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DATA SPACE 4 MOBILITY MODELS INTEGRATION

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DS4MOB MODELS

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Version	Date	Lead Beneficiary
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V 2.0	30/04/2025	ITS Spain

Glossary of Acronyms and Abbreviations

API	Application Programming Interface
ATMV	Metropolitan Transport Authority of Valencia
DGT	Dirección General de Tráfico
DS4MOBMODELS	Data Space for Mobility Models Integration
EDIM	Integrated Mobility Data Space
EGTC	European Grouping of Territorial Cooperation
EMT	Municipal Transport Company of Madrid
FCD	Floating Car Data
FPD	Floating Phone Data
ICT	Information and Communication Technologies
ITS	Intelligent Transport Systems
KPI	Key Performance Indicator
LEZ	Low Emission Zone
MaaS	Mobility as a Service
MITMA	Ministry of Transport and Sustainable Mobility
NAP	National Access Point
RSD	Remote Sensing Device
SCT	Servei Català de Trànsit
SEITT	State Company for Land Transport Infrastructures
SUMI	Sustainable Urban Mobility Indicators
TEN-T	Trans-European Transport Network
TMB	Metropolitan Transport of Barcelona
VMP	Personal Mobility Vehicle

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Executive Summary

This document presents the Stakeholder Participation Plan of the DS4MOBMODELS project, corresponding to deliverable D2.1.

The purpose of this plan is to define in detail the identification, engagement, and integration of key actors in the development and validation of use cases and pilots.

This version reflects the structure approved by the consortium, incorporating adjustments to prioritise direct or online meetings, clarify interview and focus group agendas, and align the activity calendar with the updated project schedule.

Stakeholders will be contacted to participate in structured interviews and group meetings. Contributions will be used to validate and adjust use cases, define technical requirements and performance indicators, and ensure the data space responds to actual mobility ecosystem needs.

The plan includes a detailed timeline and a methodology for integrating results into the implementation of DS4MOBMODELS. The stakeholder engagement process is a key success factor for building an effective and sustainable Mobility Data Space.

Context

DS4MOBMODELS aims to define and deploy a Mobility Data Space that integrates public and private data sources related to transportation and mobility in Spain, cross-border regions with France and Portugal, and selected metropolitan areas.

The project is structured around a series of pilots that validate specific use cases in real environments. These pilots—national, regional, metropolitan and cross-border—serve as operational frameworks for stakeholder involvement.

Each pilot addresses particular challenges of data interoperability, integration of mobility services, and the optimisation of predictive models, contributing to the development of a federated, secure and standards-based data space.

The pilots are organised as follows:

- **National Pilot (Spain):**
  Integration of traffic, public transport and shared mobility service data at national level, aimed at facilitating multimodal planning and the development of sustainable mobility indicators.
- **Regional pilots in Andalusia, Catalonia and Comunidat Valenciana:**
  Implementation of regional data spaces integrating public transport data, Mobility-as-a-Service (MaaS) services and traffic management systems into an interoperable platform.
- **Local pilots in the metropolitan area of Madrid, Barcelona and Valencia:**
  Consolidation of urban data covering public transport, traffic, low-emission zones (LEZs) and micromobility to improve urban planning and enhance information services for end users.
- **Cross-border pilots in Portugal-Spain and France-Spain:**
  Creation of a federated data space to facilitate cross-border mobility data interoperability, optimise logistic corridors, and promote intelligent transport services in the southwest European region.



Figure 1. Geographic location of the DS4MOBMODELS pilots.

A detailed description of each pilot—including specific objectives, types of data, key stakeholders and validation mechanisms—is provided in **Annex III** of this document.

Objectives of the Participation Plan.

The Stakeholder Participation Plan pursues the following main objectives:

1. **Identify and categorise key actors relevant to each pilot and use case**
   A systematic mapping will be conducted of relevant public, private and user agents for each use case and pilot, ensuring representative coverage of the mobility ecosystem.
2. **Effectively engage representatives from all stakeholder categories**
   Contact, communication and participation mechanisms tailored to the characteristics of each type of stakeholder will be established, ensuring their active involvement in interviews, and direct or online group meetings and validation activities.
3. **Validate and enrich the defined use cases, as well as the functional and operational requirements**
   Specific contributions from stakeholders will be collected to refine and adjust the use cases, and to define additional requirements that ensure their applicability and success in real operational contexts.
4. **Gather concrete inputs to adapt the project's services**
   Needs related to data, functionalities, levels of interoperability and additional services will be identified to adapt the platform to the real expectations and demands of the market.
5. **Consolidate partnerships for the future exploitation of the Data Space**
   Long-term collaboration relationships with external stakeholders will be fostered, aiming for their continued participation in the use, expansion and evolution of the Data Space after the end of the project.
6. **Integrate participation results into the final definition of pilots, KPIs and data services**
   The contributions collected will be systematically incorporated into the planning of the pilots, the definition of key performance indicators (KPIs), and the catalogue of data services to be developed.

Identification and Selection of Stakeholders

During the phase of the project proposal, the main stakeholders intended to participate in the pilots were identified, proposed, and agreed upon. These stakeholders accepted their involvement and endorsed the project's use cases.

A short description of those stakeholders is included below:

General Directorate of Traffic, DGT, is an Autonomous Body, whose purpose is the development of actions aimed at improving the behaviour and training of road users, and the safety and fluidity of vehicle traffic and the provision to citizens of all administrative services related to them. The Autonomous Body Headquarters of Central Traffic has a separate public legal personality, its own assets and treasury, management autonomy and full legal and acting capacity, and within its sphere of competence, it has the administrative powers required to fulfil its purposes, in the terms provided for in the regulations.

