



CIVITAS ELEVATE Evaluation Webinar

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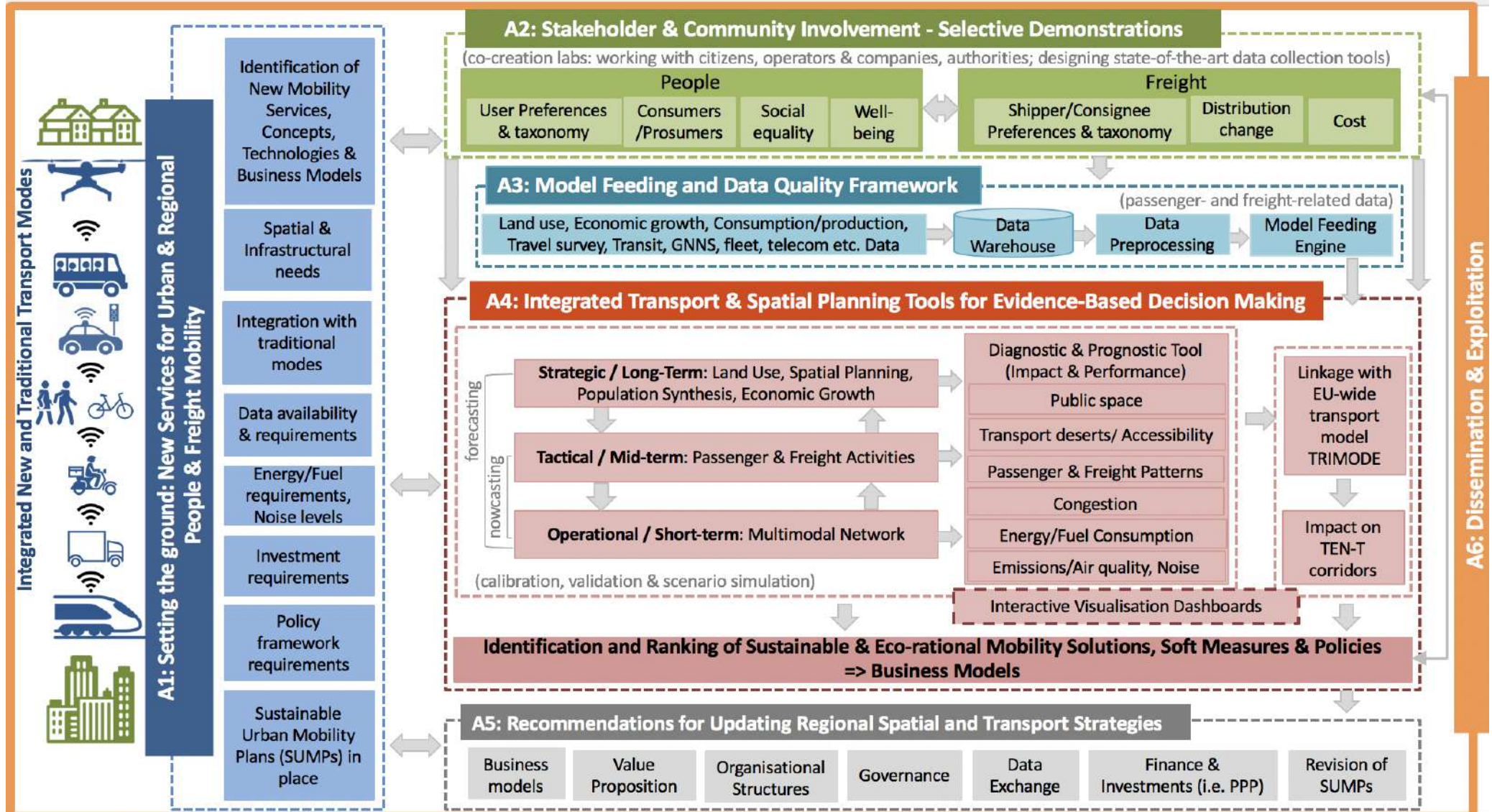
HARMONY Scope



