IDF_02: Setting-up of a dynamic Digital Twin of the territory

Activities towards demonstration *(How?)*

Completion of the preparation activities

During the preparation phase of the measure, data on traffic counting and emissions were yet to be fully available. The first step of the demonstration will initially consist of processing and analyzing these data to extract information on mobility practices (flows, trajectories) and their correlation with pollutant emissions.

After processing the traffic data collected with VGP, a comparison will be made between these data and the simulation outputs. The objective is to verify that the simulation produces results similar to the traffic counting data. If necessary, a new adjustment of the mobility model parameters will be performed.

Deployment and integration

Once the mobility model is calibrated and validated, an executable version (standalone) of the simulation tool will be generated, complete with all necessary parameters to facilitate the launch of new simulations. An automation system will be created to save the simulation output files in a database. The objective is to promote the exploitation and analysis of these results through a database, rather than relying on files that can often become excessively large.

Moreover, scripts will be developed to import MATSim simulation output files into U-Sim.plan (VISUM). The data structures of the two simulators are similar. The script will allow us to make the necessary conversions. There are already scripts to import the outputs of VISUM into MATSIM. Therefore, it will be a question of adapting these scripts to do the reverse operation.

Demonstration activities

The demonstration activities will mainly concern the presentation meetings with VGP of the simulation tool with visualizations of the results in graphs, maps, and videos.

Timeline for implementation and demonstration *(When?)*

UPPER	Jul-2024	Aug-2024	Sep-2024	Oct-2024	Nov-2024	Dec-2024	Jan-2025	Feb-2025	Mar-2025	Apr-2025	May-2025	Jun-2025	Jul-2025	Aug-2025	Sep-2025	Oct-2025	Nov-2025	Dec-2025	Jan-2026	Feb-2026	Mar-2026	Apr-2026	May-2026	Jun-2026	Jul-2026	Aug-2026	Sep-2026	Oct-2026	Nov-2026	Dec-2026
General planning for IDF_02																														
Completion of the preparation activities																														
Processing and analysing of traffic counting and emissions data																														
Comparison between traffic and emissions data and the simulation outputs																														
Deployment and integration																														
Creation of an automation system to save the simulation output files in a database																														
Implement conversion scripts for MATSim output to U-Sim.plan																														
Demonstration activities																														
Generation of different visualisations																														
Setting presentation meeting with VGP																														
Results evaluation																											D6.3			

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