



**DATA SPACE FOR
SMART AND SUSTAINABLE
CITIES AND COMMUNITIES**

Deliverable 2.1

Work plan for the development of a multi-stakeholder data governance scheme

WP 2 – Governance

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Executive Summary

This document sets out the detailed activities and timeline – or work plan - for the development of the multi-stakeholder governance scheme for the data space for smart and sustainable cities and communities as part of work package 2 led by Eurocities.

The governance scheme will be developed during a series of workshops and validation activities (see activities & timeline). The work will build on lessons learnt from cross-sectorial use cases that contribute to the goals of the Green Deal, align with the Mission on Climate Neutral and Smart Cities and/or support the New European Bauhaus initiative.

The work will be conducted within the Governance Group associated with work-package 2 as well as in the context of the Stakeholder Forum of the project.

The governance scheme will be incorporated with the deliverables of Work Package 3 (technical blueprint) and Work Package 4 (establishment of data space) into a blueprint as a basis to support the future progressive harmonisation of local data ecosystems into a federated European data space for smart communities.



1 Introduction

The preparatory work of data space for smart and sustainable cities and communities aims to deliver a comprehensive blueprint for a European Data Space for Smart Communities which aligns with European values and policies.

The work plan presented in this document supports the delivery of the multi-stakeholder data governance scheme (D2.2) by bringing together European cities and regions (Governance Group) to collaborate on two use-cases relevant to the Green Deal objectives.

The governance scheme will be co-developed with the Governance Group and validated with broader stakeholders representing the ‘quadruple helix’ (public administrations, private sector, academia, and civil society) through the project’s Stakeholder Forum (incl. associated and supporting partners as per below).

The work will be consolidated into a scheme, including a Code of Conduct, and support the deliverables of WP3 and integrated into the deliverable of WP4 to provide a blueprint towards a federated European data space for smart and sustainable cities and communities.

Associated Partners:

- Municipalities: Ghent, Vienna, Eindhoven, Rennes, Athens, SKR (Swedish Municipalities and Regions), Tampere, Porto.
- Other public entities: Luxemburg Institute of Science and Technology (Digital Twins), Computer Vision Centre (Visual Data), CERTH (IoT).
- Companies and private entities: Atos, Engineering, Kereval (Conformance), i2CAT.

Supporting Partners:

- Municipalities: VNG (Dutch Municipalities), Local Government Denmark/KL (Danish Municipalities), Helsinki, Amsterdam.
- Member State: Slovenian Government Office for Digital Transformation.
- Non-profits: imec (Digital Twins), Fraunhofer (Data Space Support), IrRADIARE (AURORAL/Smart Regions), MyData Global, GAIA-X AISBL, GAIA-X Working Group on Smart Cities, FairsFair (Mobility Data), EU AI Forum, K8 Institut für strategische Ästhetik (AI and citizens).
- Companies: Ubiwhere, AnySolution SL (Tourism data), IDC (BDVA)



2 Objectives

Using this work plan, the Governance group will co-develop a data space governance scheme to guide the practices and interactions with various stakeholders (e.g., cities, industry, academia, civil society, etc.) in the cities & communities data space. The governance scheme will be integrated with other project deliverables to create a blueprint for a European data space for smart and sustainable cities and communities.

The multi-stakeholder governance scheme will:

- Consider roles and responsibilities of different stakeholders in the data space for smart and sustainable cities and communities
- Identify standardised access rights and business models for management of the ecosystem
- Determine conditions for access, sharing, processing, and using data within (local) data ecosystems
- Explore mechanisms for identity management and trust
- Establish data quality assurance guidelines and standards
- Take into consideration existing European policy, legislation, and regulations.

Taking part in the work of the governance group will enable cities and relevant data ecosystem stakeholders to:

- Share learning, best practices and solutions
- Collaborate and share solutions to overcome specific local challenges related to data sharing with different types of stakeholders (including private sector)
- Bring the perspectives of cities and communities to the development of the blueprint for a European Data Space for Smart and Sustainable Cities and Communities
- Contribute and be part of broader networks of partner organisations via the Stakeholder Forum



3 Members of Governance Group

The following cities and associations of municipalities (alphabetical order) have agreed to take part in the co-development and/or the validation of the multi-stakeholder governance scheme:

Aarhus	Lisbon
Athens	Ljubljana
Amsterdam	Munich
Barcelona	Porto
Bratislava	Rennes
Cologne	Riga
Dublin	Swedish Municipalities & Regions
Eindhoven	Tampere
Florence	VNG (Dutch Municipalities)
Ghent	Valladolid
Helsinki	Zaragoza
Local Government Denmark	



4 Working together

Members of the **Governance Group** in this project will:

- Contribute to one group meeting or workshop a month (approx. 3 hours) from January to June (6 workshops) to co-develop the data governance scheme and/or take part in the validation of the scheme during three meetings (Feb, April, and June)
- Provide input ('homework') in between sessions (e.g., reviewing the summary of the workshop or provide feedback on a collaborative document)
- Share lessons from existing experience (e.g., what works/best practices, also challenges/ what did not work)
- Share relevant documentation when appropriate (e.g., data strategy, existing governance model mechanisms, existing use-cases documentations)

As the work package lead, **Eurocities** will:

- Create space for discussions and sharing opportunities and challenges related to the sharing of data with different types of stakeholders
- Bring input from other activities (interviews, desk research) and from other work packages (WP3 &4) into discussions
- Carefully prepare meetings/ workshops to make them productive
- Synthesise and incorporate discussion from workshops and other activities into deliverables
- Always circulate documents before sharing more widely
- Organise one Governance Group face-to-face meeting (tbc, June)

Tools:

- Online meetings: Teams
- Collaborative whiteboard: Miro
- Collaborative document: Google docs
- Dedicated workspace hosted on [Eurocities website](#)



5 Validation of the work

The governance scheme developed during the workshops will be validated through several channels with all types of stakeholders represented (i.e., demand and supply side). These include:

- Through the Stakeholder Forum which will convene several times during the project and will bring together all stakeholders, associated and supporting partners. Relevant European projects including AURORAL, DIGISER, DUET, RUGGEDISED, Scalable Cities etc. will also be represented in the Stakeholder Forum.
- Through the Gaia-X European Committee for Smart Cities and Communities
- Via Eurocities' Digital, Environment and Mobility Forums
- As part of [Living in. EU](#) movement (including in coordination with Go.lieu and DigiNEB)
- During the [OASC Connected Smart and Sustainable Cities and Communities Conference](#) in Brussels (17-18 January 2023)
- During the [FIWARE Global Summit in Vienna](#) (12-13 June 2023)



6 Identification of use-cases

6.1 Selection criteria

The use-cases are required to:

- Be grounded in cities and communities and cutting across domains (Mobility and Environment, Energy and Environment, etc.)
- Involve different types of stakeholders (e.g. private sector, governments & public administrations, research & academia, civil society)
- Align with Green Deal Goals, the Mission on Climate Neutral and Smart Cities and/or the New European Bauhaus initiative.

6.2 Relevant areas

Relevant areas for the data space for smart and sustainable cities and communities include (non-exhaustive):

- Predictive traffic management/sustainable mobility planning
- Management/efficiency of energy flows
- Zero pollution actions (e.g., air, water, soil pollution or waste)
- Data-services related to weather, climate, and extreme weather events (e.g., disaster resilience)
- Any other domain falling under the New European Bauhaus initiative (urban design, building management, public services, nature-based solutions, amongst others)



6.3 Identified use cases

Use case 1: Optimising traffic management to reduce pollution

Alignment with Green Deal Objectives:

- Accelerating the shift to smart and sustainable mobility
- Zero-pollution ambition for a toxic-free environment

Relevant datasets (non-exhaustive):

Public transportation (bus, train, subway)	Retail sales/ payment-ATM data
Micro-mobility (shared e-scooter/bikes),	Footfall data (telecommunication and mobile
National road authorities	phone companies)
Accidental causes	Citizen science
Parking data	Fix my street data
Utilities fleet data (waste)	Environmental sensor data (air quality)
Traffic data (Waze, Google, TomTom)	Camera high emission control
Last mile shipments data	Weather/ satellite data
Urban planning data (e.g., construction sites)	Surface temperature
IoT based traffic flow detection	Traffic light counting systems
	Upcoming events data

Examples of relevant experience and work conducted in the Governance Group (non-exhaustive):

- Aarhus: Working with mobility hotspots and how we can make the change of mode-of-transportation
- Amsterdam: Real time road works, traffic management scenarios around critical spots based on Waze data
- Eindhoven: Collection of travelling patterns in region to provide predictive alternative advice for more sustainable way of travelling; Traffic hot-spot data to optimise traffic flow
- Helsinki: Traffic light management, data sharing based on consent, traffic counters, weather and traction and air quality indicator
- Lisbon: Micro-mobility data analyser, predicting traffic in big events, both pedestrian as motor, crossing with relevant data from the city, calculating flow of entries/exists of the city in the main points during rush hour
- Tampere: Optimisation of the routes for public transport users.; Traffic light data and adaptive control of traffic flows



Use case 2: management of energy flows in a city/community specific context

Alignment with Green Deal Objectives:

- Supplying clean, affordable, and secure energy
- Leave no-one behind (Just Transition)