The State Company for Land Transport Infrastructures (SEITT), the corporate purpose of SEITT involves the design, construction, maintenance, operation and promotion of state-owned transport infrastructures, on behalf of the General State Administration, within the framework of the legal regime of the mandates of action that are established, as well as the execution of collaboration agreements with Public Administrations and with the entities dependent on them, for the exercise of the powers that correspond to them in matters of transport infrastructures.

Basque Government, Mobility Directions is responsible for the management of public policies in the mobility of people, logistics of transport goods, infrastructures, professional titles and the Euskadi Transport Observatory

Servei Català de Trànsit, SCT, The Catalan Traffic Service (SCT) is an organization dependent on the Generalitat of Catalonia in charge of designing and implementing road safety policies in the Community of Catalonia.

Ministry of Transport and Sustainable Mobility, is the department of the General State Administration responsible for proposing and implementing the policy of the Government of the Nation in the areas of land, air and sea transport infrastructure, of state competence; for the control, organization and administrative regulation of the corresponding transport services; and for the promotion of sustainable mobility, in its social, economic and environmental dimension, including the promotion of active mobility. It is also responsible for the normative organization of postal services; for the promotion and direction of state services related to astronomy, geodesy, geophysics and cartography; and for the planning and programming of investments related to the infrastructures, subjects and services.

The Metropolitan Transport Authority of the Barcelona Area, (ATM; officially and in Catalan: Autoritat del Transport Metropolità de l'Àrea de Barcelona) is a consortium responsible for coordinating and planning public transport in the metropolitan region of Barcelona.

The Metropolitan Transport Authority of Valencia, (ATMV; officially and in Valencian, Autoritat de Transport Metropolità de València) is an autonomous body of the Generalitat Valenciana attached to the Conselleria, with the aim of exercising, in the area of metropolitan transport of

Valencia and under a regime of institutional cooperation for the joint and coordinated management of the powers in matters of regular public transport of passengers of the Generalitat and those of the municipalities comprising the Metropolitan Transport Area of Valencia that adhere by delegating their powers in matters of urban transport.

The Ministry of Public Works and Housing - Junta de Andalucia, is the body responsible for management and development in matters of transport and mobility in the Autonomous Community, and assumes the exercise of the powers of the Ministry in these matters conferred by current legislation.

Ministry of Infrastructure, Transport and Housing - Junta de Extremadura, which depends on the General Directorate of Mobility and Transport.

Valencia City Council, The Sustainable Mobility Direction is responsible for the comprehensive management of mobility in the city of Valencia, meeting the needs of all users of public roads under criteria of road safety, sustainability, accessibility, optimization of the use of public space and efficiency.

The Regional Transport Consortium of Madrid (CRTM), is a public company dependent on the Community of Madrid that manages, regulates and coordinates all modes of regular public transport for travelers in the region: Madrid Metro, Madrid EMT and other urban buses in the region, intercity buses, Light Rail and Tram Parla, as well as the commuter rail network.

The Central Commission for Regional Coordination and Development (CCDRC), a decentralized body of the Ministry of Territorial Cohesion, endowed with financial and administrative autonomy, has the following mission:

- Implement environmental, spatial planning and urban and regional development policies at the level of NUT II Centre.
- Promote the coordinated action of decentralized services at regional level and provide technical support to local authorities and their associations.

The EGTC Euroregion Nouvelle Aquitaine Euskadi Navarra is a European Grouping of Territorial Cooperation created on 12 December 2011 whose purpose is to promote the economic, social and cultural development of the cross-border and Euro regional territory, while encouraging exchanges within it.

Since the beginning of the project, the list has been expanded to incorporate additional stakeholders in order to broaden the spectrum of participation and ensure greater representativeness.

To achieve this, a structured methodology was applied, as described below, which enabled the consolidation of the full set of actors listed in **Annex I**.

The identification and selection of stakeholders for DS4MOBMODELS has been based on a strategic approach designed to ensure maximum representativeness, diversity, and capacity to contribute in line with the project's objectives.

Selection Principles:

- **Sectoral representativeness:**
  Actors from all key sectors related to mobility, transportation and data management have been considered.

- **Geographical coverage:**
  The selection includes stakeholders operating at national, regional, local and cross-border levels, consistent with the project's pilot structure.

- **Modal diversity:**
  Priority has been given to including actors associated with different transport.

- **Demonstrated interest in mobility data:**
  Stakeholders' prior or potential involvement in open data, interoperability, or data space initiatives has been a key factor.

- **Capacity to contribute added value:**
  Stakeholders capable of actively contributing to the development, validation, or exploitation of the Data Space—through data provision, models, validations, or recommendations—have been prioritised.

Stakeholder Categories:

To ensure balanced and effective participation, stakeholders have been classified into the following categories:

- **Public administrations:**
  Entities responsible for regulation, planning, and management of transport and mobility within their respective jurisdictions.

- **Transport operators:**
  Companies and organisations managing the provision of transport services for passengers or goods across various modes (urban, interurban, international).

- **Mobility service providers:**
  Platforms and companies offering shared mobility services, micromobility, Mobility-as-a-Service (MaaS) and other innovative models.

- **Logistics and freight transport companies:**
  Key actors in goods mobility and the management of multimodal logistics corridors.

