

CIVITAS ELEVATE ECG meeting

Eleni Charoniti and Tariq van Rooijen
TNO

Amalia Polydoropoulou and Ioannis Tsouros
University of the Aegean

October 22nd, 2020

HARMONY Scope and Objectives



Develop a **new generation of harmonised spatial and multimodal transport planning tools** which model the dynamics of the changing transport sector, enabling metropolitan area authorities to lead the transition to a low carbon new mobility era in a sustainable manner.

- O1** • Identify new mobility services, concepts and technologies for people and freight
- O2** • Establish metropolitan and region-wide co-creation labs for people and freight.
- O3** • Demonstrate AVs and drones integrating them with traditional transport modes and collect data from citizens and freight operators
- O4** • Develop methodologies to combine and integrate multidisciplinary data related to new forms of mobility, collective transport and planning
- O5** • Develop a new generation of a multiscale spatial and transport planning model suite (MS). Adaptors/interfaces will also be developed to link existing spatial or transport models to HARMONY
- O6** • Apply the HARMONY MS to support metropolitan planners and decision-makers
- O7** • Explore the linkage between the HARMONY MS (metropolitan-level) and aggregate EU-wide transport models
- O8** • Recommend updates for spatial and transport strategies and SUMP to deal with mobility transition
- O9** • Scale up and disseminate the developed model suite



HARMONY Metropolitan Areas' Activities



Rotterdam

- Electric AV demonstration - Freight
- HARMONY MS - Freight

Oxfordshire

- Electric AV demonstration - Passenger & Freight
- Drones demonstration - Freight
- HARMONY MS - Passenger

Athens

- HARMONY MS - Passenger

Turin

- HARMONY MS - Passenger

Trikala

- Drones demonstration for medical purposes

Katowice (GZM)

- Adopter metropolitan area

Trailblazing

Aspiring

Follower



Evaluation activities and related deliverables

Work Packages [Del/Mx]

Evaluation Activities

WP2: HARMONY integrated spatial & transport planning model suite: development & application [D2.5/M36]

Co-created scenarios on sustainable mobility solutions and policies are evaluated & ranked based on their impact on air-quality, accessibility, energy consumption and other criteria.

WP4: Land use, spatial planning and strategic decision [D4.4/M36]

The strategic simulator is applied to explore and quantify the impact of economic growth, spatial redesign and other strategic co-created scenarios on the metropolitan areas.

WP5: Demand models for passenger transport [D5.1-D5.3/ M18-M36]

The tactical and operational models will be applied to evaluate demand shifts due to new mobility schemes (e.g. AVs, MaaS), as well as network performance measures and agent's reaction to events.

WP6: Demand models for freight transport [D6.4/M36]

The freight models will be applied to evaluate the impact of new freight distribution services (e.g. crowd shipping, last-mile distribution like AV or drones) and policies (e.g. environmental zoning, road user charges).

WP8: Process assessment, SUMP recommendations and roadmaps [D8.2 / M41]

Transferability of HARMONY results to other metropolitan areas across Europe will be assessed, considering local conditions (pre-existing models, data needed, software requirements, etc.).

WP9: Validation areas: orchestration, engagement, & demonstrations [D9.5 / M42]

Activities taking place in each area will be evaluated and compared, elaborating on the findings and barriers and opportunities faced.



Evaluation approach

Evaluation is carried out in **3 key steps**:

Step 1. Development of the evaluation framework

Periodical process evaluation

Open questions to record the experiences and lessons learnt

Evaluation of the physical demonstration

KPIs to evaluate the results of the physical demonstrations

Performance indicators (on operations as well as specific technical features of the demonstration)

Public acceptance indicators (adoption in a sense of both buying and using the innovation)

Business model indicators (determine the success rate of the demonstration and the uptake of the results after the testing period)

Technological readiness of solutions

Step 2. Data collection processes (*interviews, workshops, surveys, automated data collection*)

Step 3. Data analysis



Progress of activities: what was done so far

- Co-creation labs in virtual form.
- Questionnaires and surveys developed; stakeholder interviews planned and carried out.
- Activities for further data collection; data warehouse developments.
- Development of freight simulator.



Progress of activities: outlook for the next period

- Virtual calls with stakeholders. Co-creation labs probably in virtual form.
- Preparing a new time line to organise the demonstrations.
- Ongoing data collections; synthesizing of additional data.
- Travel surveys postponed to February-March



Progress of evaluation activities

- Regular meetings with the local partners to update each other.
- Distribution of periodic process evaluation report



Main challenges

- Stakeholder engagement activities and in-person workshops still hindered.
- Readiness of the new technologies for the demonstrations.
- Permissions for the demonstrations.
- Agreement processes to access data and models take longer than expected.



How can ELEVATE / our peers in the ECG support / improve our evaluation activities?

- Currently we have no requests for the evaluation activities. This is likely to change in a next phase of the project.

HARMONY consortium

21 partners from 9 European countries



www.harmony-h2020.eu



Harmony-H2020



Harmony_H2020



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 815269

