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Deliverable 7.1

Project Handbook



Net4Cities Consortium



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Executive Summary

This Project Handbook serves as a guide for the execution of the Horizon Europe project Net4Cities, Grant No. 101138405. While many rules and regulations for the proper management of the project are outlined in the Grant Agreement (GrA) and Consortium Agreement (CA), others are not clearly specified. In such cases, the Project Handbook serves to fill in these gaps with the required detail. All project Beneficiaries and Associated Partners are expected to follow the practices outlined in this handbook. In this document are descriptions of key elements of the GrA and CA that are vital to the proper management of the project. In addition, elements of project management, communication, project structure, reporting, and D/E/C are described.

There are several key structural bodies in the Net4Cities project. These include the Granting Authority (CINEA), the Coordinator (GFZ-RIFS), the General Assembly, the Steering Committee, and the External Expert Advisory Boards (Stakeholder and Scientific). This document reiterates regulations for how these bodies meet, how their composition is determined, and how they interact with one another, as well as their respective roles in the project.

Clearly outlined in this Project Handbook are key regulations for Quality Management (QM) that will be expected to be met. This includes details of quality planning, quality control, quality assurance, and risk management. This project will establish various quality management logs, e.g. for deliverables, milestones, and risks, that must be regularly maintained by WP and Task Leads. The position of Quality Manager is also established in this Handbook, which will serve to enforce aspects of QM outlined in this document.

Also defined in this document are methods of communication that will be used in this project. These primarily include email lists, which will be established for various structural bodies of the Consortium, including for individual Work Packages. The file-sharing platform Sync&Share, provided by the HIFIS – Helmholtz Federated IT Services, will be used in this project. It is GDPR compliant and can be used by all members of the Consortium according to the Acceptable Use Policy for editing, sharing, and storage of Net4Cities-related materials. Other key aspects of communication, including the creation of a Net4Cities website, the communication with external partners and projects, and the importance of following EU Visibility Guidelines are also outlined.

Key elements of official reporting are also documented in the Project Handbook, including the establishment of timelines for finalizing and uploading deliverables, creation of technical and financial periodic reports, and the reporting of milestones. Finally, elements of Dissemination, Exploitation, and Communication (D/E/C) are described. Expectations and regulations are outlined for the publication of peer-reviewed scientific articles, including their open-access requirements and internal deadlines for their dissemination and publication.

This document will be revised as necessary as the project progresses. All revisions will be documented and reviewed by the Coordinator.

1. About the Project Handbook

The Project Handbook documents the selected approach for implementing the project goals. It also highlights the key controlling processes to be used, the project policies and rules, and the overall management approach.

The Project Handbook is an important document since it defines the outputs of the planning (i.e. it defines the plans necessary for managing the project as well as to what extent they should be customize or/and tailored).

The Project Handbook becomes the basis for managing the project throughout its lifecycle and is an important point of reference for all project members. The Project Handbook will be kept up to date throughout the duration of the project. During the Closing Phase, the Project Handbook becomes an important point of reference for the Project-End Review Meeting, and should be properly closed and archived.

1.1 Precedence

The general principles for the project execution are defined in the EC Grant Agreement (GrA), the Description of the action and the Consortium Agreement (CA). The Project Handbook does not replace any of these established agreements, nor does it replace any of the EC guidelines for project implementation and documentation.

Where there are any inconsistencies between these documents, the following order of precedence should be applied:

1. EC Grant Agreement including Description of the Action, also referred to as the Grant Agreement (GrA)
2. Consortium Agreement (CA)
3. Project Handbook (present document)

2. Project Overview

Table 1: General details regarding the Net4Cities Project.

Title	Real-Time Monitoring Networks and Transport Emissions for Tailored Zero Pollution Action Plans in European Cities
Acronym	Net4Cities
Grant Agreement No.	101138405
Funding Programme	Horizon Europe – HORIZON-CL5-2023-D5-01
Instrument	Innovation Action
Project Start Date	01.01.2024
Project Duration	48 Months

2.1 Project Summary

The transport sector is a major contributor to environmental degradation, including air and noise pollution that have negative effects to ecosystems and human health. This is particularly critical in urban areas, where the confluence of transport emissions and high population density result in adverse health impacts and substantial economic burden. The upcoming changes in the transport sector will be critical to reach targets set by the EU Green Deal. The Zero Pollution Action plans are essential tools to reduce pollution at many different levels.

Through co-creation with stakeholders Net4Cities will facilitate the realization of the zero-pollution vision by 2050. The backbone of Net4Cities is this transdisciplinary approach in which the consortium members will engage with the partner cities, including port and airport authorities, to jointly produce new knowledge, and ensure relevance, uptake, and maximize transferability and exploitation. During the project, air and noise pollution monitoring infrastructure will be advanced and expanded in 11 European cities, including transportation hubs such airports and ports, to conform with upcoming directives and provide data for health impact assessments.

The activities are designed to have long-lasting impact through both mid-, and long-term pathways, providing a roadmap for greater uptake in European cities by offering tailored, transferrable, evidence-based support for implementing effective management strategies for reducing transport-related emissions. The main project results will be consolidated in the Net4Cities Studio which will provide (1) a web-based interface with real-time maps and information to raise awareness, and (2) a support tool for policy decisions that will provide guidance for operationalization and recommendations of solutions that consider innovative technologies such as dynamic traffic management systems and inclusion of nature-based solutions in overarching policy designs.

2.2 Critical Success Factors

Successful project management in Net4Cities will be determined in part by several critical success factors. These include:

1. Continuous stakeholder engagement for the duration of the project.
2. Transparent communication within the Net4Cities consortium and with external partners.
3. Integration of Sync&Share file-sharing platform and communication tools into everyday workflows.
4. Effective leadership of the Coordinator in collaboration with Work Package and Task Leads.
5. Clear definition of project goals and establishment of roles and responsibilities.
6. Effective team work and collaboration.