- **Technology developers and data providers:**
  Companies specialised in the generation, processing, analysis and provision of mobility and location data.

- **End-user associations:**
  Associations of public transport users, chambers of commerce, business user groups and citizen collectives, among others.

Participation Methodology

Stakeholder participation in DS4MOBMODELS will be structured through a methodology specifically adapted to the characteristics of the project.

During the proposal preparation phase, a comprehensive identification of the most relevant stakeholders for each pilot was carried out, establishing initial contact with them and confirming their interest in participating.

Thus, the participation process will not begin from an unknown or cold contact, but will build upon already initiated relationships, consolidating and evolving them as the project progresses.

The defined methodology will be structured into four interrelated phases:

Phase 1: Updating Contact and Sending Contextualised Information
Stakeholders will be re-contacted and provided with updated information about the current status of the project, the prioritised use cases, and the specific objectives of their participation. This update will strengthen the initial engagement and facilitate their active incorporation, aligned with the concrete needs of the project's execution phase.

Phase 2: Conducting Individual Interviews
Structured interviews and direct or online group meetings will be organised with key stakeholders. These interviews will collect precise information regarding their anticipated contributions, current expectations, and technical or operational recommendations related to their assigned pilots.

Phase 3: Organisation of direct or online group meetings
Direct or online group sessions will be convened, grouping stakeholders by entity type or by geographic pilot. These sessions will enable collective discussion of requirements, contrast of perspectives, identification of collaboration opportunities, and validation of essential elements to ensure data interoperability and effective data utilisation.

Phase 4: Integration and Analysis of Results
All information obtained during the interviews and group sessions will be systematised in participation reports, which will be analysed in a structured way. The results will be effectively incorporated into the definition of pilots, the adjustment of technical requirements, and the functional design of the Data Space platform.

Expected Outcomes

- **Validation and adjustment of use cases:**
  The initially defined use cases will be cross-checked against stakeholder inputs and adjusted to more accurately reflect real operational needs, priorities and conditions.
- **Definition of additional functional and operational requirements:**
  Specific functionalities, data formats, update frequencies and required levels of

interoperability will be identified to ensure effective integration of stakeholder data into the Data Space.

- **Prioritisation of KPIs and relevant data sources:**
  Key performance indicators (KPIs) most relevant from the perspective of users and operators will be selected and prioritised, as well as the data sources considered critical for their calculation and evaluation.
- **Identification of barriers and formulation of recommendations:**
  Potential technical, operational, legal or social acceptance barriers that could hinder the integration and use of the Data Space will be detected, and concrete mitigation measures and tailored solutions will be proposed.

This methodology will ensure that stakeholder participation not only enriches the project outcomes but also strengthens their practical applicability, alignment with the mobility ecosystem's expectations, and long-term sustainability potential.

Interview and direct or online group meetings Agendas

Stakeholder participation in DS4MOBMODELS will be articulated through individual interviews and direct or online group meetings, following an agenda specifically designed to maximise the quality and applicability of the contributions collected.

Both formats will allow the gathering of relevant information to adapt and enrich the use cases, the functional requirements of the platform, and the project's key performance indicators (KPIs).

Individual Interview Agenda

Each individual interview will have an estimated duration of 60 minutes and will be structured into the following blocks:

- **Project Introduction (10 minutes):**
  A brief presentation of the DS4MOBMODELS project will be provided, covering its context, general objectives, pilot structure, and current progress.
  The purpose of this introduction is to contextualise the participation requested from the stakeholder and to establish a common framework of understanding.

- **Stakeholder Role and Capabilities (15 minutes):**
  An analysis will be carried out of the stakeholder's technical capabilities, the data they manage, the models or tools they use, and the role they play within the mobility ecosystem. Resources or systems that could be relevant for the development of the Data Space and the associated pilots will also be identified.

- **Foreseen Contributions and Areas of Collaboration (15 minutes):**
  The ways in which the stakeholder can contribute to the project will be clearly defined, whether through the provision of specific datasets, the validation of functionalities, participation in pilot tests, technical advice, or the identification of priority services for end users.
  Specific interests related to interoperability, data visualisation or analytical services will also be collected.

- **Identification of Needs, Barriers and Risks (15 minutes):**
  Observations will be gathered regarding technical, legal, or organisational obstacles that could hinder data sharing or active participation in the pilots.
  Specific needs in terms of data quality, format, accessibility, or governance will also be identified, as well as possible risks to the long-term sustainability of the Data Space.

- **Confirmation of Participation and Next Steps (5 minutes):**
  The interview will conclude by confirming the stakeholder's willingness to continue participating in future phases of the project, including attendance at focus groups, validation of pilots, or specific technical or functional advisory activities.
  The next steps will be agreed upon in a consensual manner.

Direct or online group meetings Agenda

Each group session will have an estimated duration of 2 hours and will follow the sequence below:

- **Welcome and Introductions (15 minutes):**
  The session will begin with a brief round of introductions by the participants and their organisations, highlighting each entity's role within the mobility ecosystem and its linkage to the project's objectives.

- **Summary of Project Progress and Preliminary Findings (15 minutes):**
  The main findings collected during the individual interviews will be presented, as well as the current status of the use case development, providing a common starting point for discussion.

- **Collective Discussion of Requirements and Priorities (60 minutes):**
  A structured debate will be conducted aimed at validating the functional and technical requirements of the use cases, prioritising the services to be offered by the platform, analysing data interoperability conditions, evaluating the proposed KPIs, and exploring synergies or complementarities among the different represented actors.

