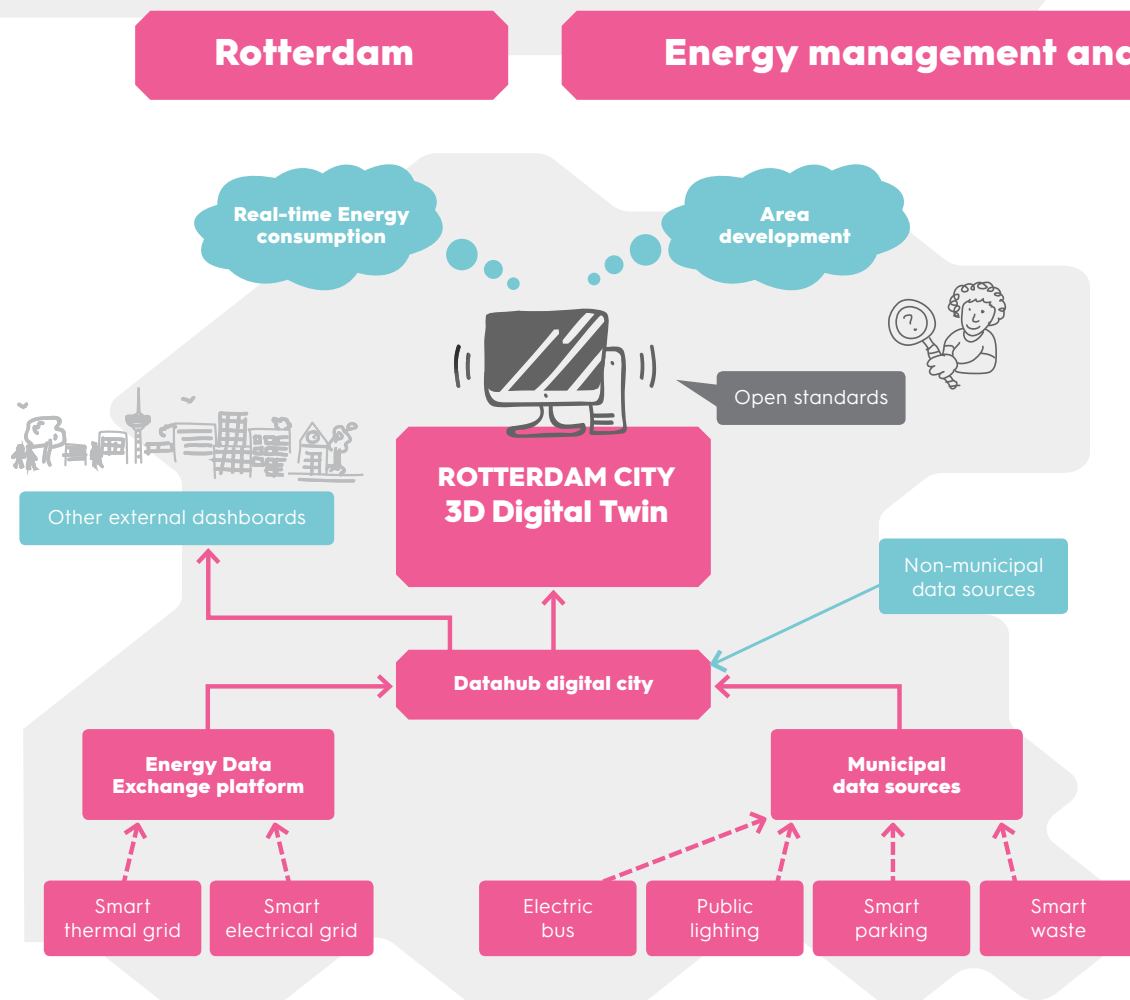


3-D city operations platform



One objective of Ruggedised is to transform large districts or buildings (old, new and mixed) into low carbon and resource efficient districts through smart interaction and integration of energy systems at district level. This requires smart management or infrastructures for electricity, heat and cold as well as smart solutions for local energy production, storage and exchange of energy. A representation of available open data of the district will be visualized on an open 3D platform, making it possible to monitor and communicate different information (starting with the energy performance of buildings), enabling endless applications and scalable to digital city level.

