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for smart communities

Deliverable D1.1

Pilot Milestone Planning

WP 1 – Programme management

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Revision History

Author Name, Partner short name	Description	Date
Jan Wester, s-Hertogenbosch	Project Coordinator for Consortia	28-October-2025
Niek Verschure, s-Hertogenbosch	City Project Manager cum New Project Coordinator for Consortia	6-November-2025
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Margriet, Future Insight	Consortia Partner Project Manager	10-November-2025
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Corné Helmons, Rotterdam	City Project Manager	8-December-2025
Anni Joela, Tampere	City Project Manager	8-December-2025
Margriet, Future Insight	Consortia Partner Project Manager	8-December-2025

Abbreviations

Abbreviation	Definition	Abbreviation	Definition
DS4SSCC	European data space for smart communities (DS4SSCC)	DT-aCoGo	Digital Twinning as Common Good
OASC	Open & Agile Smart Cities & Communities	OUP	Open Urban Platform
WP	Work Package	PC	Pilot Coordinator
EDC	Eclipse Dataspace Components	DS	Data Space

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Executive Summary

1.1 Aim of the Document

This document presents the Pilot Milestone Planning for the DT-aCoGo project. Its aim is to provide a structured overview of the deliverables necessary to coordinate and execute the pilot across the three cities: Rotterdam, Den Bosch, and Tampere. The planning ensures alignment with project objectives, operational coherence, and the structured deployment of the Open Urban Platform (OUP) as a federated Urban Data Space supporting Digital Twin pipelines. Emphasis is placed on trialling Replicable Recipe Templates within the Climate Adaptive Urban Design use case, enabling cross-domain collaboration and scenario-based modelling for heat flood management, mobility impact and heat stress mitigation.

1.2 Summary of the Deliverable Content

The Pilot Milestone Planning defines a tiered framework for completing each of 5 deliverables sets under 5 work packages (WPs), operationalized under 4 tracks.

Table-1: DT-aCoGo-Work Packages and Deliverables

Work package	Deliverables
WP1 Programme management	1.1 Pilot milestone planning 1.2 One progress report and one final report and independent CFS reports by consortium members 1.3 DS4SSCC onboarding complete
WP2 Set-up phase	2.1 OUP 'hubs' ready in pilot sites for use case deployment. Data requirement inventory for Replicable Recipe Template 2.2 Timelapse viewing slider for 2D, 3D and Unreal viewing installed 2.3 Checks and guidance by Governance & Ethical board report
WP3 Model usage phase	3.1 Interoperability between OUP and sectoral models realized and Inventory of data model requirements for usage in Replicable Recipe Format 3.2 Timelapse viewing slider for 2D, 3D and Unreal viewing validated 3.3 Model input created 3.4 Models validated 3.5 OUP data flows validated 3.6 Ethical assessment report on models
WP 4 Replicable Recipe Template & Model2Model phase	4.1 and 4.2 Replicable Recipe Template tested and validated. 4.3 Report on: · Replicability · Human – Machine readable functionalities · Usability within 'Data Space blueprint' building blocks
WP5 Communication and dissemination	5.1 Dissemination, Communication & Learning Community of Practice 5.2 'Cookbook' for design and implementation of Recipe's

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Although each Consortium partner is basically responsible for their own organisations activities, we felt the need to divide the deliverables (and the tasks underneath) amongst the Consortiumpartners as well. Therefore we created 4 tracks. And each Track has a responsible person that leads that track.

We believe that this track approach will help our project becoming more effective and importantant to mention. Therefor we cannot exclude it from the report, although that was requested in the review document of 27-nov-2025.

Track-based organization guides the project's operational structure:

- **Track 1 – Data Preparation and Model Providers:** Ensures data readiness, onboarding of models, and harmonization of datasets across pilot cities.
- **Track 2 – Data Space Building Blocks:** Develops and integrates technical enablers such as identification, authorization, and data connectivity mechanisms.
- **Track 3 – Recipe Definition and Scoping:** Defines the Replicable Recipe Template, ensuring interoperability, replicability, and usability within the DS4SSCC building blocks.
- **Track 4 – Program Coordination, Communication & Dissemination:** Maintains coherence across all tracks, manages reporting cycles, and leads stakeholder engagement and dissemination activities.

Organizational and governance considerations include coordination by a central Pilot Coordinator supported by a Managing Team comprising project managers from each partner. Each city and Future Insight have dedicated Project Managers overseeing implementation and coordination. This structure ensures transparency, accountability, and inter-city collaboration.

1.3 Summary of Conclusions and Next Steps

The Pilot Milestone Planning provides a roadmap for executing DT-aCoGo, linking project goals, use case specifications, and deliverable outputs. It enables the consortium to monitor progress, coordinate cross-city activities, and ensure effective integration of governance, technical, and operational components.

Looking ahead, the focus will be on advancing the completion of upcoming deliverables while maintaining alignment with the planned pilot milestones. Regular progress monitoring, transparent communication with mentors, and adherence to the defined track-based execution strategy will ensure that the project continues to deliver replicable, interoperable, and transferable solutions for data spaces.

