

City Simulation Platform

CDW

Description

This platform will be a centralised virtual hub for software tools and datasets developed by the city of Seville to support its sustainability goals. It will include tools for data-driven planning of collection and treatment of various waste fractions, for evaluation of citizen satisfaction and policy effectiveness, and for simulation of future scenarios of city development. The purpose of combining these tools in a platform is to support cross-sectoral dialogue and facilitate data exchange between municipal departments, research institutions, and relevant business partners. Use of the simulation platform in urban development events with stakeholders can foment an informed, flexible and balanced transition to a circular Seville.

Keywords:

- #Decision making; #Planning
- #Coordination
- #Stakeholder engagement
- #Data analysis
- #Data visualisation

Complementary tools:

- CDW Flow optimisation tool, Wellbeing monitoring tool

Target user:

- Local governments - (e.g. departments of buildings & infrastructure, environment, urban development, waste management)
- Businesses (e.g. building owners, environmental consultants, construction and demolition contractors, waste managers)
- Citizens and civil society organisations
- Research institutions

Format:

- Web-dashboard hosting various software tools, for the city of Seville (in Spanish)

Development

For the back-end part of the application, the data analysis and machine learning were powered by Python libraries. Communication between data sources was managed with Python when needed. The use of Django as a framework help to improve the performance of the applications developed with other popular web frameworks. The initial developments were provided to the managers for testing in containers or virtual machines to facilitate direct deployment in any computer. A GitHub repository has been created with a clean Django project to serve as template to implement the initial features of the software tool.





Deployment

In **Seville**, citizens and the municipal manager can use the platform to access all the software tools developed under CityLoops as well as to support the campaign of the city and the dissemination activities not only related to the project but also with the circular actions carried out in the city.

Developed by

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