Relevant datasets (non-exhaustive):

Utilities	Aggregated data consumption by postcode
Energy use of municipal buildings	Current energy use + source
Sensor data to measure housing stock efficiency/carbon emission	Closure energy accounts
Solar energy production	Connection with gas
Green /Solar energy potential	Geospatial data
Smart meter data (with customer consent)	Public sector data (benefits, taxes, statistics, CRM)
Weather and environment data	Building constructions

Examples of relevant experience and work conducted in the Governance Group (non-exhaustive):

- Amsterdam: PV advent calendar project exploring the solar panel implementation potential on rooftops in the city
- Barcelona: Datacity pilot on energy communities involving public and private sector data
- Florence: smart city control room, a cooperative model for managing the city and sharing data (incl. data from energy utilities)
- Rennes: B2G data sharing and local mapping of energy consumption (RUDI project)
- Porto: Asprela + Sustentável project which aims to create Porto's first energy community
- Zaragoza: Tokenisation of energy reduction / Positive Energy District



7 Core elements of multi-stakeholder governance scheme

7.1 Overview

1. Definition of data space for smart and sustainable cities and communities (in collaboration with the Data Space Support Centre)
2. Why create a data space for smart and sustainable cities and communities (benefits, value proposal, common purpose)
3. Map of data ecosystem stakeholders and users

7.2 Code of conduct

4. Roles & responsibilities
E.g., data users, producers, intermediaries, stewards, etc
5. Business models
E.g., types of agreements/procurement, partnerships, product ownership, funding, sustainability, accountability, monitoring, etc
6. Trust and Identity management
E.g., Data access rights
7. Legal frameworks and overarching principles
E.g., GDPR, data minimisation, privacy by design, NDA

7.3 Tools

8. Data management standards/ specifications (incl. security, interoperability, quality assurance, data structure, data models) (in collaboration with WP3/4)
9. Checklist/ practical recommendations to set governance guidelines for data space



8 Activities & Timeline

Date	Stakeholders	Type of activities	Objectives	Structure
22 Nov 2022	Governance Group	Group meeting	Establishment of Governance Group, the workplan and scope use-cases	<ul style="list-style-type: none"> • Welcome & Introductions • Background info about the project • Draft work plan and ways of working • Scope use-cases
12 Dec 2022	Governance Group	Group meeting	Agreed workplan & Identifying use-cases	<ul style="list-style-type: none"> • Welcome & Introductions • Review workplan (to be circulated in advance) and how to contribute • Tour de table on emerging issues related to multi-stakeholder data governance • Scope use-cases
Dec-May	Coordinator (collaboration with other WPs/ DSSC)	Desk research	Capturing existing knowledge and identifying relevant projects and stakeholders	<ul style="list-style-type: none"> • Landscape overview of (local) data ecosystems and their main representatives, considering especially European projects and their deliverables, existing sectoral data space initiatives as well as those under development under the DEP Programme • Identify document reviews, deliverables, and recommendations from pilots and European projects on data ecosystems and data sharing • Identify conditions and non-regulatory measures related to access, sharing, processing, and using data in data ecosystems, such as common data exchange and business models, standard terms of use and corresponding contract clauses and template agreements for multi-stakeholder engagement • Review applicable European laws on data sharing, management, ownership, protection, privacy, and interoperability



Jan – May 2023	Experts	Interviews	Capturing existing knowledge to feed into discussion	<ul style="list-style-type: none"> • Identify experts in issues related to data governance (e.g., social-ethics, technical-ethics, B2G data sharing, etc.) • Feedback to governance group • Feed into defining a common language for DS4SSCC
Jan - Feb 2023	Through partners' networks/ supporters of the project (coordinated by WP5)	Survey	Mapping local data ecosystems/ stakeholders.	<ul style="list-style-type: none"> • Capture information about local data stakeholders (types of partners, datasets) • Capture application domains • Capture information about governance frameworks used/ data sharing & management mechanisms • Capture information about data quality standards used
Jan 2023	Section of Governance Group interested in use-case 1	Workshop Use-case 1	Capturing learning	<ul style="list-style-type: none"> • Share experience and learnings related to multi-stakeholder governance on use-case as starting points • Identify the types of stakeholders in the ecosystem and user mapping • Challenges, experiences, and solutions deployed by each city (e.g., definition roles & responsibilities for data exchange, partnerships, data business models, legal aspects) • Collect and clustering learning in categories against predefined structure of the governance scheme on a collaborative board (this will be kept and updated throughout)
Feb 2023	Section of Governance Group interested in use-case 1	Workshop Use-case 1	Reflecting on learning	<ul style="list-style-type: none"> • Identify key roles & responsibility to ensure functioning local data ecosystem in terms of multi-stakeholder governance • Discuss business models and access rights against user map produced in previous workshop • Outline key insights related to governance from discussion of use-case