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2 Introduction

2.1 Purpose of the Document

This document presents the Pilot Milestone Planning for the DT-aCoGo project, providing a structured framework to coordinate and monitor pilot activities/tasks across Rotterdam, Den Bosch, and Tampere. Its purpose is to consolidate project milestones, deliverables and tasks in a single reference, facilitating transparent project management, effective resource allocation, and alignment across consortium partners.

The Pilot Milestone Planning enables the project team and stakeholders to effectively monitor and manage the overall progress of the project. It allows them to track the progress of deliverables and milestones while managing interdependencies between tasks and thematic tracks. Through this process, potential project risks can be identified early, and appropriate mitigation measures can be developed. Additionally, it ensures that all activities remain aligned with the project's objectives, governance framework, and ethical standards. Ultimately, the Pilot Milestone Planning also supports the development and deployment of Replicable Recipe Templates across multiple cities, fostering consistency and scalability in project implementation.

2.2 Relation to Project Work Packages and Outputs

The Pilot Milestone Planning directly supports the execution of key Work Packages (WPs)

- **WP1 Pilot coordination** involves overall pilot coordination, project management and (progress) reporting
- **WP2 Setup phase** involves setting up OUP-hubs for pilot sites by connecting stakeholders, desired and relevant data sources.
- **WP3 model usage phase** involves connecting sectoral models to the OUP, train stakeholders for usage and test rendering to fit for purpose visualization over time (timelapse viewing)
- **WP4 Replicable Recipe Templates & Model2Model phase:** in this phase the Replicable Recipe Format based on the use case is trialed for Replicability, Human -Machine readability and useability within DS4SSCC blueprint building blocks. WP 2 and WP3 deliver input for the Replicable Recipe Template that will be trialed in WP 4.
- **WP5 Communication & dissemination** involves activities to secure and disseminate results. To disseminate and secure results a 'cookbook' will be extracted from WP 2, 3 and 4 describing pragmatic steps to create and implement Recipe-templates for Smart Community Data Spaces.

This deliverable builds upon prior project outputs, including governance frameworks, technical specifications, and initial onboarding, by mapping them into an actionable milestone and task structure for pilot execution.

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2.3 Partner Contributions

Each consortium partner plays a defined role within the pilot. The project is coordinated by a Pilot Coordinator (PC) across multiple teams. The PC Oversees project coordination, budget control, and stakeholder mediation, covering all phases. PC formed a managing team (MT) that includes project managers from the partners. Each partner-city and Future Insight have appointed a project manager (PM) to manage the local project team.

2.4 Structure of the Deliverable

The document is organized to provide clarity and accessibility for project monitoring and decision-making:

1. **Executive Summary** – Overview of deliverable aims, content, conclusions, and next steps.
2. **Introduction** – Contextualizes the deliverable, highlights partner contributions, and links it to broader project objectives.
3. **Pilot Milestone Planning**– Details the planning framework for each deliverable, including pilot milestones, associated tasks, and activities across thematic tracks.
4. **Conclusions and Next Steps** – Summarizes outcomes, learning points, and the roadmap for the subsequent phases of pilot execution.
5. **About the European Data Space for Smart Communities**
6. **Annexures**- Work Plan and Pilot Milestone activity lists, required for specific tasks and leading to completion of milestones towards closure of deliverables.

By following this structure, the Pilot Milestone Planning ensures that project execution is coordinated, traceable, and aligned with the overarching DT-aCoGo objectives, enabling the replicable deployment of Urban Data Space solutions for climate-adaptive digital twin scenarios.

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3 Pilot Milestone planning

To support structured execution and ensure alignment with project objectives, the DT-aCoGo pilot adopts a milestone-driven approach where each deliverable is seen as a milestone. The following sections present a detailed overview of the first key deliverable, D1.1, which establishes the foundation for the Replicable Recipe Template and guides subsequent planning, implementation, and replication activities within the Climate Adaptive Urban Design use case.

3.1 Milestone Planning Description and Deliverable Status

A snapshot of key deliverables and associated status remarks is summarized below

Table-2: DT-aCoGo- Milestone Planning Description and Deliverable Status

Deliverable and Description	***Planned Delivery and responsible Track***
D1.1 Pilot Milestone Planning	
Internal milestone planning completed including task assignments and progress tracking across work packages, ensuring focused project management. • Tasks:Updating milestone planning. This milestone provides a cornerstone for coordinating tasks, guiding pilot execution, and establishing a clear reference point for subsequent deliverables. • Overall coordination and management of pilot • Consortium front office internal/external, • Planning consortium meetings, • Guarding use case mutual alignments/milestones, • Guarding collaboration, general communications. Dependencies: • none	*Nov'25* *Track 4* *Delayed due to staggering holidays and meetings regarding planning, tasks distribution, budget and architectural picture. Planning completed internally and ready for formal reporting beginning of November.*
Deliverable: D1.2 Progress, Final, and CFS Reports	
Deliverable D1.2 covers the preparation and submission of one progress report and one final report. • These milestones ensure transparency, accountability, and alignment across all partners, providing a clear reference for project performance and financial management. • Budget allocation for year 2025 to be secured • Financial impact of delayed subcontracting to be tracked and managed Tasks: • Creating an mid term report in January • Creating a end report in September	*Jan'26 + Sept'26* *Track 4*

