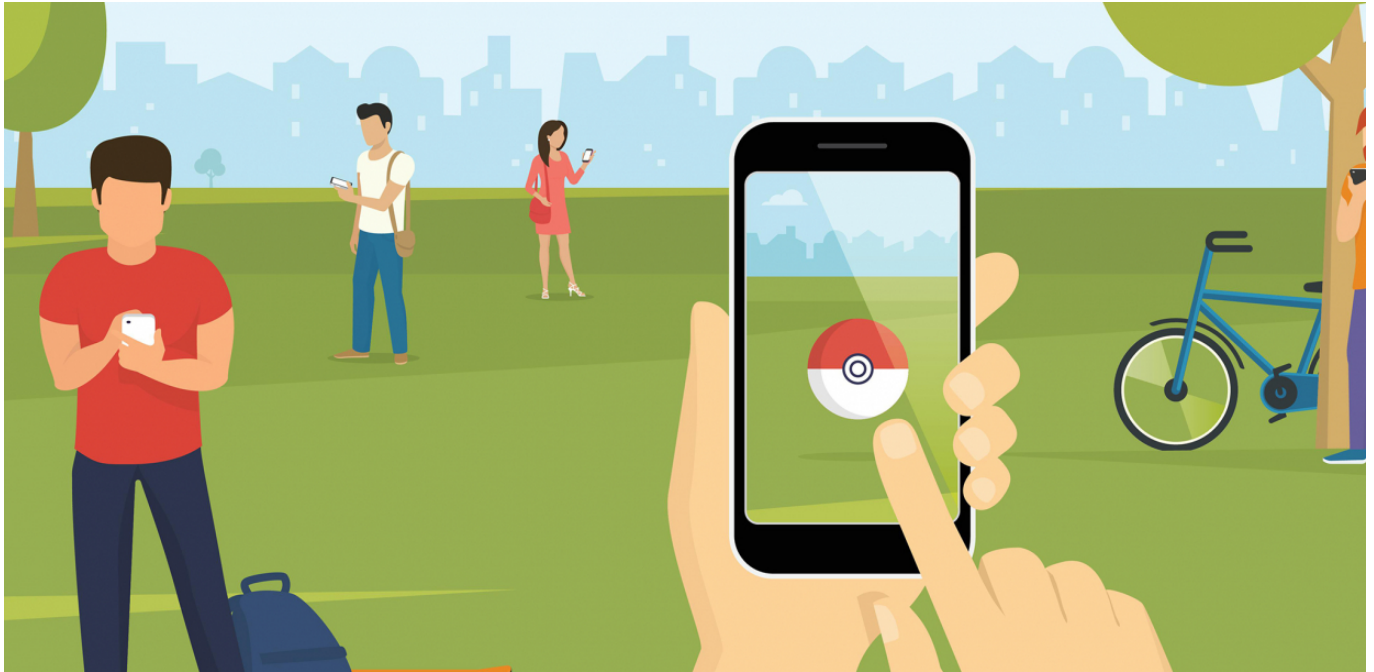EBP◎

The use of big data and crowd data for urban planning in Berlin

EBP outlines the potential benefits of using big data and crowd data in the context of urban planning and how these data can be used more effectively in the future.

Big data and urban development

The digital transformation of society with its many manifestations (e.g. social media, the Internet of Things (IoT), citizen sensing, gamification and cellphone records) is producing ever more and various data at ever-increasing speed. Many suggest that mining these data at a sufficient depth will enable us to detect meaningful new relationships and increase our knowledge. Given that ever more data can also be gathered via geolocation, this is especially applicable to urban development projects.

Potential benefits for urban planning

Working on behalf of the Berlin City Administration, EBP analyzed the potential benefits of various types of data in the general context of urban planning and project management in Berlin. We also identified potential applications for the different types of data on the basis of three specific urban development plans. We then assessed the risks and opportunities associated with the use of big data and crowd data, for instance, in connection with data protection statutes.

Analysis of data sources and channels

Our first task in the context of the project was to arrive at a

Client

Berlin Senate Administration for Urban Development and Housing

Facts

Period	2016 - 2017
Project Country	Germany
Number of identified data sources	99
Number of data-source categories	23
Number of examined applications	16

Contact persons

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precise and workable definition of the terms big data and crowd data. We then identified various sources of big data, including user-generated, transaction-generated and sensor-generated data, and bundled these into distinct categories. We were also able to specify the types of useful information that could be derived from the data for each of the identified categories.

In addition to this, we also examined the channels that could be used to gather and make use of big data, before then going on to assess the data that could be drawn from the channels in light of their quality, representativeness, spatial and temporal resolution, extractability and potential for use in time-series analyses.

A need for further inquiry

Sustained rapid developments in the area of urban planning make it worthwhile to continue to examine the value of big data and crowd data. In the framework of the present project, EBP was able to show how urban planners can deepen their understanding and competence in the area of big data and crowd data and how to make better use of these new data sources in the future to improve and facilitate their planning work.

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