End Feb 2023	Governance Group	Meeting	Validation	Presentation and feedback from workshops on use-case 1 (i.e. emerging themes against structure governance scheme, best practices)
End Feb 2023	Stakeholder Forum (including governance group and supply-side partners)	tbc	Validation	Presentation and feedback from workshops on use-case 1
End Feb 2023	Other WPS	Meeting	Validation	<ul style="list-style-type: none"> • Share work-in-progress for each section of multi data governance scheme (roles & responsibilities, legal aspects, data quality assurance tools, etc.) with other work packages to ensure alignment • Map against building blocks (WP3) and priority datasets (WP4)
March 2023	Section of Governance Group interested in use-case 2	Workshop Use-case 2	Capturing learning	See structure Workshop Use-Case 1 above
April 2023	Section of Governance Group interested in use-case 2	Workshop Use-case 2	Reflecting on learning	See structure Workshop Use-Case 1 above
End April 2023	Governance Group	Meeting	Validation	Presentation and feedback from workshops on use-case 2
End April 2023	Other WPS	Meeting	Validation	<ul style="list-style-type: none"> • Share work-in-progress with other work packages to ensure alignment • Map against building blocks (WP3) and priority datasets (WP4)
End April 2023	Stakeholder Forum (including governance group and supply-side partners)	tbc	Validation	Presentation of Work-in-progress/ insights from the two use-cases for feedback
May 2023	Governance Group	Workshop 5	Co-development of data governance scheme	<ul style="list-style-type: none"> • Review together the collaborative board • Guided discussion on roles and responsibilities for multiple stakeholder data governance scheme drawing on previous workshops



				<ul style="list-style-type: none"> Review possible business models / data rights
May 2023	Coordinator	Working document	Co-development of data governance scheme	First draft of data governance scheme drawing on all workshops
May / June 2023	Governance Group	Homework/ one-to- one meeting	Co-development of data governance scheme	Input/feedback on data governance scheme (either directly on doc or via one-to-one meeting)
June 2023	Governance Group	Meeting	Validation	Presentation draft governance scheme for feedback
June 2023	Governance Group	Workshop 6 Half-day session in FIWARE Summit in Vienna (tbc)	Co-development of data governance scheme	Guided discussion on data governance scheme (what is missing, what to develop, etc.)
June 2023	Other WPS	Meeting	Validation	Incorporation into project blueprint
July 2023	Experts	tbc	Legal validation	Presentation of data governance scheme for legal feedback/validation
Sept 2023	Core/ validation groups/ Stakeholder forum	Meeting	Final validation	Final validation of data governance scheme



About Data Space for Smart and Sustainable Cities and Communities (DS4SSCC)

Data is a central aspect of the twin green and digital transformation, and European cities, regions, towns, and rural areas play a vital role in safely leveraging its potential. This preparatory action for a Data Space for Sustainable and Smart Cities and Communities (DS4SSCC) provides a coordinated starting point for public, private, and individual stakeholders to contribute and use data, aligned with European values and policies.

This preparatory action emphasises the sustainability aspect – green, social, and economic – and the diversity of communities, and aims to:

- Develop a multi-stakeholder data governance scheme by bringing together European cities and their local stakeholders ('quadruple helix') to collaborate on use cases relevant to Green Deal objectives through operational local data governance core group”.
- Create a blueprint for the European DS4SSCC by co-creating with stakeholders a methodology for setting it up, from the vision of a full-fledged pan-EU DS4SSCC, not only from a technical perspective but also giving operational guidance e.g., for procurement.
- Bring an agreed set of priority datasets into conformity with the new blueprint by delivering a catalogue of domains, use cases and related data sets for DS4SSCC.
- Develop a roadmap and action plan towards a mature, connected pan-EU DS4SSCC.
- Shape and implement the data space on the local, regional, national and EU levels, taking into account their different levels of maturity, will be an exercise in co-creation with the stakeholder forum.

Documentation will include recommended actions for standardisation, business models and strategies for running data spaces, and a vision for the federation of platforms. Building on core European networks of cities and communities that have championed the Living-in.EU movement, DS4SSCC is a timely, ambitious, and essential contribution towards the sustainability goals of European citizens.

Our consortium:

 OPEN & AGILE SMART CITIES	 EURO CITIES	 European Network of Living Labs
 FIWARE FOUNDATION	 AUSTRIAN INSTITUTE OF TECHNOLOGY	 Gospodarska zbornica Slovenije Chamber of Commerce and Industry of Slovenia