Deliverable and Description	***Planned Delivery and responsible Track***
Dependencies: • Receiving hour and cost insights of all consortium partners in time (half January and half September)	
Deliverable: D1.3 DS4SSCC Onboarding	
Deliverable D1.3 relates to the DS4SSCC onboarding process, establishing a coordinated foundation for pilot execution. The milestone consolidated key activities, including Tasks: • Project introduction • Data sharing setup, • Folder structure organization, • Organizing series of online meetings covering technical, governance, and operational aspects. • Attending all meetings and providing feedback. Dependencies: • Availability of Consortium Partners to participate in these meetings and share outcomes with the internal organizations	*Nov'25* *Track 4* *Onboarding activities concluded with pilot sites; formal submission is pending following onsite bootcamp in Ljubljana.*
Deliverable: D2.1 OUP Hubs Ready & Data Requirement Inventory	
Deliverable D2.1 focuses on preparing the Open Urban Platform (OUP) hubs in pilot sites to support use case deployment and to establish a comprehensive data requirement inventory for the Replicable Recipe Template. Tasks: • Setting up the OUP for DTaCoGo • Each municipality to add datasets on current citymodel and datservices to the OUP in a streaming way using open standards. For example info on: buildings, terrain, trees etc. • Each municipality to add city plans (future situation) to the OUP in a streaming way using open standards. Dependencies: • Availability of OUP • Possibility for municipalities to provide the datasets in a streaming way using open standards	*Jan'26* *Track 2* *Procurement of model and viewer providers is ongoing; completion expected by end of November 2025.*

Deliverable and Description	***Planned Delivery and responsible Track***
Deliverable: D2.2 Timelapse viewing slider for 2D, 3D and Unreal viewing installed	
Deliverable D2.2 focuses on the installation and configuration of the timelapse viewing slider for 2D, 3D, and Unreal visualizations across pilot cities. These milestones ensure consistent deployment and accurate representation of city data, preparing the platform for effective use case demonstrations. Tasks: • Creating a way that users easily can shift in time, so they are able to see the current, near future and long term future. Dependencies: • Availability of the Unreal viewer • Accepting a financial offer of the Subcontractor to start building the Timelapse viewing.	*Dec'25* *Track 1* *This deliverable is postponed due to delay in contract signing with suppliers. It is now combined with the Deliverable 3.2: Timelapse viewing slider.*
Deliverable: D2.3 Checks and guidance by Governance & Ethics board report	
Deliverable D2.3 focuses on obtaining guidance and oversight from the Governance & Ethics Board to ensure that pilot activities align with ethical standards and project policies. This milestone ensures that all project activities, data management, and pilot implementations adhere to agreed ethical frameworks and governance principles, supporting transparency, accountability, and responsible deployment across the pilot sites. Tasks • Performing GAP analysis between current Governance and Ethical board and agreements of the current Rotterdam OUP, and the Governance building blocks of the DS4SSCC Blueprint • Consulting the Governance and ethical board on the GAP analysis • Agree on possible actions / adjustments to expand, of become more in line (where and if needed). Dependencies: • Performing a GAP analyses means having good understanding of the Blueprint building blocks and the current way of working within the Governance and Ethical board.	*Apr'26* *Track 1*

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Deliverable and Description	***Planned Delivery and responsible Track***
Deliverable: D3.1 Interoperability between OUP and sectoral models realized and Inventory of data	
Deliverable D3.1 focuses on achieving interoperability between the Open Urban Platform (OUP) and sectoral models, while creating an inventory of data model requirements to support the Replicable Recipe Format. Tasks • Creating an overview of requirements regarding the datasets, by the model suppliers (to make sure the models can run using the available datasets). • Creating a generic datamodel based on international standards, to be used by model suppliers and Municipalities (that are responsible for adding the datasets to the OUP) • Creating the technical connection between Models and OUP, so the models are able to retrieve the data. • Also creating a connection between the models and OUP that can handle the outcome of the models (this is 'output data' that needs to be shared with the viewer, using the OUP. • Creating a connections between models and OUP that uses the OUP IAM (Identity and Access management) Dependencies: • Availability of datasets (2.1 do be done by Municipalities) • Hiring of Subcontractors • Planning of subcontractors matching DTaCoGo planning • Availability of Partners, specially Future Insight to coordinate all technical insights, proposals, questions, suggestions and issues.	*Mar'26* *Track 1*
Deliverable: D3.2 Timelapse viewing slider for 2D, 3D and Unreal viewing validated	
Deliverable D3.2 focuses on validating the timelapse viewing slider for 2D, 3D, and Unreal visualizations across the pilot cities. This milestone ensures readiness for pilot activities that rely on accurate temporal and spatial representations of city data. Tasks: • Municipalities to check the datasets can be seen in unreal viewer • Municipalities to check all datasets can distributed to the models	*Apr'26* *Track 1*