Main partners involved:



City of Rotterdam



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FACTSHEET R9

3-D city operations platform

How does it work?

This solution will complement the R8 “Energy Management System”. Data on the energy use of the buildings, provided by the energy management system, will be matched and transferred into a new 3-D city operations platform that will be developed.

This platform discloses and visualises actual use of energy as well as use over a period of time (by individual buildings as well as the whole area). The 3-D model is connected to the platform, and together with realtime data it forms a 3D Digital Twin of the city.

This forms the basis for further innovation by making data available for everyone. The required infrastructure for this subsolution is provided separately.

Both the city of Rotterdam as well as private parties will use the model for new applications, also to create new businesses. Connecting the many sensors and other data sources, such as municipal databases, requires standards for connecting to the data platform. The development of such standards is crucial.

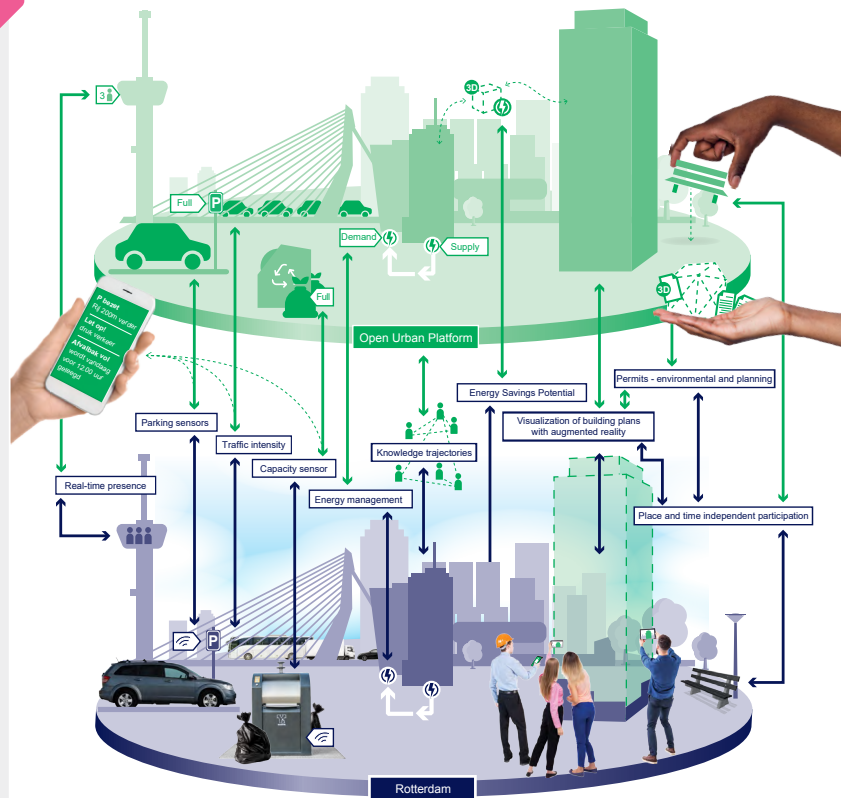
Because the entire community will have access to data due to the use of open standards, it is expected that this 3-D Operations platform will become a powerful resource for further innovations.

Estimated impacts

The 3D city operations platform is an open data platform. So every third party can use data and visualisation tools to create their own business. This will influence society and lead to additional economic benefits for companies and more wellbeing for citizens.

Digital City

Gemeente Rotterdam



Replication potential

Once developed, the 3-D city operations platform can technically be replicated any city. However, there are a number of conditions for the development of the model and for maintaining effectiveness and availability:

- a) Development and availability of open data standards;
- b) Disconnecting data collection and -storage from application development
- c) Data- and platform ownership and governance issues;
- d) Avoiding vendor-lock in.

In addition, co-creation with commercial parties is required for acquiring knowledge and resources.



Find more factsheets on
www.ruggedised.eu

