

## Urban TRAFFIC

### PART OF SMART SOLUTION 8: BIG DATA MANAGEMENT

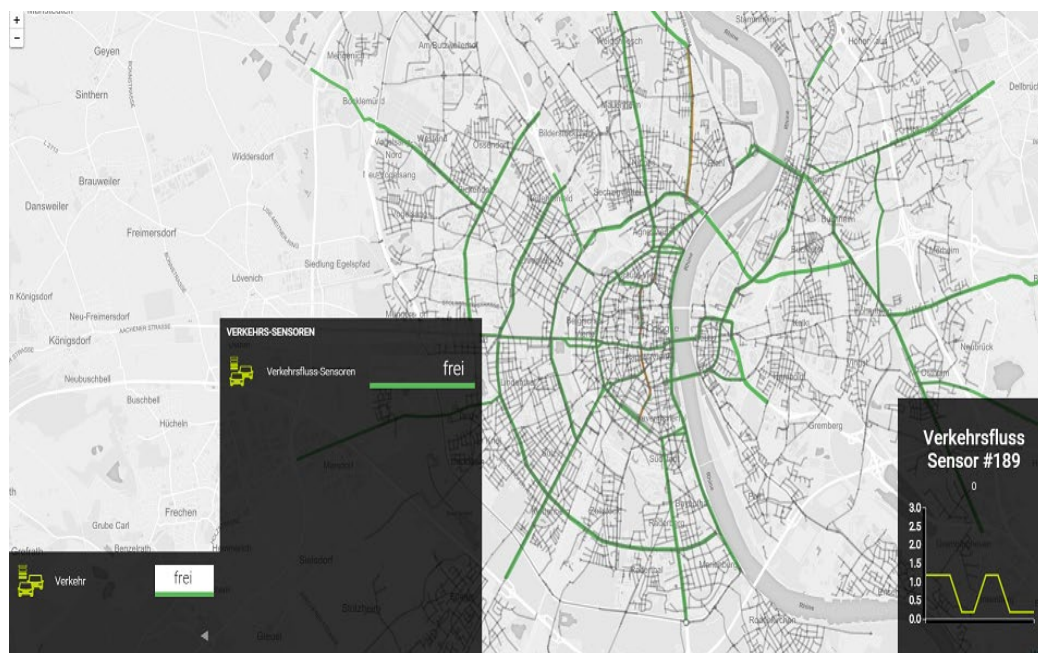


Figure 1: Urban TRAFFIC

- Provides a fast and easy overview of the current traffic flow within your city
- Data and information can be used to improve traffic management by exploiting historical data to detect unusual situations
- Data can also be provided on open data platforms of cities, so external app developers can use these data as well. All urban data can be included independently of the manufacturer of the data provider

INTEGRATED  
INFRASTRUCTURES



Cologne

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## What is the solution?

The picture below (Figure 1) shows the City of Cologne's Urban TRAFFIC app. The map provides a view of Cologne's street map, with the different colours indicating current traffic flow in each street. In the current version of the app, 4 different colour indicators are used: green, yellow, red and grey. Green indicates a good traffic situation with no traffic jams. Yellow is less good and red is bad. Grey indicates a disconnection from the sensor source. In the picture above the traffic situation shown is good and therefore all supported streets are green. The map gathers its data from the UrbanPulse data backend which is described in the next paragraph. The original data source are traffic sensors installed next to streets, which capture the current traffic flow. Future versions of the app will be enriched with more traffic information such as available parking spaces, and the location of bike sharing and car sharing spots.

The picture below (Figure 2) shows an overview of the whole system which is implemented for Cologne in the context of GrowSmarter. The UrbanPulse module in the middle is a multisided big open data platform. This means that it is open to any kind of urban data on the urban data side and can provide data and information via open standards to different data consumers.