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Deliverable and Description	***Planned Delivery and responsible Track***
Dependencies D2.1 and D.2.2 need to be complete enough to proceed	
Deliverable: D3.3 Model input created	
Deliverable D3.3 focuses on preparing and structuring model input data to support pilot simulations across the cities. These milestones establish the foundation for accurate model execution and interoperability in subsequent tasks. • Current citymodel and dataservices as input for models (Rotterdam, Den Bosch, Tampere) • Cityplans as input for models (Rotterdam, Den Bosch, Tampere) Tasks: • Purple Polar Bear (PPB) needs to be connected to the OUP • Current citymodels and dataservices of all cities need to be converged into the same generic Datamodel using PPB. • The Generic Datamodel of PPB needs to be translated into workable datasets for the model suppliers to use. • Data needs to float from Municipalities, via OUP to PPB, and when converged from PPB via OUP to Models. Dependencies. • D 2.1 and 3.1 need to be complete enough so the models have the minimum required data to run their analysis. • PPB needs to be connected to the OUP • Generic datamodel needs to be available / determined / agreed upon by municipalities and model suppliers.	*Mar'26* *Track 1*
Deliverable: D3.4 Models validated	
Deliverable D3.4 focuses on validating the pilot models to ensure they operate correctly and produce reliable outputs for use case demonstrations. This milestone ensure that models are functioning as expected, outputs are accurate and consistent across pilot cities, and the results are suitable for integration into subsequent analysis, visualization, and recipe replication steps. Tasks: • The datmodels need to run their analysis based on the available datasets of Municipalities. • The outcome of the models-calculations need to be delivered as service to the OUP • The outcome of the models-calculations need to be shown in the Unreal viewer	*Apr'26* *Track 1*

Deliverable and Description	***Planned Delivery and responsible Track***
• Municipalities need to validate these outcomes with experts on the specific terrains. If possible by comparing these results with other calculation-results if these are available. Dependencies: • D3.3 needs to be in a phase where the needed basic info is usable (via OUP) for the model suppliers.	
Deliverable: D3.5 OUP data flows validated	
Deliverable D3.5 focuses on validating data flows within the Open Urban Platform (OUP) to ensure seamless operation of pilot analyses, visualizations, and marketplace interactions. This milestone ensure that data flows are robust, interoperable, and aligned with pilot objectives, supporting reliable execution and replication of use cases across cities. Tasks: • All dataflows need to be running as planned. Not only the current situation, but also for the future situations. • All datastets on all moments in time, includiding model outcomes, need to be visible in the Unreal viewer • These datasets and the model outcomes need to be validated by municipalities. Dependencies: • D2.1, 2.2 3.1, 3.2, 3.3, and 3.4 need to be finished, at the end of this Deliverable 3.5. Otherwise the D3.5 cannot be ready.	*May'26* *Track 1*
Deliverable: D3.6 Ethical assessment report on models	
Deliverable D3.6 focuses on preparing an ethical assessment report for the pilot models to ensure that all simulations and data usage comply with agreed ethical standards. This milestone ensures that model development and use are transparent, responsible, and aligned with governance and ethical guidelines, supporting trust and accountability across all pilot cities. Tasks: • Governance Board to de an ethical assessment of all datasets, data conversions and model outcomes. • Governance Board to report on that to Consortium, with the positive observations, but also with the suggested learnings.	*Jun'26* *Track 1*

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Deliverable and Description	***Planned Delivery and responsible Track***
• Consortium to evaluate this report and write a plan for further improvements with regards to the learning pints made by the Goverance board. Note that implementation of this report is out of scope for this project. Dependencies • Governance board needs to be available and able to do the Ethical assessment. • D3.5 needs to be ready before finishing 3.6.	
Deliverable: 4.1 Writing Replicable Recipe Template (by Rotterdam).	
Deliverable D4.1 focuses on the writing and creation of the Recipe, based on the Rotterdam situation. Tasks: • *Determine the way a recipe is created (software to be used)* • *Rotterdam to writing the actual recipe as it is now available (the outcome of previous deliverables).* • *Making sure it is man-readable and complete. For example by checking internally within the municipality of Rotterdam itself.* *Dependencies:* • D2.1 and 2.2, 3.1, 3.2, .3, 3.4 and 3.5 need to be finished, at the end of this Deliverable. • *All steps needed to create the current available solution, need to be noted correct and detailed during. These notes and details give the recipe the real value, as it makes the recipe (when reproduced by others), more consistent with the Rotterdam usecase. (a detailed and qualitative good recipe when cooking, makes the result when reproduced by others, more reliable)*	*Jul'26* *Track 3*
Deliverable: 4.2 Replicable Recipe Template trails for replicability (tested/validated by Tampere and 's-Hertogenbosch).	
D4.2 focuses on testing and validating the Replicable Recipe Template to ensure it is robust, usable, and replicable across pilot cities. Each milestone ensures that the Replicable Recipe Template can be applied consistently, scaled across cities, and integrated effectively with technical and governance elements of the pilot. Tasks: • Tampere and 's-Hertogenbosch to use the Rotterdam Recipe to recreate the same Digital Twin as Rotterdam, but then with and for their own city data.	