- **Definition of Contributions and Commitments (20 minutes):**
  Preliminary agreements will be encouraged regarding stakeholders' voluntary contributions to the project, including data provision, participation in pilot testing, formulation of recommendations, or collaboration in specific technical tasks.

- **Conclusions and Planning of Next Steps (10 minutes):**
  The session will close with a summary of the agreements reached, a definition of the immediate actions to be developed, and a confirmation of the participants' interest in continuing to collaborate in future activities.

Activity Planning and Flow Diagram

The execution of the Stakeholder Participation Plan will take place between months 3 and 6 of the project (April to June 2025), following a structured phase-based schedule that ensures the logical progression of activities and the effective integration of results.

Activity Calendar

- **1st April 2025 – Approval of the Participation Plan:**
  This document will be approved and validated as the official basis for the deployment of stakeholder engagement activities.
- **1st April – 15th May 2025 – Update of Stakeholder Contact:**
  Contact will be updated with the previously identified stakeholders, providing them with updated information about the project, confirming their interest in participating, and defining their potential role in the process.
- **1st April – 30th May 2025 – Conducting Individual Interviews:**
  Structured interviews will be held with key stakeholders to collect detailed information on their capacities, needs, expectations, and potential contributions.
- **15th May – 15th June 2025 – Direct or online group meetings:**
  Group sessions will be organised, structured either by entity type or by pilot geography, to collectively contrast requirements, validate service priorities, and identify collaboration opportunities.
- **1st June – 30th June 2025 – Analysis of Results and Participation Report:**
  The contributions collected will be systematised, analysed and synthesised for integration into the final definition of pilots and the design of the Data Space platform.
  Integrated results will be validated, collaboration commitments will be consolidated, and use cases and technical requirements will be adjusted if necessary

Participation Flow Diagram

The participation process will follow a progressive sequence where each activity feeds into the next:



This planning will ensure a structured collection of contributions, their effective integration into the technical and operational development of the project, and the consolidation of an engaged and active stakeholder ecosystem.

Integration of Results into Project Implementation

The results obtained through individual interviews and focus groups will be systematised, analysed, and structurally integrated into the implementation of the DS4MOBMODELS project.

This integration will take place at several levels:

Adjustment and Validation of Use Cases
Stakeholder contributions will allow the validation of the initially defined use cases and, where necessary, adjustments to align them with the real needs of end users, operators, and involved administrations.
Priorities, application scenarios, and specific requirements will be redefined as appropriate.

Adaptation of the Functional and Operational Architecture of the Data Space
The information gathered will be used to adapt the functional components of the Data Space platform, including interoperability services, data provision mechanisms, metadata management, access control, and usage control, based on the requirements and expectations expressed by stakeholders.

Definition and Expansion of Data Services
Based on identified needs, new data services, analytical tools, or visualisation services will be proposed to enrich the functional offering of the Data Space and meet the specific demands of end users.

Prioritisation of Key Performance Indicators (KPIs) and Data Sources
The set of KPIs envisaged for the evaluation of the pilots will be adjusted, prioritising those indicators considered most relevant by stakeholders.
New data sources will be incorporated if they are identified as strategic during the participation process.

Incorporation of Stakeholders in the Pilot Validation Phase
Stakeholders who express interest and whose contribution is deemed pertinent will be invited to actively participate in the pilot validation phase, either as data providers, test users, or external validators of the achieved results.

The effective integration of participation results will ensure that the Data Space and the pilots of DS4MOBMODELS reflect the real needs of the mobility ecosystem, thereby increasing their practical applicability, acceptance by end users, and potential for future replication.

Conclusions

This Stakeholder Participation Plan establishes a comprehensive, structured approach specifically adapted to the characteristics and needs of the DS4MOBMODELS project.

The defined methodology will ensure active, meaningful, and results-oriented participation by the key public, private, and social actors of the mobility ecosystem.

Such participation will allow the validation and enrichment of the defined use cases, the adjustment of the functional requirements of the Data Space platform, the prioritisation of relevant key performance indicators (KPIs), and the consolidation of a sustainable collaboration ecosystem beyond the project's duration.

The activity planning has been designed to ensure the logical progression of actions and the effective integration of the collected contributions, while respecting the project's updated execution schedule.

Although the plan is based on a defined and consensual structure, it will maintain the necessary flexibility to adapt to the evolution of use cases, the incorporation of new stakeholders, or the emerging needs detected during the development of DS4MOBMODELS.

The effective integration of stakeholder contributions will constitute a critical success factor for the deployment of an interoperable, replicable Mobility Data Space aligned with European strategies for sustainable, connected, and smart mobility.

Annex I. List of Stakeholders

The table below summarises the key stakeholders identified for participation in interviews and focus groups, classified by type of entity, role in the mobility ecosystem, expected contribution to the project, and their planned mode of participation.