2.3 Project Stakeholders

Primary stakeholders in the Net4Cities project include the EC, partner city administrations, port and airport authorities, local organizations and citizens in each city, and external stakeholders such as other European cities or policymakers from various agencies interested in the results and products of the Net4Cities project.

A Stakeholder Matrix will be developed as the project proceeds forward.

The targeted project stakeholders are as follows:

- Authorities in partner cities (those involved in the project), including ports, and airports
- Authorities in other European cities (those not involved in the project), including ports and airports
- Scientific community
- Policy- and decision-makers, as well as regulatory bodies
- NGOs and citizens of partner cities
- Industry

3. Legal Aspects

3.1 Grant Agreement

The Grant Agreement forms the legal basis for the implementation of the project. It outlines all rights, obligations, terms, and conditions for the Net4Cities project to which all Participants must adhere to. This includes the Coordinator, Beneficiaries, Affiliated Entities, and Associated Partners.

It consists of:

- Preamble
- Terms and Conditions (including Data Sheet)
- Chapter 1 – General
- Chapter 2 – Action
- Chapter 3 – Grant
- Chapter 4 – Grant Implementation
- Chapter 5 – Consequences of Non-Compliance
- Chapter 6 – Final Provisions
- Annex 1 – Description of the action
- Annex 2 – Estimated budget for the action
- Annex 2a – Additional information on unit costs and contributions
- Annex 3 – Accession forms
- Annex 4 – Model for the financial statements
- Annex 5 – Specific rules

By signing the Accession Forms to the GrA, all Participants have become individual contract partners with the EC, even though the core contract is arranged between the EC and the Project Coordinator (GFZ-RIFS). The GrA must be kept by all partners in the Consortium and provided upon request, such as in the case of an audit.

The final Grant Agreement can be found in the “Admin” folder of the Net4Cities shared folder on the Sync&Share file-sharing platform.

3.2 Consortium Agreement

Whereas the GrA is signed between the EC and the partners, the CA is signed between the Participants themselves, including associated partners. It arranges in more detail the provisions of the GrA, such as but not limited to: financial issues, payments, management, decision making, conflict resolution, intellectual property rights, and liability.

The CA must also be kept by the partners and must be shown in case of audits.

The final CA can be found in the “Admin” folder of the Net4Cities shared folder on the Sync&Share file-sharing platform.

3.3 Amendments

There may be circumstances during the course of the project that necessitate an amendment of the Grant Agreement. This could be:

- Change of legal entity,
- Changes to the budget,
- Changes in the description of the action,
- Change of partner(s).

An amendment request may be submitted to the EC after a majority decision by the General Assembly (GA) following voting rules outlined in 6.3.4 of the CA. Once the amendment has been approved, the

Project Coordinator shall distribute the revised version of the GrA to all partners. In doing so, old versions of the GrA are replaced.

4. Project Structure

4.1 Project Organisational Hierarchy

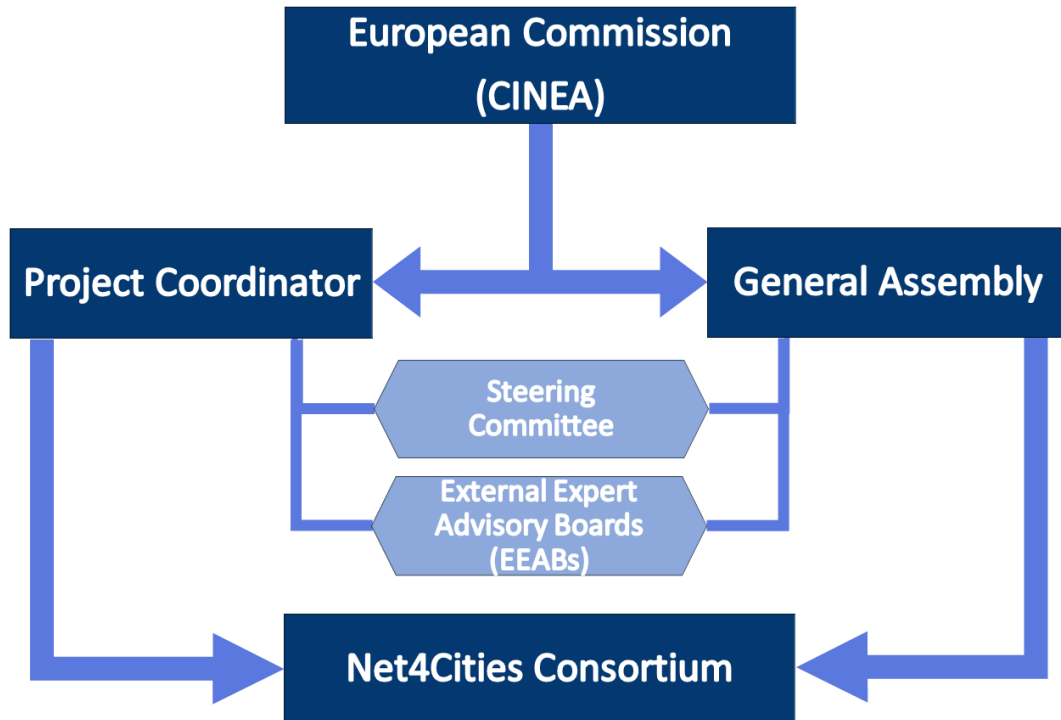


Figure 1. A basic overview of the project organisational structure and hierarchy.