Deliverable and Description	***Planned Delivery and responsible Track***
Dependencies: • D4.1 needs to be ready before this deliverable can be finished as a qualitative good Recipe of Rotterdam helps creating a good copy in the cities of Tampere and 's-Hertogenbosch.	
Deliverable: D4.3 Report on: • Replicability, • Human –readable functionalities • Usability within 'Data Space blueprint' building blocks	
Deliverable D4.3 focuses on finalizing a comprehensive report that evaluates the Replicable Recipe in terms of replicability, human readable functionalities, and usability within the Data Space blueprint building blocks. This milestone ensures that insights from the pilot regarding Recipe application, interoperability, and usability are captured, providing guidance for replication, scaling, and integration with the broader Data Space framework. Tasks: • Writing the report that evaluates the Replicable Recipe in terms of replicability, human readable functionalities, and usability within the Data Space blueprint building blocks. Dependencies • In order to finish this deliverable, the deliverables 4.1 And 4.2 need to be ready as well.	*Jul'26* *Track 3*
Deliverable: D5.1 Dissemination, Communication & Learning Community of Practice	
Deliverable D5.1 focuses on establishing effective dissemination, communication, and learning channels to support knowledge sharing across the project and the wider community. This milestone ensures that project activities, findings, and lessons learned are effectively shared, fostering engagement, collaboration, and visibility among stakeholders and the broader community. Tasks: • Launching a Project website to centralize communication and information dissemination regarding project updates and events. • Participation in key events, presentation of Demo • Review communication tracker; add presentations, interviews, articles, podcasts, events related to DT-aCoGo Dependencies:	*Aug'26* *Track 4*

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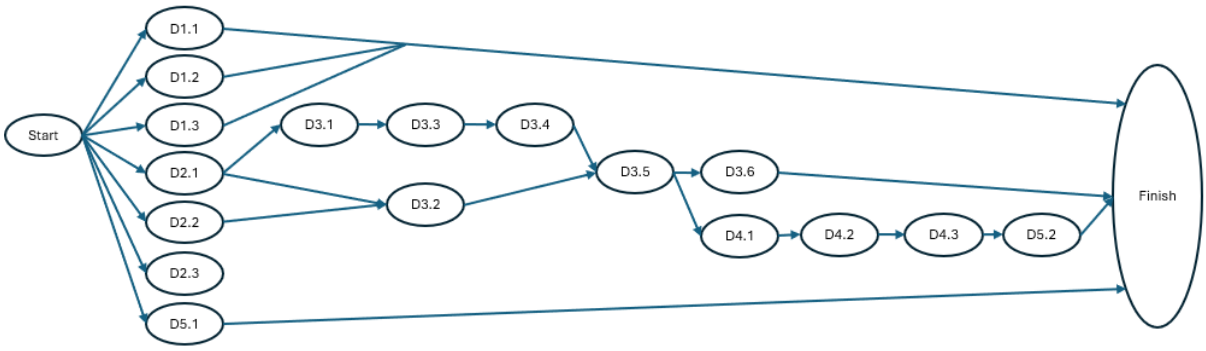
Deliverable and Description	***Planned Delivery and responsible Track***
None	
Deliverable: D5.2 'Cookbook' for design and implementation of Recipe's	
Deliverable D5.2 focuses on compiling a pragmatic 'Cookbook' that captures lessons learned and processes for designing and implementing Replicable Recipe templates. This milestone ensures broader adoption, facilitates knowledge transfer, and supports scalable deployment of the Replicable Recipe framework across Europe. *Tasks:* • Reporting on the lessons learned and process for designing NS IMPLEMENTING Replicable Recipe templates. *Dependencies* • *Before finishing this deliverable, D 4.1, 4.2 and 4.3 need to be ready.*	*Aug'26* *Track 4*

The above described planning is summarized in the below table for your convenience:

Work	Deliverables	Tasks	Milestones	Responsibl	2025 M	J	J	A	S	O	N	D	2026 J	F	M	A	M	J	J	A
WP1 Programme management	1.1 Pilot milestone planning report	1.1 Creating a Pilot milestone planning		Track 4																
	1.2 One progress report and one final report and independent CFS reports by consortium members	1.2 Reporting in project status, one mid term and one final.		Track 4																
	1.3 Report on DS4SSCC onboarding	1.3 Attending DS4SSCC onboarding activities	MS1 Onboarding complete	Track 4																
WP2 Set-up phase	2.1 Report on OUP 'hubs' ready in pilot sites for use case deployment.	2.1 Maken OUP 'hubs' ready in pilot sites for use case deployment.		Track 2																
	2.2 Report on Timelapse viewing slider	2.2 Creating a solution for Timelapse viewing and Unreal viewing installed		Track 1																
	2.3 Meeting minites of Governance & Ethical board meeting on DTaCoGo project plans.	2.3 Checks and guidance with Governance & Ethical board		Track 1																
WP3 Model usage phase	3.1 Report on Interoperability between OUP and sectoral models realized and Inventory of data model requirements for usage in Replicable Recipe Format	3.1 realize Interoperability between OUP and sectoral models and Inventory of data model requirements for usage in Replicable Recipe Format	MS2 Models and Viewer connected to the OUP	Track 1																
	3.2 Report on validatio of Timelapse viewing slider for 2D, 3D and Unreal viewing..	3.2 Validate the Timelapse viewing and Unreal viewing		Track 1																
	3.3 Report on Model input	3.3 create Model input		Track 1																
	3.4 Report on validation of models	3.4 Validate Models		Track 1																
	3.5 Report on validation of OUP data flows	3.5 Validate OUP data flows	MS3 Model output (calculations) visible in Unreal viewer for	Track 1																
	3.6 Ethical assessment report on models	3.6 Ethical assessment on models		Track 1																
WP 4 Replicable Recipe Template & Model2Model phase	4.1 Creation of Replicable Recipe Template (by	4.1 Writing Replicable Recipe Template (by		Track 3																
	4.2 Report on useability of the Replicable Recipe Template Rotterdam, by Tampere and 's-Hertogenbosch	4.2 Use Recipe Template as a trails for replicability (tested/validates) by Tampere and 's-																		
	4.3 Report on: · Replicability · Human – Machine readable functionalities · Usability within 'Data Space blueprint' building blocks	4.3 Report on: · Replicability · Human – Machine readable functionalities · Usability within 'Data Space blueprint' building blocks	MS4 Recipe concept created	Track 3																
WP5 Communicatio n and	5.1 Overview of Dissemination and Communication	5.1 Dissemination and Communication of project		Track 4																
	5.2 'Cookbook' document for design and implementation of Recipe's.	5.2 Writing a 'Cookbook' for design and implementation of Recipe's		Track 4																

The above table also shows the predicted lead times for each Deliverable and the responsible tracks.
For Track 1 and 3 Rotterdam (Corné Helmons) is in the lead.
For Track 2 Future Insight (Margriet Visscher) is in the lead
For Track 4 's-Hertogenbosch (Niek Verschure) is in the lead.

Below a PERT diagram showing the dependencies:



Milestone table

Milestone no.	Milestone name	Work Package no.	Lead Organization	Description	Means of verification
MS1	Onboarding complete	1	's-Hertogenbosch	All consortium partners to participate in onboarding activities of DS4SSCC, making sure basic knowledge is gathered.	Attendance of activities and Report D1.3
MS2	Models and Viewer connected to OUP	3	Rotterdam	Connection created between OUP and 3 model suppliers, making it possible for models providers to run calculations on datasets registered in OUP, from cities.	Model providers to confirm they can use datasets registered in OUP.
MS3	Model output visible in Unreal viewer for verification	3	Rotterdam	Results of model calculations to be registered in OUP and showed in Unreal viewer.	Being able to see results of model suppliers in Unreal viewer
MS4	Recipe concept created	4	Rotterdam	The recipe concept is created by Rotterdam and tested by replicant cities.	Receiving copy of the recipe and report on verification.

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3.2 Explaining delay in Deliverables due dates (Deliverable milestone planning)

The below explanation on the changes in due dates for several deliverables has also been shared in the documents 'Motivation delay deliverables' shared on 26-11-2025 and the 'DT-aCoGo Justification note' shared on 28-11-2025. It is added here based on the Review report we received 27 nov 2025.

The reason behind the proposed changes in deliverable planning, can best be explained by giving a more detailed insight on our activities during the first part of the project, and the implications of the outcomes.

1. **Submission of proposal (Feb)**

In February 2025 the Dt-aCoGo consortium made a planning based on the (limited) knowledge at that time. There were limits to the knowledge about:

- the exact way to realize the proposed evolutions,
- the exact state of affairs (practical usability) of the proposed solutions, and
- the requirements on Dataspaces / content of the Blueprint.

In addition to this, the Data Space subject/environment is very changeable and far from crystallized.
As far as I know, the planning has not yet been revised since February. So now the planning has changed quite significantly.

2. **Project phase 1 - setup (May-June)**

When the project started in May, the first period was spent on realizing all the formal agreements with both OASC and the partners (using the Project Partner Agreements, PPA). Appointing Project Leaders and the Consortium Leader, clearing schedules, sharing all (financial) aspects and starting onboarding activities took quite some time as well.