Stakeholder Name	Entity Type	Role in the Mobility Ecosystem	Expected Contribution to the Project	Planned Participation
Dirección General de Tráfico (DGT)	National Public Authority	Traffic and road safety management	Provision of traffic data, validation of national indicators	Interviews, National Focus Group
Ministry of Transport and Sustainable Mobility (MITMA)	National Public Authority	Multimodal transport planning and regulations	Definition of national data interoperability requirements	Interviews, Pilot Validation
SEITT (State Company for Land Transport Infrastructures)	National Public Authority	Road infrastructure management	Support in freight mobility and toll analysis	Interviews, National Focus Group
Generalitat Valenciana (ATMV)	Regional Public Authority	Regional public transport management	Validation of regional data, definition of metropolitan KPIs	Interviews, Regional Focus Group
Servei Català de Trànsit (SCT)	Regional Public Authority	Traffic management in Catalonia	Traffic data contribution, validation of regional use cases	Interviews, Regional Focus Group
Junta de Andalucía	Regional Public Authority	Regional mobility and transport management	Definition of requirements for mobility in tourist areas	Interviews, Regional Focus Group
Basque Government	Regional Public Authority	Mobility management in the Basque Country	Coordination of cross-border cases with Nouvelle-Aquitaine	Interviews, Cross-border Focus Group

Stakeholder Name	Entity Type	Role in the Mobility Ecosystem	Expected Contribution to the Project	Planned Participation
Valencia City Council	Local Public Authority	Urban mobility and low emission zone management	Validation of urban use cases and micromobility data	Interviews, Metropolitan Focus Group
Madrid Regional Transport Consortium (CRTM)	Local Public Authority	Metropolitan transport coordination	Definition of intermodal transport needs in major cities	Interviews, Metropolitan Focus Group
Euroregion Nouvelle-Aquitaine–Euskadi–Navarra	Cross-border Organisation	Cross-border mobility cooperation	Validation of data and model interoperability across borders	Interviews, Cross-border Focus Group
Comissão de Coordenação e Desenvolvimento Regional do Centro (Portugal)	Regional Public Authority	Mobility coordination in the Centre of Portugal	Identification of use cases and data for Iberian cooperation	Interviews, Cross-border Focus Group
RENFE Mercancías	Railway Operator	Freight railway transport	Railway logistics data, interoperability demands	Interviews, Pilot Validation
SNCF (France)	Railway Operator	National and international railway transport	Validation of railway interoperability in cross-border cases	Interviews, Cross-border Focus Group
EMT Madrid	Urban Transport Operator	Urban public transport in Madrid	Urban mobility data, validation of SUMI indicators	Interviews, Pilot Validation
TMB Barcelona	Urban Transport Operator	Urban public transport in Barcelona	Validation of metropolitan KPIs, data interoperability	Interviews, Metropolitan Focus Group
Cabify	Mobility Services Provider	Private urban mobility on demand	Integration requirements for private services into public platforms	Interviews

Stakeholder Name	Entity Type	Role in the Mobility Ecosystem	Expected Contribution to the Project	Planned Participation
Bolt	Mobility Services Provider	Urban mobility (VTC, scooters, micromobility)	Contributions on new shared mobility models	Interviews
Zity	Carsharing Provider	Shared electric mobility	Integration of electric vehicles and carsharing data into the Data Space	Interviews
HERE Technologies	Data and Mapping Provider	Map, traffic and location data	Interoperability of private data sources with public data	Interviews
TomTom Mobility	Data and Navigation Provider	Traffic data and prediction	Enrichment of traffic prediction models	Interviews
ASTIC (International Road Transport Association)	Sector Association	International road freight transport	Identification of logistics needs in TEN-T corridors	Interviews
CETM (Spanish Confederation of Freight Transport)	Sector Association	National and regional freight transport	Operational requirements for heavy transport fleets	Interviews
Spanish Public Transport Users Association	User Association	Representation of public transport users	Validation of user needs in transport planning and operation	User Focus Group
European Passengers' Federation	European User Association	Defence of passenger rights in Europe	Recommendations for improving data-driven services	Interviews, User Focus Group
ALSA	Interurban Transport Operator	Regional and interurban road transport	Data on routes and demand, validation of intermodal integration use cases	Interviews, Pilot Validation
SABA Parking	Infrastructure Provider	Urban and intermodal	Occupancy data, integration into	Interviews

Stakeholder Name	Entity Type	Role in the Mobility Ecosystem	Expected Contribution to the Project	Planned Participation
		parking management	MaaS services and LEZ management	
Correos	Public Logistics Operator	Urban and national goods distribution	Validation of urban logistics cases, sustainable planning data use	Interviews
ITENE	Technology Centre	Innovation in logistics, data and sustainability	Support in defining technical requirements, validation of standards	Technical Focus Group
CTAG	Technology Centre	Mobility research, connected vehicles and V2X	Contributions to predictive models, integration of smart mobility technologies	Interviews, Technical Focus Group

Annex II. References

This document has been developed primarily based on the following sources:

- The official technical description of the DS4MOBMODELS project (Application Form Part B).
- The Grant Agreement signed between the Consortium and the European Climate, Infrastructure and Environment Executive Agency (CINEA).

No additional external references (articles, laws, public regulations or external reports) have been used beyond the internal documentation and official European data strategy frameworks cited in the project proposal.

In case of future updates to the Participation Plan, any inclusion of external references will be appropriately cited in accordance with the requirements established in the Grant Agreement

Annex III. Description of Pilots

Pilot 1: Spanish National pilot.

This pilot could contain many use cases, one of them could be the planning of public transport in the main corridors of the country such as the TEN-T Network. In addition, the national matrix of passenger and freight vehicle movements along the transport corridors of the trans-European network (both core and comprehensive network) and travel trends could be analysed to ensure adequate management and planning of traffic or road and rail infrastructure solutions for different long-distance movements and national points of interest.