Urban data is provided by traffic management systems, from project partners, and from urban companies like energy provider. Additionally environment data from sensors can be used. The data will be stored to provide historical comparison for the data analytics. Data and information are provided to apps or as Data Services to consumers. In the image above, the Urban TRAFFIC app is the data consumer and depicts the information.

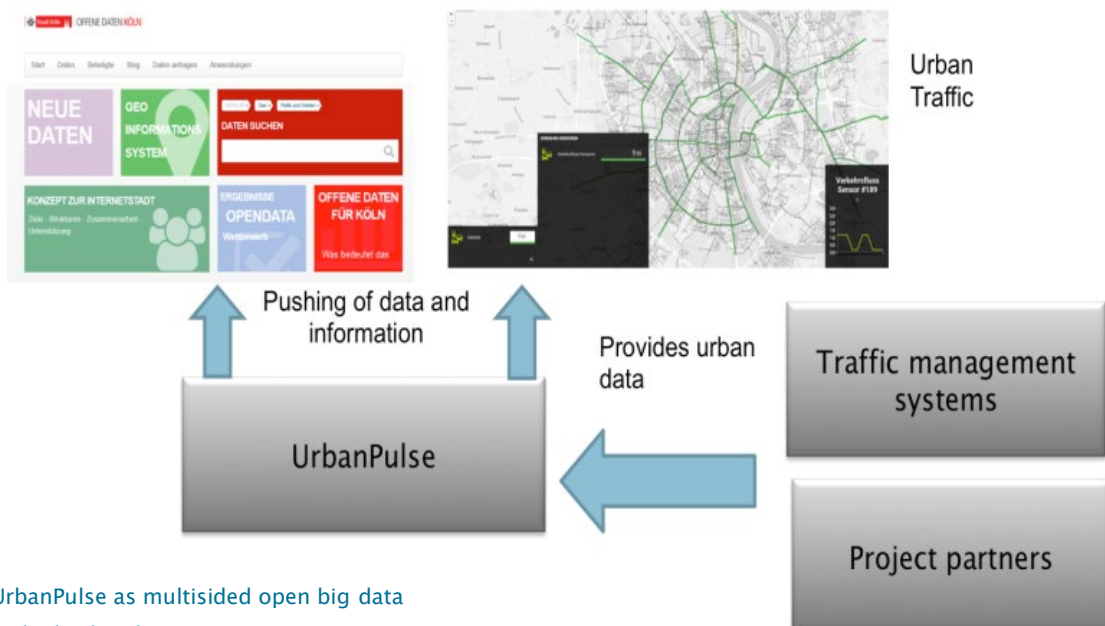


Figure 2: UrbanPulse as multisided open big data platform in the backend

## Business Model Used

The Urban Software Institute GmbH (=ui!) is developing the UrbanPulse and the Urban TRAFFIC app and offering them to cities and urban management companies. They can by licences and can give additional orders to extend or adapt the solution after finishing the GrowSmarter project. Further more [ui!] is doing analytics on the data to determine information which can also be sold. Cities could sell the urban data and information to interested parties.

The business models have to be adapted for the cities to fit their needs and requirements.

## Integration with other smart solutions

The Urban TRAFFIC app is a good addition to other urban apps like the Urban COCKPIT, which is described in another fact sheet.

## Expected Impact

The Urban TRAFFIC app provides important information about the current mobility situations of a city. It can be used to monitor mobility developments in order to detect the impact of measures and to improve certain aspects such as improving traffic navigation algorithms. The displayed information will also be provided as Data as a Service on the open data platform of Cologne.

This will enable service and app developers to develop new methods of using the information for new value added information and data for users. E.G. they can use these data in their own apps and enrich them with their own data to offer their customers a better solution.

## Potential for replication

The solution can be replicated in any European cities as it is not dependent on proprietary standards and therefore connectors from the data source to the UrbanPulse can be developed for every sensor / service interface. Connections to the Urban TRAFFIC app and the open data platform are realized by open standards to ensure every app developer can use the data easily.