3. **Project phase 2 - actual start (Jul-Aug)**

During this period, we took a closer look at the actual status of all the components we had included in our proposal and discussed how we could connect everything at a more detailed level.

In this phase we had our first doubts on the actual practical applicability of the PDX (Product Data Exchange). This was, amongst other things, seen as a solution to share our data with other dataspaces. Please note that this was a cost-free solution developed by DMI (Dutch Metropolitan Innovations) that we were allowed to use, but could not really influence.
The discussion about the actual implementation of the recipe concept also took quite some time, because we felt that this should be as practical as possible at the end of the project.
The municipalities started to work on their data / datasets, in an attempt to get ready and be able to start shared streaming data in new formats. Note that this is the biggest job the Municipalities have in the project, and it will take a large part of the total processing time.
The main reasons for the extra time needed relate to the factual data that must be used:

- not available (like the future plans for urban planning),
- not in the right format, and
- not ready for streaming.

Finally, for example 's-Hertogenbosch and Tampere only then found out that the streaming of data has to be done by the municipality itself, it is not (as was wrongly assumed) part of the technical solution within the Open Urban Platform. Now this requires extra server and software to be set up, which takes quite some time in such a big organisation.
Last but not least, this was also the summer holiday period, which did not benefit the progress of the project.

4. **Project phase 3 - learning & defining (Sept-Oct)**

During the preparations for the training in Ljubljana, but especially during the training days itself, we learned a lot on the Blueprint, its building blocks and technical (reference) architecture.
Because of all the knowledge that was shared and the things we learned, we also had to spend quite a bit of time discussing the impact this would have on our project and our proposed working method. We concentrated on the technical solutions and on how far we thought we could and should go, given the time and budget available.
It was then that the use of both the additional solutions of EDC (Eclipse Data Connector) and PPB (Purple Polar Bear) were introduced and intensively discussed.
By doing this, we believe we've found very important solutions to the challenges we were currently facing:

Challenge 1:
The mismatch of the earlier proposed PDX solution for sharing data with other dataspaces and aligning with EU standards. Not only was the planning of this solution a problem (not delivered in time for our project), but also the scope of what was to be delivered was insufficient.
By implementing EDC, we think we found a solution. The hiring of external expertise (Think-IT) is needed, and their first rough offer was 105K. Of this, no less than 40K was reserved to make the EDC ready for sharing data federative (not sending copies). The other big aspect is the Identity and Access Management (IAM) that needs to be aligned with the current Open Urban Platform (OUP) that forms the basis of our dataspace solution.
Still there is a lot of uncertainty, therefore we suggest to start spending 30K. After that has been spend, we reconsider based on the progress made so far and the expectations we have regarding: technical possibilities, time needed, budget required.

Challenge 2:
All 3 cities, but also other partners that may join our dataspace in future, use different data models. Given that these municipalities have been working with these data models for many years, the assumption that everything can be harmonised between these cities during this project is practically impossible.
The Purple Polar Bear software is a solution for this problem, as it is seen as a conversion tool that can converse, after a setup by each partner, all the city specific data models, into a generic data model that can be used by all model providers.
These costs are estimated at 50K for the first municipality alone, including license.

The time spent finding solutions to the above problems and discussing them could not, understandably, be spent on progressing the other deliverables. It is important to note that these problems/solutions also have a major impact on the requirements of the model suppliers, the viewer and, therefore, on the implementation of the entire project.

Only after consensus had been reached on the practical and technical approach could (and was) information shared with the suppliers. This was originally planned in July, meaning we are 4 months behind schedule.

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In this phase Jan Wester announced that he accepted the new job offer, and although he was committed to our project, he immediately had to start spending time on this new job as well. Appointing a new Consortium Leader took quite some time as well.

5. **Project phase 4 - assignment (Nov-dec)**

During this period, I took over the role of consortium leader from Jan Wester. We gave two presentations at the SCEWC in Barcelona, which required quite some preparation.
We have agreed to follow both of the above solutions (EDC and PPB), which still need to be approved by OASC in terms of the budget. However, we have reached agreement on how the costs should be divided, and how the cost component budgets should be adjusted to incorporate all of this.
Thanks to this agreement and the receipt of the final proposals from all suppliers (model suppliers, viewer, PPB and Think-IT), we can now begin the formal appointment of the most important suppliers.
This is, of course, the starting point for all suppliers to establish their connections with the Open Urban Platform (OUP) in the proposed manner. By doing so, they will greatly assist the OUP in developing into the proposed and desired Dataspace, as outlined in our application.
We focus primarily on the technical aspects/technical building blocks, as has always been the case in our project proposal.

6. **Conclusion regarding the delay**

Due to all of the above, suppliers will be able to start work in December at the earliest, whereas in February we thought this would be much sooner. Since we need to give suppliers time to implement connections, test, train, etc., the schedule for most deliverables needs to be adjusted as we did on November 14th.

We are confident that this revised schedule is much more robust and well-founded, and therefore more reliable. We will make every effort to fulfil all our commitments within the time and budget limits of the project. Of course there are still quite some risks, as the technical connections are still to be created (and tested).]