4.2 Roles

4.2.1 Coordinator

The **Coordinator** is the legal entity acting as the intermediary between the Parties and the Granting Authority. The Coordinator shall, in addition to its responsibilities as a Party, perform the tasks assigned to it as described in the GrA and CA.

The Net4Cities project is coordinated by the **Helmholtz Centre Potsdam – Deutsches Geoforschungszentrum (GFZ)** and acts as the intermediary between the European Commission (including the EC Project Officer) and all partners in the project. While administrative and financial coordination occurs through the GFZ, technical coordination is managed by the **Research Institute for Sustainability – Helmholtz Centre Potsdam (RIFS)**, which is administratively associated with the GFZ. In this project, the primary coordinator is Dr. Erika von Schneidemesser. In this document, the coordinating institution will be referred to as GFZ-RIFS.

4.2.2 General Assembly

The **General Assembly (GA)** is the decision-making body of the consortium. The GA shall consist of one representative of each Party. Each Party shall be deemed to be duly authorised to deliberate, negotiate and decide on all matters listed in Section 6.3.7 of the Consortium Agreement.

The **Coordinator** shall chair all meetings of the GA, unless decided otherwise by the GA. The Parties agree to abide by all decisions of the GA. The Coordinator shall produce minutes of each meeting which

shall be the formal record of all decisions taken. They shall send draft minutes to all Parties within 10 calendar days of the meeting. The Coordinator shall convene ordinary meetings of the GA **at least once every six months, or as needed**, and shall also convene extraordinary meetings at any time upon written request of any Party. The Coordinator shall follow the procedures for preparing meetings as established in Section 6.3.2 of the Consortium Agreement. It is anticipated that these meetings will be held primarily online, but hybrid or in-person meetings are also encouraged, where possible.

The GA shall not deliberate and decide validly in meetings unless two-thirds (2/3) of its Parties are present or represented (quorum). **Associated Partners** are excluded from voting on and vetoing specific decisions of the GA (CA 6.3.7) and in such cases are not counted towards any respective quorum. Assuming quorum is met, decisions shall be taken by a majority of two-thirds (2/3) of the votes cast.

The GA will be primarily responsible for:

- Project management (e.g. quality management, risk management),
- Finances and reporting,
- Administrative items,
- Harmonization between WPs, cities, and stakeholders.

A table containing all members of the GA is available in the Sync&Share under:

“Net4Cities/Admin/Project Overview”

4.2.3 Steering Committee

The **Steering Committee (SC)** is an informal advisory body to the Coordinator. The SC is composed of the Coordinator, the WP leaders and key task leaders, as outlined in Task 7.2 of the GrA. The SC members are invited by the Coordinator and reflect the breadth of disciplinary expertise represented in the Consortium to ensure smooth integration across topics. It will meet at a minimum **quarterly**, or as needed. It is anticipated that these meetings will be held primarily online, but hybrid or in-person meetings are also encouraged, where possible.

The SC will be primarily responsible for discussing:

- Updates from WP Leads on:
 - o progress in Tasks,
 - o achieving Milestones,
 - o completing Deliverables,
 - o challenges and problems hindering progress.
- Key developments and challenges faced in the project, including major risks
- Providing feedback to the Coordinator on important decisions

A table containing all members of the SC is available in the Sync&Share under:

“Net4Cities/Admin/Project Overview”

4.2.4 Work Package Leaders and Task Leaders

Work Package (WP) Leads are individuals that will be responsible for the implementation and management of their respective work packages, including the coordination of associated deliverables and milestones. Similarly, Task Leads will be responsible for the management of activities at task level, including any work related to the achievement of deliverables and milestones. WP Leads will be responsible for:

- Organizing and moderating WP check-in meetings at regular intervals (at a minimum **quarterly**, but at the discretion of the WP Lead),

- Coordinating actions with the Task Leads,
- Providing general guidelines, interfacing and coordinating work with other work packages or tasks, in particular for delivering results on time that are needed as input for tasks to be performed in other work packages,
- Reporting progress at GA and SC meetings and in management reports,
- Reporting major decisions and changes made to the WP plan to the Project Coordinator in a timely fashion, namely indicating to the Project Coordinator when deadlines are not going to be met or contributions in the work package are of insufficient quality, and discuss procedural and strategic issues in order to take joint decisions to reach the project's objectives.

Specific sub-tasks may be delegated by WP or Task Leads to other individuals involved in the respective WPs and Tasks as needed. Task Leads will assist WP Leads in the planning and management of their respective tasks and will report back on their progress regularly to WP Leads. In turn, WP Leads will report back the overall progress of the WP, including Tasks, at regular intervals to the SC and GA. Deputy WP and deputy Task leads should support and coordinate with the WP and Task leads, so that continuity can be ensured in case of absences or other eventualities.

4.2.5 External Expert Advisory Boards (EEABs)

A **Scientific Advisory Board** and a **Stakeholder Advisory Board** will be established. Both boards are independent from each other. The same rules shall apply to both boards. The EEABs will be appointed and steered by the GA. The EEABs shall assist, inform, reflect, and provide feedback on the coordination, steering, and progress of the project. The Coordinator will ensure that a non-disclosure agreement is executed with each EEAB member.

The Coordinator shall write the minutes of the EEABs meetings and submit them to the GA. The EEAB members shall be allowed to participate in GA meetings upon invitation but do not have any voting rights.

Meetings with the EEABs should be held **at a minimum once every year**. However, these can be called for by either the Coordinator or the GA as needed. This collaboration will further be coordinated under Task 7.3. It is anticipated that these meetings will be held primarily online, but hybrid or in-person meetings are also encouraged, where possible. Lists of the members of the EEABs can be found in the Sync&Share under "Admin/Project Overview."

