosystems to contribute to a city's triple-bottom-line: social, environmental and economic.

The respondents in the study—of which a majority are involved in one of the 17 European Smart City Lighthouse projects—are at different levels of adoption with 44 percent in the first explore and plan phase, 25 percent in the build and implement phase, and 31 percent with an operational urban data platform.

One city currently implementing an urban data platform is Rotterdam. They are building a so-called digital twin that will allow stakeholders to engage in new ways. For example, citizens will be empowered to co-design the city with city-planners, who can test ideas, possibilities and more in the platform rather than through complicated and expensive studies where different data has to be added for each new project. Engineers will be able to use the digital twin to visualize underground infrastructures, while working in the field.

Roland van der Heijden, Programme manager Digital City for the Municipality of Rotterdam, participated in the study and will use the input in the [city](#)'s future work:

"We will try to incorporate the findings in our next development steps. The most important one at this moment is: if we want to organize a successful UDP we need to create trust, not only in the [platform](#) but in the whole urban digital ecosystem," he says.

  More information: Digitally managed cities of the future – how close are we?
[discovery.rsm.nl/articles/436- … re-how-close-are-we/](#)

  Provided by CORDIS

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