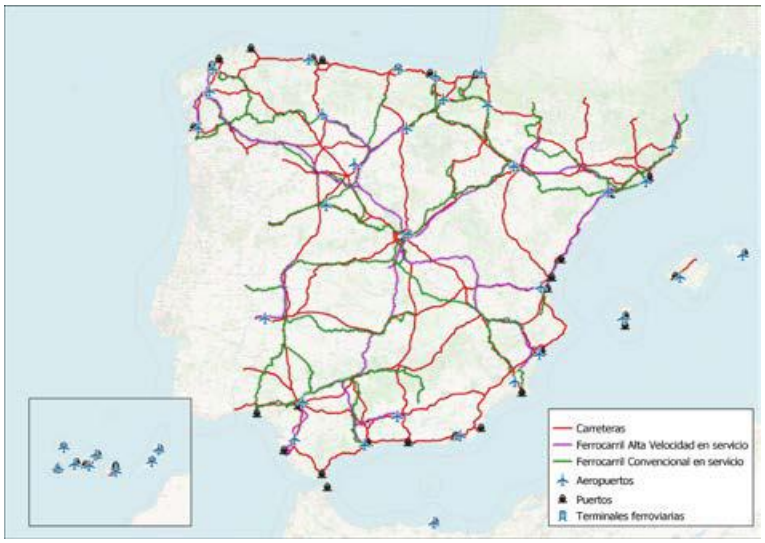


Figure 1. TEN-T Network in Spain

The following actors will participate in this pilot:

- Public Authorities: General Directorate of Traffic DGT (which is responsible for traffic management on the roads network of Spain), SEITT, Gobierno Vasco, Servei Català de Trànsit (SCT), Junta de Andalucia, Junta de Extremadura and other national stakeholders consulted (Ministry of Transports).
- Technology & Service providers: EYSA (platform), CPS (data and models), NTT Data (platform and data), AIMSUN (data and models), INGARTEK (data and models), MINDATA (platform).
- Academia: UPC (data and models), UPM (data and models)

Pilot 2: Regional pilots in Andalusia, Catalonia and Comunidat Valenciana

2.a) Regional pilot in Andalusia.

The Andalusia regional pilot aims to solve the use cases related to sustainable mobility management planning in the region and, in particular, in the TEN-T network corridors (both basic and comprehensive) that run through the region, paying special attention to the Mediterranean and central corridors. Likewise, Operation Marhaba or Operation Crossing the Strait is a very interesting case study at cross-border level to analyse in order to ensure the traffic solutions carried out in Spain in this Special Operation. Crossing the Strait Operation is a special traffic operation that takes place during the summer months and involves a large volume of traffic coming from all over Europe and bound for North Africa, which passes through the roads of Spain to use the ferries of the Andalusian ports. For example, the main objective of Operation Crossing the Strait is the correct planning so as not to collapse the ports and access roads, especially in the central corridor and the Mediterranean corridor.

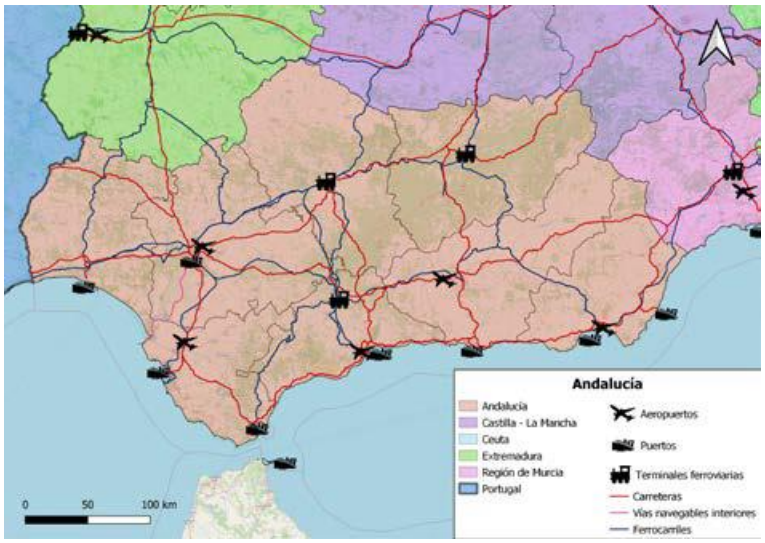


Figure 2. TEN-T Network in Andalusia

The following actors will participate in this pilot:

- Public Authorities: General Directorate of Traffic DGT (which is responsible for traffic management on the roads network of Spain), Junta de Andalucia (associated partner/ stakeholder) that will provide the existing models as well as participate in the definitive establishment of KPIs, and other national stakeholders consulted (Ministry of Transports).
- Technology & Service providers: EYSA (platform), CPS (data and models), NTT Data (platform and data), AIMSUN (data and models), INGARTEK (data and models), MINDATA (platform).
- Academia: UPC (data and models), UPM (data and models)

2.b) Regional pilot in Catalonia.

This pilot could analyse the volume of traffic and journeys on the cross-border link between France and Spain, specifically on the cross-border links of the Mediterranean corridor and the central corridor, as well as develop a traffic map of the corridors and modes of transport of the TEN-T network.