4.2.6 Partner Cities

There are 11 Partner Cities to the Net4Cities Consortium. These cities generally have pre-existing connections to Parties of the Net4Cities Consortium and indicated initial support for the project during the proposal phase. These Partner Cities will be key stakeholders in the project and will be included in the co-creative process throughout its duration. For each city, specific Partner Organizations will act as primary liaisons for communication and engagement (Table 4). The responsibility for continuous engagement lies with the respective Partners, but will be managed and harmonized by the Coordinator through regular planning and reflection meetings as a part of WP1.

Table 4. List of Partner Cities and responsible Partners in the Net4Cities Consortium.

City	Main Point of Contact
Antwerp	VITO/VMM
Barcelona	UAB
Berlin	GFZ-RIFS
Düsseldorf	FZJ
Heraklion	UOC
Limassol	Cyl
Oslo	NILU
Rotterdam	VITO
Southampton	EarthSense
Tbilisi	TSU
Zürich	ZHAW

5. Project Management

5.1 Quality Management

Within Net4Cities the Quality Management will be implemented comprising the usual three pillars of quality management: Quality Planning, Assurance and Control. The Quality Management reflects a fluid and continuous process to ensure a high quality of project implementation and identify opportunities for improvement. The quality management will be tracked through progress logs as described below. This follows the guidelines of a plan-do-check-act (PDCA) cycle, which is at the basis of the quality management standards according to ISO 9001. The Coordinator is responsible for the implementation of the Quality Management Process, which is further detailed, in the following sections.

The Coordinator will designate a Quality Manager for the Net4Cities project. The role of the Quality Manager will be to ensure that the expectations and processes for quality management outlined below are being met. This can include discussion of quality management related items at meetings of the GA as well as bilateral discussions with Parties.

5.1.1 Quality Planning

The GANTT chart included in the proposal sets the foundation for the time-related quality plan of Net4Cities. This includes not only the defined work packages and tasks, but also the timeline for deliverables and milestones. As described in Section 4, regular meetings of the GA and SC are a cornerstone for the **early identification of potential problems** that could arise in the preparation of tasks and deliverables. It is expected that all members of the SC take responsibility for detecting issues that affect the project's quality. Such issues should be discussed and addressed in meetings of the SC and/or GA, as appropriate.

5.1.2 Quality Assurance

For quality assurance with respect to tasks, deliverables, milestones, and risks, a Quality Management (QM) Log (an Excel file) has been created and is available in the Sync&Share platform under:

"Net4Cities/Admin/Project Overview/Project Timeline Net4Cities with Logs.xlsx"

This QM Log will support the effective monitoring of all deliverables and milestones, including their preparation and review status. Additionally, it gives an overview of the general progress of Net4Cities and **provides the basis for audit reports and exchange among the consortium partners on these matters**. The log also defines necessary steps and corrective actions if the quality standard is not going to be or is not met. This is particularly important with respect to identified risks. While the list of deliverables and milestones will not change in the project as these have been pre-determined, the list of potential risks should be **continuously maintained and updated** as new potential risks arise. The progress of work will be additionally monitored against the defined milestones, objectives and relevant Key Progress Indicators (KPIs) defined in the proposal of Net4Cities. As part of the KPI tracking, logs for e.g., publications and events, will be kept (see further detail in section 8).

Another key aspect of quality assurance will be the regular consultation with EEABs (see Section 4) throughout the project. These meetings will focus on receiving feedback and criticism on project work and will serve to improve quality of results and project management. Consultation with EEABs will also be undertaken on an as-needed basis, when there is urgent need for feedback.

5.1.3 Quality Control

As described in Section 7, project deliverables will be subject to a process based on the dual-control principle before their submission and eventual publication. This procedure ensures the quality of the content and increases transparency. In order to guarantee the coordinated dual control of all deliverables and tasks, two individuals (one responsible and one accountable) will be assigned in the quality management log. A main responsibility of the Quality Manager will be to manage these processes and the allocation of roles.

In order to ensure that QM is appropriately implemented across the Consortium and that it meets the project's requirements, the Project Coordinator will periodically review the QM logs and decide whether they should be adjusted. The following will be considered when reviewing the QM:

- The results and feedback from the European Commission's reviews,
- The quality of the project's deliverables,
- The corrective actions of the Coordinator in the deliverable approval process,
- The up-to-date state of the list of internal reviewers,
- The status and level of resources used for respective WPs, Tasks and Deliverables.

Any major changes to the QM as an outcome of decisions for adjustment will be implemented by the Quality Manager.

5.1.4 Internal Quality Audits

Under special circumstances or when a problem of a supreme significance arises, the Consortium can initiate an internal quality audit on the performance of a Partner where the problem or a set of issues occur. The following persons shall be involved in a quality audit:

- The Coordinator,
- Two consortium representatives selected from the Consortium Partners with knowledge and expertise relevant to the problem in question, but without stake in the outcome of the issue.

The proceedings and the findings of an internal quality audit will be documented by the Coordinator and will have to be approved by the two representatives and the Coordinator. The results of the internal quality audit will be distributed to the Partners and decisions or corrective actions will be put forward for approval by the GA. In case the outcome or result of the audit contains sensitive information of one or more Partners, the distribution of the results of any proceedings will be limited to a particular WP where an issue has arisen or to a (set) of the Consortium Partners.

5.2 Financing

The Coordinator is responsible for the distribution of financial contributions from the funding authority (EC) and will do so as outlined in Section 7 of the CA. Payments to Beneficiaries will be made by the Coordinator in alignment with the stipulations set out in Section 7.2 of the CA, as well as Article 22 and Article 7 of the GrA.

The following is copied directly from the text Section 7.2 of the CA and is reiterated here to reinforce the roles and responsibilities of the Coordinator and Beneficiaries in distributing and receiving financial contributions. This does not apply to Associated Partners.