3.3 Risk mitigation

In order to mitigate the risk regarding the revised planning described above, the following activities are planned:

- There is a weekly Consortium meeting, where all Partners participate and the progress is reported for all tracks (see 1.2) and deliverables that we are working on.
    - If progress seems to slow down in respect to the planning, we will discuss the various ways to improve the speed and getting back on track. At this point an extensive list of possible actions cannot be made. But these will include: adding extra capacity, discussing other ways to meet the set goals, hiring specialists to advise / assist.
- A biweekly meeting between FI, Rotterdam is scheduled with the important subcontractors (the 3 model suppliers, Purple Polar Bear and The People Group) making sure they keep on track and focused on this project.
    - If progress seems to slow down in respect to the planning, we will discuss the various ways to improve the speed and getting back on track. At this point an

extensive list of possible actions cannot be made. But these will include: adding extra capacity, discussing other ways to meet the set goals, hiring specialists to advise / assist.

- A planning is made with deadlines, this is managed by both Consortium leader, the Track leaders and Partner Project managers.

3.4 Work Plan

The DT-aCoGo pilot follows a structured and phased planning designed to ensure coherent progress across all thematic tracks and deliverables. The plan outlines the logical sequence and expected outputs aligned with the overall project timeline. Coordination across partners and pilot cities is maintained through regular monitoring sessions, ensuring that progress remains synchronized and adaptable to evolving project needs. Each deliverable milestone is mapped against its respective track—covering data preparation, technical integration, recipe development, and dissemination—to support efficient task execution and progress evaluation. Conclusions and Next Steps

The DT-aCoGo Pilot Milestone Planning has been created and adjusted during the first half year of the project. The structured mapping ensures clear responsibilities, operational alignment across partners, and a shared understanding of objectives and dependencies. Key achievements to date include the definition of the Replicable Recipe Template, onboarding of pilot cities, initial setup of OUP hubs, and progress in data preparation and model integration.

Looking ahead, the project will focus on the continued implementation and validation of remaining deliverables, including OUP hub readiness, model interoperability, Recipe testing, and dissemination activities. Close attention will be paid to tracking pilot milestones, monitoring dependencies, and documenting lessons learned. Coordination with project mentors will continue to ensure transparency, support timely completion, and facilitate proactive risk management.

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The framework provided by the Pilot Milestone Planning, along with ongoing monitoring and reporting, will support the replication and scalability of digital twin solutions in other cities and regions. By consolidating best practices, technical guidelines, and governance measures, the project positions itself to deliver validated, reusable, and transferable solutions for climate-adaptive urban design, while maintaining alignment with ethical, governance, and technical standards.About the European Data Space for Smart Communities

The European Data Space for Smart Communities (DS4SSCC-DEP) initiative is a pivotal deployment following the preparatory action for a Data Space for Sustainable and Smart Cities and Communities (DS4SSCC). Emphasising sustainability aspects and diversity in communities, DS4SSCC developed a multi-stakeholder data governance scheme, created a blueprint for the European DS4SSCC, delivered priority datasets, and developed a roadmap towards a mature DS4SSCC.

DS4SSCC-DEP's vision revolves around creating a well-governed federated territorial, place-based data space for smart communities available for developers and infrastructure providers, aligning with the prospects outlined in Europe's Digital Decade objectives. This approach distinguishes itself from sectoral data spaces by encompassing diverse domains, and underpinning governance across all levels of society. The key objectives of the project are:

- **Objective 1: Establishing a Federated and Innovative Data Space**. This phase focuses on creating a large-scale data space controlled by public data holders, ensuring alignment with the Smart Middleware Platform and broader data space ecosystems. It also aims to offer middleware service solutions facilitating data sharing and management while refining the blueprint based on gained experience.
- **Objective 2: Pilots and Refinement of the Data Space Blueprint**. Through 10-12 cross-sectoral data pilots in various EU communities, this objective aims to validate and refine the data space blueprint. Using common high-value data sets, it seeks to create added value by combining data from various domains, contributing to the sustainability plan, and minimising infrastructure investment.
- **Objective 3: Fostering Innovation and Ecosystem Alignment**. Engaging stakeholders, compliance with sector-specific legislation, establishing links with Horizon Europe missions, creating services available via trusted application catalogues, and enhancing ethical considerations and AI-enabled local solutions constitute the focus of this objective.

DS4SSCC-DEP, building upon established European networks, aims to significantly contribute to the sustainability goals of European citizens. It emphasises co-creation, standardisation, business models, strategies for data spaces, and envisions a federated platform.

DS4SSCC-DEP consortium includes the following partners:

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OPEN & AGILE SMART CITIES & COMMUNITIES		imec	FIWARE
IDC	serendipity	TAL TECH, FinEst Centre for Smart Cities	Gospodarska zbornica Slovenije, Chamber of Commerce and Industry of Slovenia; zit ICT Association of Slovenia