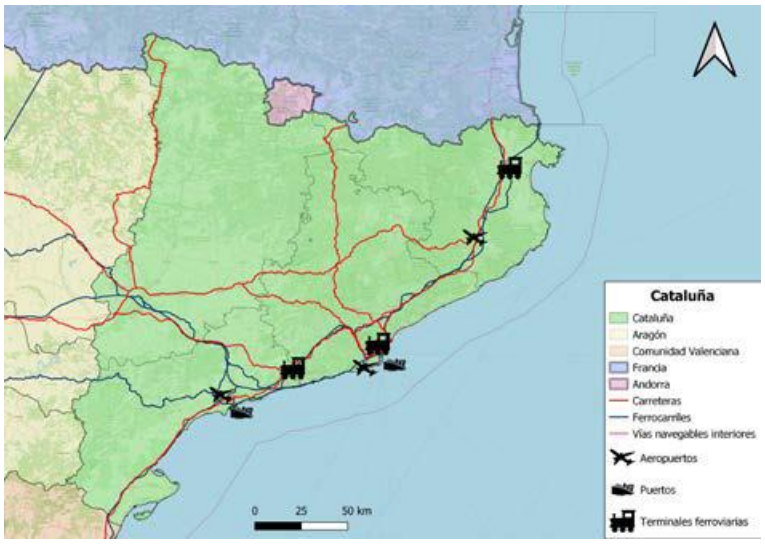


Figure 3. TEN-T Network in Catalonia

The following actors will participate in this pilot project:

- Public Administrations: Autoritat Metropolitana de Barcelona (ATMB), Servei Català de Trànsit (SCT) that will provide the existing models as well as participate in the final establishment of the KPIs, General Directorate of Traffic DGT (responsible for ITS at border control points), and other national stakeholders consulted (Ministry of Transports).
- Technology & Service providers: EYSA (platform), CPS (data and models), NTT Data (platform and data), AIMSUN (data and models), INGARTEK (data and models), MINDATA (platform).
- Academia: UPC (data and models), UPM (data and models)

2.c) Regional Pilot in Comunitat Valenciana.

This pilot could contain many use cases, such as the planning of public transport in the main corridors of the Valencia Region and the TEN-T Network. This region is particularly important as it is served by the Mediterranean, Cantabrian-Mediterranean and Atlantic-Mediterranean corridors for both passengers and freight. The pilot could be focused on a public transport planning or multimodal travel management approach. This public transportation network will be efficiently designed and optimized based on data from public transport lines, demand, urban area growth, trips, etc. In addition, the matrix and trends of regional road passenger and freight movements could be analysed to ensure appropriate traffic management and planning or infrastructure solutions for regional movements and relate them to inter-regional movements via the TEN-T network. At the same time, we could measure the impact between the main metropolitan areas and provinces and the long-distance movements and

national points of interest, coming from and through Catalonia in the north of the Mediterranean corridor and in the south of the Mediterranean corridor to Andalucia.

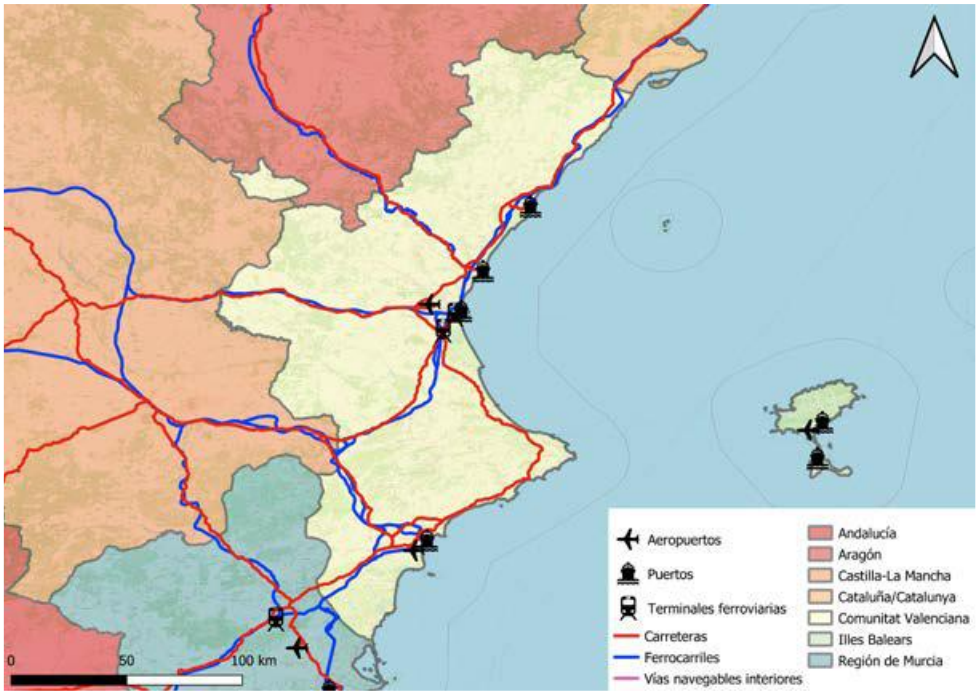


Figure 4. TEN-T Network in Comunitat Valenciana

The following actors will participate in this pilot:

- Public Authorities: ATMV/Generalitat Valenciana, Valencia City Council, SEITT, DGT (which is responsible for traffic management on the roads network of Spain), and other national stakeholders consulted (Ministry of Transports).
- Technology & Service providers: EYSA (platform), CPS (data and models), NTT Data (platform and data), AIMSUN (data and models), INGARTEK (data and models), MINDATA (platform).
- Academia: UPC (data and models), UPM (data and models)

Pilot 3: Local pilots in the metropolitan area of Madrid, Barcelona and Valencia.

These three cities and metropolitan areas are part of the basic nodes of the trans-European network in the central, Atlantic-Mediterranean, Cantabric-Mediterranean, and Mediterranean corridors and are the three most populated nodes in Spain. It could be carried out a public transport planning or multimodal travel management for example. This public transportation network will be efficiently designed and optimized based on data from public transport lines, demand, urban area growth, trips, etc.