- The Coordinator checks and approves the achievement of Milestones and the submission of Deliverables. If, at the time of the Project Progress Report and / or the Interim Report, a Party has not achieved a Milestone or its contribution to one or more Deliverables is missing, the Coordinator can decide to withhold the payment of this Party. The Party shall receive this payment at the time of the next interim or final payment, if it reaches the Milestones or contributes to the Deliverable until that time.
- If the Party fails to reach the Milestones or Deliverables, the Coordinator will propose further actions (e.g. transfer of the tasks and associated budget to other parties), as appropriate and necessary due to Grant Agreement obligations and in alignment with the European Commission. In addition, the GA will decide on these further actions. Exempt from this rule are Milestones which have been shifted in time in agreement with the Coordinator and Milestones or Deliverables which have been shifted in time by an amendment of the Grant Agreement.
- The Coordinator is entitled to withhold any payments due to a Beneficiary identified by the GA to be in breach of its obligations under this Consortium Agreement or the Grant Agreement or to a Beneficiary which has not yet signed this Consortium Agreement.

As outlined in the CA, the following types of payments are foreseen:

1. Pre-financing at the start of the project:
 - Pre-financing funds remain EC property until they are 'cleared' against eligible costs accepted by the EC.
 - The Coordinator receives all funds and distributes 70% of the pre-financing to all Beneficiaries. The final 30% are released in project month 15, provided that all Deliverables and Milestones due until the end of project month 12 are submitted or achieved. The basis for this is the Project Progress Report to be submitted to the coordinator until the end of month 13.
2. Interim payment following the approval of the periodic reports:
 - After approval of the formal periodic reports an interim payment will be issued.
 - First Periodic Report: 2024 January (M01) – 2025 June (M18)
 - Second Periodic Report: 2025 July (M19) – 2026 Dec (M36)
 - Third Periodic Report: 2027 January (M37) – 2027 December (M48)
3. Final payment following the approval of the final report:
 - The final payment will be transferred after the approval of the final report and consists of the difference between the calculated EC contribution (on the basis of the eligible costs) minus the amounts already paid.

5.3 Risk Management

This section sets out all the processes necessary to implement a coordinated risk management approach, as well as the respective contingency plans that will be carried out within the project management structures of WP7.

A first list of possible risks to be expected in the course of the project are documented in the List of Critical Risks of Part B of the Grant Agreement, and will be updated as the project progresses. Most of these risks refer to e.g. potential loss of project-relevant actors and personnel, changes to structural conditions, or to dependencies such as budget availability and changes in political support. These are generally categorized under Coordination, Management, Implementation, and Technical Risks.

The core of the risk management approach of Net4Cities is two-fold:

1. to continuously observe whether the advancement of the WPs and their respective deliverables is affected by any of the identified risk factors, and
2. to make sure that the mitigation measures identified in anticipation of those risks are actually taken in a proper and timely matter by WP or Task Leads and deliverable owners. In short, those measures include:
 - monitoring the progress of deliverables,
 - implementing task co-leaderships,
 - peer-reviewing deliverables,
 - holding extra virtual meetings (in case of major issues),
 - finding fall-back for stakeholders participating in the project progression.

Some of these measures have already been put in place, as outlined in this document (e.g. assignment of WP and Task leads and deputy leads – Section 4.2.4.)

Timely awareness of and reaction to potential risks will be crucial to effective risk management. In practical terms, these quality and risk management actions will be taken at the regular meetings of the Net4Cities GA and SC, where a **dedicated item** is foreseen in the agenda.

A project **Risk Log** will be created (template presented below) serving as a tool for continuous documentation of expected and emerging risks, i.e. those that might arise in the course of the project. This log will be updated as necessary throughout the project. It contains the typical categorisation of risks according to severity and probability and describes all planned mitigation measures. It also captures recognised effects and potential adjustments of the risk and mitigation measures or even other processes of the project if required. The log will be organised in the form of a Microsoft Excel Table that is accessible on the Sync&Share Net4Cities shared folder. **This log is to be updated by WP leaders before every GA and SC meeting with the support of the Task leaders.**

The Risk Log adds visibility, accountability, and transparency to the risk management process and all WP leaders in close collaboration with Task leaders are responsible for closely monitoring the already identified risks and for identifying further risks along with their level of impact. Likewise, they are also responsible for implementing the mitigation strategies as defined in the risk log. All high and very-high risks were communicated to and approved by the European Commission at the start of the project. For risks with medium-to-high impact, mitigation measures will be developed by the quality manager. These will be discussed with the SC and GA and the low impact ones will be controlled by WP and Task leaders to ensure that they are promptly identified and that necessary counter-measures are taken.

Table 5. Template for Risk Log for a specific risk. Suggested content and definitions are provided for each descriptor of the risk.

