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# Wellbeing Monitoring Tool

## CDW

## Description

This software tool combines varied data on the city of Seville's quality of life -such as waste generation per capita, access to green spaces, and other demographic and sustainability indicators- to measure progress towards the city's sustainable development goals and project the socio-environmental impacts of specific policy initiatives. Citizen satisfaction and urban metabolism analysis will converge in a methodology to evaluate the performance of the city using standardised wellbeing indicators. This tool serves to facilitate constant improvement of the city's urban development agenda both in hard environmental terms and in ensuring happy residents.

**Keywords:**

- #Strategy
- #Decision making; #Planning
- #Coordination
- #Data analysis

**Complementary tools:**

- City Simulation Platform

**Target user:**

- Local governments - (e.g. policymakers and departments of environment, urban development, or social affairs)

**Format:**

- Software tool for Seville in Spanish – interface for use by city, and interface for use by citizens showing public results
- Report in English: Methodology for standardised Satisfaction Indicators in the context of urban development

## 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.

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The data used is sourced from: socio-economic data from available statistic reports on the website of the municipality, municipal waste collection data from LIPASAM, data from EMASESA, and open-access environmental and geospatial data.

**Barriers**:

A challenge encountered is the availability of data in the required format, and lack of historic socio-economic data. Regarding the data format, this was overcome by: (1) changing the format manually or (2) asking for collaboration from local partners; the lack of data is not immidiately resolveable, so the tool and the data analysis methodology had to be adapted to the available data.

# Deployment

In **Seville**, the wellbeing monitoring tool will be integrated into the city's simulation platform, and will be used to track and analyse impacts and results of public actions and CityLoops demo-actions on citizens wellbeing. In this way, the city will monitor whether or not (and how efficiently) public programmes for sustainable development are benefiting life-satisfaction and health of residents.

# Replication

Other cities could use the technical report on the software tool developed in order to replicate the tool taking into account local specifications and data. The software tool is unique to Seville since the data analysis and Backend use local data of the city. Therefore, potential replicators would need to develop their own version. The methodology used will be identified in the report so that each city can develop different functionalities at their convenience.

IDENER advises that those looking to replicate the approach select the functionalities of the tool taking into account the municipal requirements and available data.

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