The following actors will participate in this pilot project:

- Public Administrations: Consorcio Regional de Transportes de Madrid (partner/associate) that will provide the existing models as well as participate in the final establishment of the KPIs, SEITT, General Directorate of Traffic (DGT), Autoritat Metropolitana de Transportes de Barcelona (ATMB), Servei Català de Trànsit (SCT), Autoritad de Transporte Metropolitano de Valencia ATMV/Generalitat Valenciana, Ayuntamiento de Valencia (Local government of the city of Valencia) and other national stakeholders consulted (Ministry of Transports).
- Technology & Service providers: EYSA (platform), CPS (data and models), NTT Data (platform and data), AIMSUN (data and models), INGARTEK (data and models), MINDATA (platform).
- Academia: UPC (data and models), UPM (data and models).

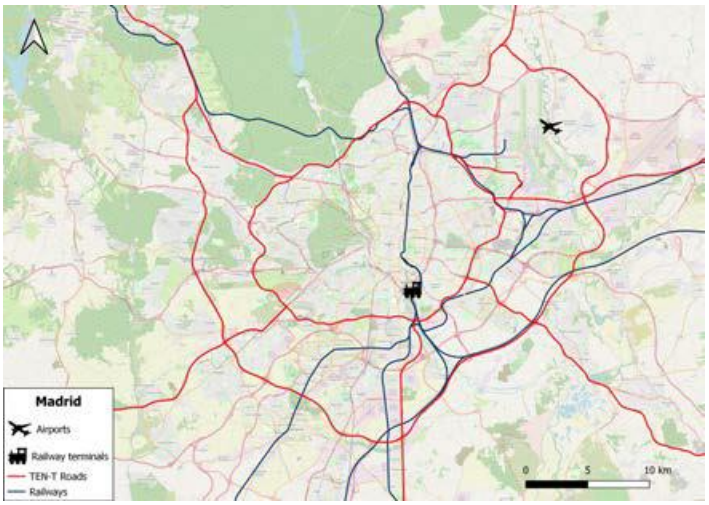


Figure 5. TEN-T Network in the metropolitan area of Madrid

Pilot 4: Cross-border pilots in Portugal-Spain and France-Spain:

Pilot 4.1. Nouvelle-Aquitaine-Euskadi-Navarre Euroregion:

This pilot will contain different cross-border use cases in the Nouvelle-Aquitaine-Euskadi-Navarre Euroregion, which is a European Grouping of Territorial Cooperation (EGTC) subject to Regulation (EC) No 1082/2006 of the European Parliament and of the Council, by common agreement with the States, regions or communities that make it up. It therefore incorporates the regions of the Basque Country and Navarre on the Spanish side and the Nouvelle-Aquitaine region on the French side. The main objective of the EGTC is to develop a transversal and global territorial cooperation from a European perspective, which includes, among other specific objectives, sustainable territorial development in the field of mobility.

In this sense, this pilot may contain various use cases that guarantee the interoperability of data between the Spanish and French regions and, consequently, guaranteeing the joint management of the cross-border transport corridors of the TEN-T network. The cross-border corridors of the TEN-T network included in this pilot are the Atlantic corridor and the Atlantic-Mediterranean corridor.



The following actors will participate in this pilot:

- Public Administrations: Nouvelle-Aquitaine-Euskadi-Navarra Euroregion, Gobierno Vasco, General Directorate of Traffic DGT, and other national stakeholders consulted (Ministry of Transports).
- Technology & Service providers: EYSA (platform), CPS (data and models), NTT Data (platform and data), AIMSUN (data and models), INGARTEK (data and models), MINDATA (platform).
- Academia: UPC (data and models), UPM (data and models)

Pilot 4.2. Iberia Central West Region.

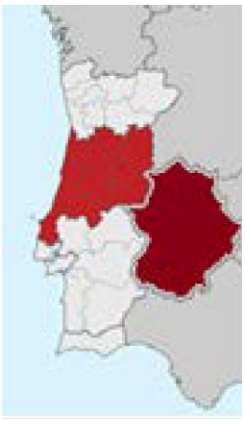
This pilot will contain different cross-border use cases between the Central Portugal Region and Central West Spanish Region.

The pilot includes the region of Portugal to connect the country to Europe through the Spanish territory.

The objective is to promote cross-border cooperation in the areas of interconnected and cohesive territory.

Includes the districts of Coimbra, Castelo Branco and Leiria, most of the districts of Aveiro, Viseo and Guarda, northern part of the District of Lisbon and about one third of the District of Santarém. As well as the region of the Junta de Extremadura.

This pilot may contain various use cases that guarantee the interoperability of data between the Spanish and Portugal region and, consequently, guaranteeing the joint management of the cross-border transport corridors of the TEN-T network. The cross-border corridors of the TEN-T network included in this pilot are the Atlantic corridor.



The following actors will participate in this pilot:

• Public Administrations: Comissão de Coordenação e Desenvolvimento Regional do Centro, I. P.: Junta de Extremadura, General Directorate of Traffic DGT, and other national stakeholders consulted (Ministry of Transports).
• Technology & Service providers: EYSA (platform), CPS (data and models), NTT Data (platform and data), AIMSUN (data and models), INGARTEK (data and models), MINDATA (platform).
• Academia: UPC (data and models), UPM (data and models)