Risk Identification and Description	
ID	The risk identifier.
Category	Risk category related to the area affected by the risk (e.g. business, IT, People & organisation, external or legal).
Title	A short title for the risk.
Description	A description of the risk, its causes, the kinds of problems that it could result in (potential effects), and risk dependencies.
Status	The risk status can be any of the following: Not affected: The work package is not affected by the respective risk. Not yet materialized: A possible risk was taken into account but has not yet materialized. In case of emergence, suitable mitigation measures are predefined. At risk: The risk has emerged and its impact has not yet been limited/eliminated by the necessary mitigation measures. Closed: The risk is not present (anymore) because mitigation measures were adopted.
Identification date	The date on which the risk was identified.
Risk Assessment	
Likelihood (L)	A numerical value denoting the estimate of the probability that the risk will occur. The possible values are: 5=Very high, 4=High, 3=Medium, 2=Low, 1=Very low
Impact (I)	A numerical value denoting the severity of the risk's impact (should it occur). The possible values are (negative risks): -5=Very high, -4=High, -3=Medium, -2=Low, -1=Very low Note: use same scale but positive values for positive risks (opportunities).
Risk Level (L*I)	The risk level is the product of the likelihood and impact (RL=L*I).
Risk owner	The person accountable for managing and monitoring the risk.
Escalation	Whether or not the risk is to be escalated to the Directing or Steering Layers (Yes or No).
Risk Response – Contingency Plan	
Risk response Strategy	The possible strategies to deal with the identified (negative) risks are: - Avoid: risk avoidance, modifying the project or project plan to eliminate the conditions or activities that introduce the risk. - Reduce: risk mitigation or reduction through the proactive implementation of risk reduction activities. - Accept: acceptance of the risk. In this case, contingency plans should be defined in case the risk occurs (active acceptance). - Transfer/Share: transfer or share the risk with other entities, e.g. through insurance, subcontracting etc.
Action details (effort & responsible)	Description of the mitigation action(s), including its objective, scope, deliverables, and the person responsible and estimated effort needed.
Target date	The date on which the action is expected to be implemented.
Traceability/Comments	The ID(s) of the tasks (in the Project Work Plan) that implement the risk response actions, and/or the IDs of related changes, issues or decisions (log entries). Also include any additional information/comments related to the risk.

5.4 Management of Gender and Discrimination

Net4Cities will take all measures necessary to achieve equal opportunities between men and women in the project. As outlined in the GrA:

The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action and, where applicable, in line with the gender equality plan. They must aim, to the extent possible, for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level.

Furthermore, they will aim, to the extent possible, for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level. Net4Cities will promote and encourage the active participation of women and gender nonconforming individuals in the scientific work as well as in decision making groups. Furthermore, Net4Cities will actively prevent discrimination in all project activities – including discrimination based on age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation. Finally, the use of gender-free language in reports and other communications will be used.

6. Internal and External Communication

The Net4Cities project will make use of a variety of different tools to support communication both internally amongst partners in the Consortium, and externally with stakeholders, advisory boards, and other EU funded and/or related projects.

Internal communication is considered communication within the Net4Cities Consortium. External communication is considered communication with all persons or entities not a part of the Consortium (e.g. the Project Officer, stakeholders).

6.1 Email Lists

To simplify internal email communication amongst partners, a variety of email lists will be used. These will always contain a unique keyword in the subject title for quick identification and for automatic sorting of emails into folders. For example:

Subject: [net4cities_all] Kick-Off Meeting Agenda

The Project Coordinator will be a part of all lists to stay up-to-date on all internal communication. The coordinating team will take responsibility for moderating these lists, but will also give moderator rights to each WP leader for WP-specific email lists.

A table containing all email lists, with their purpose, members, and moderators included, can be found in the Sync&Share platform.

6.2 Sync&Share File-sharing Platform

For the Net4Cities project, a file-sharing platform was organized through HIFIS – Helmholtz Federated IT Services. This platform is hosted by the Deutsches Elektronen-Synchrotron (DESY), a centre of the Helmholtz Association. Access is provided for all partners through the Net4Cities Virtual Organisation (VO), for which all consortium members individually receive access. This provides them with the ability to log-in to the Helmholtz Authentication and Authorisation Infrastructure (AAI) and access the Sync&Share platform. All members of the Consortium shall receive direct access to the VO and the platform.

A shared folder “Net4Cities” has been created in the Sync&Share platform that all members of the Net4Cities VO will have access to. In addition, each individual can use the platform for storage of files relevant to the Net4Cities project that do not necessarily need to be saved in the shared folder. This usage is however restricted by the terms of the Acceptable Use Policy (AUP). The AUP can be found in the “Admin” folder of the shared Net4Cities folder.

No storage limit is currently envisioned for the shared folder or for individual users.

External stakeholders and partners may **only** receive read/write access to specific documents as necessary.

6.3 Project Website

The project website primarily serves a role in external communication. It can be found at <https://www.net4cities.eu/>. Contained within the website will be information about the project, its structure and partners, its objectives and results, and any events and press releases.

6.4 EU Visibility Requirements

All partners in the Net4Cities consortium are required to indicate at all times in any form of external communication that the project has received funding from the European Union. To do so correctly, the EU emblem must be displayed alongside the phrase “Funded by the European Union”. Several images that display the emblem and this phrase are available in the shared Net4Cities folder under “Admin”. In addition, the project logo, also available in the shared folder, must be displayed.

It is also recommended for documents, deliverables, reports, press releases, and presentations that the specific funding programme and project number be included. It should be mentioned using this acknowledgement (e.g. in documents, deliverables, and press releases):

“This project has received funding from the European Union’s Horizon Europe funding programme under Grant Agreement No. 101138405 (Net4Cities).”

The GrA number should also be mentioned in the margins of e.g. presentations.

This is as follows:

“HORIZON EUROPE PROGRAMME – HORIZON-CL5-2023-D5-01 – Project 101138405 — Net4Cities”

Furthermore, in any dissemination of project results the following statement must be included:

"Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them."

6.5 Communication with other Projects (Horizon Europe)

The Horizon Europe programme funded two projects under the HORIZON-CL5-2023-D5-01 funding call. One is Net4Cities and the other is entitled MI-TRAP. Given the interconnectedness of the topic and the two projects, it is expected that there will be collaboration between these projects. The Coordinator will serve as the first point of contact. WP and Task leaders are also encouraged to communicate and collaborate with partners from these projects. The Coordinator must be informed of all such collaborations.