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 Architecture





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

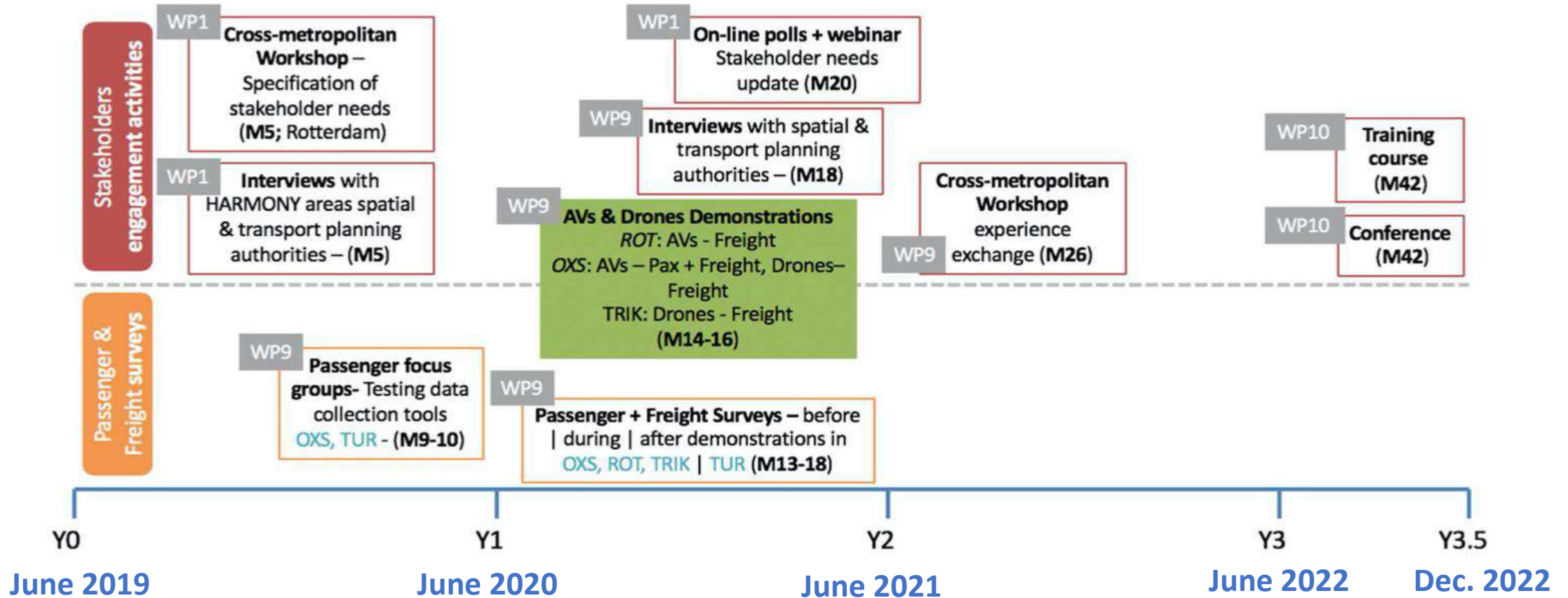


Key Outputs

- The HARMONY MS (software)
- AVs and drones demonstrations
- Training material and activities for using the HARMONY MS
- Recommendations for SUMP's update (AVs & drones included)



HARMONY Timeline



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.

Orchestration, engagement plan, data collection guidelines and evaluation (WP9; D9.1-D9.5)



- **Case studies' set-up, management and cross-metropolitan activities:**
 - Orchestration of the tasks, demonstrations and relevant activities;
 - Preparation of reach-out strategies and supporting material needed for the pilot areas;
 - Coordination to ensure the quality of HARMONY results and to allow comparisons across the different geographic areas.
- **Evaluation of the validation area activities:**
 - In line with the EC's MAESTRO, CONVERGE, CONDUITS, FESTA and CIVITAS guidelines, an **evaluation and validation framework will be developed** for the pilot cases which will enable to set up the pilots, bring together the results, compare their achievements and evaluate their results.



Evaluation approach and activities

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

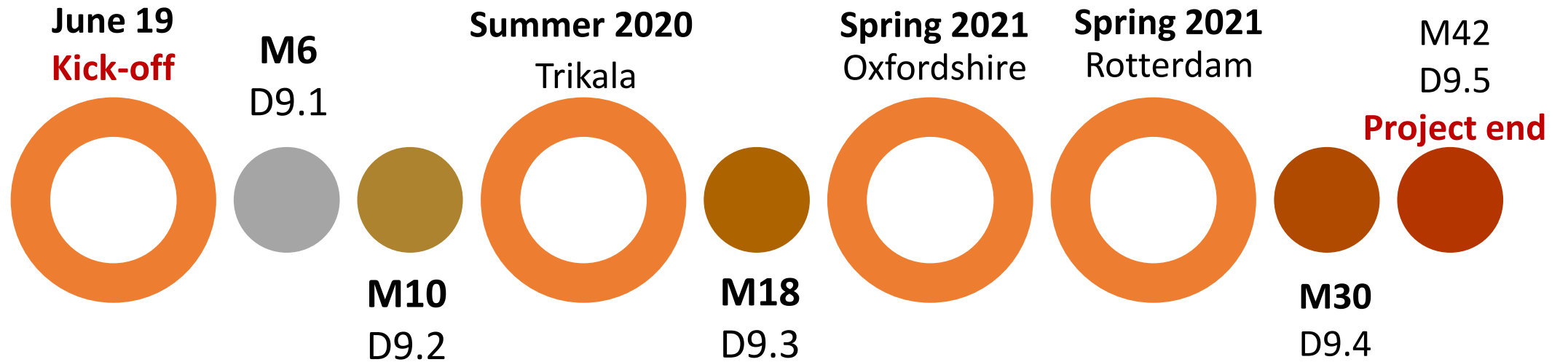
Step 2. Data collection processes (*interviews, workshops, surveys, automated data collection*)

Step 3. Data analysis



Validation areas' engagement & demonstrations

Timeline



HARMONY consortium



21 partners from 9 European countries



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