Other projects (funded by the EC or other sources) that have either been completed, are underway, or are beginning that have relevant connections to Net4Cities will be kept in a list stored on the Sync&Share file-sharing platform. A shorter indicative list is also included here and will be updated as the project proceeds.

Table 6. Indicative subset of relevant projects that have direct linkages to the Net4Cities project.

Project Abbreviation	Relevance to Net4Cities
MI-TRAP	A sister project to Net4Cities in the same funding Call that seeks to achieve similar objectives.
RI-URBANS	Development of enhanced AQ monitoring observations for UFP and PM to support AQ policy assessments. Net4Cities will build on the results of RIURBANS, and implement and validate these to establish an EU-wide network.
AQUILA	Air Quality Reference Laboratories is a network of National Reference Laboratories involved in the implementation of existing EU air policy and advising harmonization of measurements and QA/QC. There will be information exchange with Net4Cities on best practices and how to overcome potential bottlenecks for monitoring of emerging pollutants.
ACTRIS	Pan-European research infrastructure producing high-quality, long-term, open access atmospheric data. Implements QA/QC, SOP for emerging pollutant instrumentation useful for Net4Cities monitoring activities.
PAUL-ICOS	European-wide GHG research infrastructure. There will be information exchange with Net4Cities as new data come online in this project.

7. Reporting

7.1 Reporting of Deliverables

WP Leads will be responsible for coordinating the execution of all deliverables associated to their WPs, though the ultimate responsibility lies with the Partners assigned to them. These responsibilities are made clear in Part B of the GrA. WP Leads will determine alongside Task Leads which individuals will be responsible for producing the deliverables, including the creation and editing of draft versions, as well as their finalization. WP Leads will be accountable for the timely submission of the deliverables, as well as for their quality, even if they delegate the work to other members of the Consortium involved in their WP.

A deliverable template will be made available in the Sync&Share under “Admin/Press and Communications”. All deliverables must use this same template, once available.

The Coordinator must be informed as soon as possible, but no later than 60 days in advance of the deliverable deadline of any expected delays that would hinder timely submission. Any challenges or conflicts among deliverable authors must also be reported as soon as they arise, so that appropriate interventions may be taken.

WP Leads and Task Leads are responsible for updating deliverable logs in accordance with quality management guidelines outlined in Section 5.1 of this handbook. These logs will be stored in the “Admin/Project Overview” folder of the Sync&Share.

The reviewers will consider the following aspects during their internal deliverable review:

- The appropriateness of the level of detail of a deliverable,
- Coherence with the Project’s objectives,
- Relevance to the Project’s, stakeholders’, and end-users’ needs,
- Methodological reliability and robustness,
- Quality of results and achievements as well as the overall presentation,
- Formatting, spelling, and layout of the document,
- If the document conforms with fundamental requirements.

Decisions about (co-)authorship, contributor status and acknowledgements for deliverables should be guided by the following rules:

1. Contributors of substantial amounts of text in the draft document will be mentioned as **authors**.
2. Persons providing written comments and text revisions in the draft documents and extensive comments in emails (or other documentation) will be mentioned as **contributors**.
3. Persons contributing to discussions and providing oral comments will be mentioned in a special **acknowledgements** section, detailing the nature of the contribution.

To ensure timely submission of the deliverable, the following timeline for internal review and submission must be followed:

Table 7. Timetable of Deliverable Quality Review Process.

Submit date	Action
By 1.5 months before the deadline	The author discusses with the WP Lead which internal expert will be asked to review the first final draft of the deliverable. Commitment from person this will need to be confirmed.
1 st of the month of deliverable deadline	Deliverable lead sends the first final draft version of the deliverable to the WP Lead, the appointed internal expert and the Coordinator.
1 st of the month – 14 th of the month (2 weeks)	The WP Lead (first reader) as well as the appointed internal expert review the deliverable separately and provide it with comments.
14 th of the month of deliverable deadline	WP Lead and internal expert send their comments to the author.
15 th of the month – 21 st of the month (1 week)	Author addresses all comments and suggestions and updates the deliverable accordingly.
21 st of the month of deliverable deadline	Author sends the second final draft version of the deliverable to the Coordinator as well as to the full consortium for transparency.
22 nd of the month – last working day of the month (~1 week)	The Coordinator does a final check.
Last working day of the month	Project coordinator uploads the final document to the Participant Portal and places a copy on the Sync&Share.

7.2 Reporting of Milestones

Responsibility for implementation of project activities according to the work plan lies with WP Leads. Accordingly, each WP Lead is also responsible for achievement of milestones and ensuring that each of those is formally checked-off once completed in the EU Continuous Reporting Portal. This entails keeping the Milestone Log in the Sync&Share accurate and up-to-date. Any foreseen delays in achieving a milestone must be reported to the Coordinator immediately. The Coordinator will check-in with each WP Lead and Task Lead associated with each milestone 60 days in advance of its due date.

WP Leads are responsible for updating milestone logs in accordance with quality management guidelines outlined in Section 5.1 of this handbook. These logs will be stored in the “Admin/Project Overview” folder of the Sync&Share.

7.3 Periodic Reports

The Coordinator must submit a periodic report within 60 days following the end of each reporting period. Tasks of the Coordinator include:

- Checking that the Continuous Reporting Module is updated in a timely fashion (i.e. before the end of the 60-day window)
- Checking that Financial Statements and Certificates on the Financial Statements (CFS) have been submitted by all participants.
- Conducting quality checks of the technical and financial reports, including ensuring that the report is coherent and that the information in Parts A and B are consistent, and ensuring that the template has been fully completed with no missing Annexes.

Tasks of the Beneficiaries include:

- Submitting Financial Statements and CFS on time (at the latest 30 days before the end of the 60-day window)
- Providing all required information to the Coordinator for the preparation of the Technical Report (at the latest 30 days before the end of the 60-day window)

The periodic report must include the following:

1. ‘Periodic Technical Report’ containing:
 - (1) Part A: information regarding the project in structured tables (these can be retrieved from the grant management system)
 - (2) Part B: the narrative part of the report, in which reports on differences between the current project status and the application are made (e.g. delays, work not implemented, budget challenges, etc.). It must be prepared outside of the Grant Management System using templates that can be downloaded there. This also includes:
 - (a) an explanation of the work carried out by the beneficiaries;
 - (b) an overview of the progress towards the objectives of the action, including milestones and deliverables. This report must include explanations justifying the differences between work expected to be carried out and that actually carried out. The report must also detail the exploitation and dissemination of the results and an updated ‘plan for the exploitation and dissemination of the results’;
 - (c) a summary for publication by the Commission;
2. ‘Periodic Financial Report’ containing:
 - (1) Structured individual and consolidated financial statements
 - (2) Detailed reporting of costs in an Excel table
 - (3) For payments above a single threshold of €430,000 – a CFS produced by an independent auditor. This shall provide assurance to the Granting Authority about the regularity of the costs claimed.

8. Dissemination and Exploitation

All partners in the Net4Cities Consortium must disseminate their results (i.e. make them public), as soon as is feasible. There are many ways to effectively disseminate results. In the Net4Cities project, these include:

- publication on the project website
- press releases

- publication / presentation in the Net4Cities Studio or Data Hub
- open access peer-reviewed publication
- presentation at scientific conferences and relevant events
- stakeholder and/or other workshops
- policy briefs and fact sheets.

The dissemination should remain consistent with stipulations outlined in the D/E/C Plan (Deliverable 7.3) and should be proportionate to the impact expected from the action. The D/E/C Plan will be available by M6 (June 2024).

All Dissemination must adhere to the EU visibility rules described in Section 6.4 of this document.

8.1 Open access to scientific publications

Each partner is required to ensure that all peer-reviewed scientific publications with results produced in the Net4Cities project are open access. As stipulated in Article 17 of the GrA, partners must ensure that:

- at the latest at the time of publication, a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication, is deposited in a trusted repository for scientific publications,
- immediate open access is provided to the deposited publication via the repository, under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a licence with equivalent rights; for monographs and other long-text formats, the licence may exclude commercial uses and derivative works (e.g. CC BY-NC, CC BY-ND),
- information is given via the repository about any research output or any other tools and instruments needed to validate the conclusions of the scientific publication.

In addition, the following best practices for peer-reviewed publications are expected to be met:

- CRediT statements must be included to recognize contributions of all co-authors (see <https://credit.niso.org/>),
- Manuscripts must be circulated to the whole consortium with sufficient time **before submission** for transparency and to avoid authorship disputes (see also 8.2).

Authors) must retain sufficient intellectual property rights to comply with the open access requirements.

It is required that end-users have free-of-charge access to scientific publications funded by the EC. **Only “Green” and “Gold” open-access fees for peer-reviewed scientific publications are eligible for reimbursement.**

8.2 Dissemination rules

The rules for dissemination are outlined in the CA in Section 8.4 and in the GrA in Article 17. Key components of these rules are as follows:

- Prior notice of any planned publication shall be given to the other Parties **at a minimum of 15 calendar days** before submission for publication, but is **expected 45 calendar days** before the submission for publication. Ideally, the planned publication is registered in the publication log latest by 45 calendar days before submission. Any objection to the planned publication shall

be made in accordance with the GrA by written notice to the Coordinator and to the Party or Parties proposing the dissemination within 30 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

- A Party shall not include in any dissemination activity another Party's Results or Background without obtaining the owning Party's prior written approval, unless the results are already published.
- The Parties undertake to cooperate to allow the timely submission, examination, publication and defence of any dissertation or thesis for a degree that includes their Results or Background subject to the confidentiality and publication provisions agreed in the CA.
- Where the call conditions impose additional dissemination obligations, the beneficiaries must also comply with those.

8.3 Exploitation Plan

As a component of the D/E/C Plan, an Exploitation Plan will be developed within the first year of the Net4Cities project and will be available by M6. Later versions of the Project Handbook will be updated to include key details of the exploitation aspects of the D/E/C plan.

The main goals for Exploitation in the D/E/C Plan are as follows:

1. To support European cities to be frontrunners for advanced monitoring networks and address any monitoring needs because of revisions to the EU Ambient Air Quality Directives.
2. To provide policy solutions with synergies for air and noise pollution for the transport sector to achieve Zero Pollution Action Plan targets.
3. To achieve wider uptake of the project results, outcomes, guidance, and recommendations in both partner cities and beyond.

8.4 Publication and Activity Logs

To maintain an overview of dissemination activities, logs will be created and stored on the Sync&Share platform under Admin/Continuous Reporting that should be updated whenever dissemination occurs. These will also facilitate the production of interim progress reports as well as periodic reports. Logs will be created for:

- Publications
 - Peer-reviewed publications
 - Policy briefs
 - Reports
- Activities and Events
 - Presentations
 - Conferences
 - Press Releases
 - Workshops

9. Appendices

9.1 Appendix 1 – abbreviations and acronyms

Abbreviation	Definition
AUP	Acceptable Use Policy
CA	Consortium Agreement
CFS	Certificates on the Financial Statements
EC	European Commission
EEABs	External Expert Advisory Boards
EU	European Union
GA	General Assembly
GrA	Grant Agreement
KPIs	Key Progress Indicators
PDCA	Plan-do-check-act
QM	Quality Management
QMP	Quality Management Plan
SC	Steering Committee
WP	Work Package