# Working Programme 2023

## Milestone Overview, Action Plans, and Work Items

Status:      final

Version:      1.0

Date:      24 November 2022

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## Document information

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| Activity no. and title | S.1 Project Management |
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## Document history

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|---|---|---|---|
| 0.1 | 06/08/2022 | Timo Hoffmann | Created template, first rough draft |
| 0.2 | 23/09/2022 | Annet van Veenendaal | Added action plan RTTI |
| 0.3 | 26/9/2022 | Anastasia Founta | Adding comments on the introduction, updating the structure to fit with new topics, working on parking action plan, cycling action plan. |
| 0.4 | 28/9/2022 | Timo Hoffmann | Deletion of old Action Plans, new template for Action Plans, new chapters created for Action Plans |
| 0.5 | 11/11/2022 | Ronald Jorna | Added action plan cycling and cycling infrastructure data |
| 0.6 | 12/11/2022 | Maria Stavara | Added action plan for NAP reference architecture |
| 0.7 | 13/11/2022 | Petr Bureš, Chrysostomos Mylonas, Benjamin Witsch, Madiha Shahzad, Christian Rantzow von Huth | Finalisation of NAP reference architecture |
| 0.9 | 15/11/2022 | Timo Hoffmann | Updates and review, inclusion of Milestone overview table |
| 1.0 | 24/11/2022 | Hana Peters | Updates and review, inclusion of updated Milestone overview table |

## Action requested

☐ To be revised by partners involved in the preparation of the document

☐ For review/ approval by the Core Alignment Team

☒ For approval by the NAPCORE Steering Committee

## Abstract

This is the NAPCORE Working Programme 2023, containing the overview table of milestones, the NAPCORE Action Plans for the year 2023 and other working items towards the milestones of NAPCORE.

**Abbreviations**

| Abbreviation | Meaning |
| --- | --- |
| AFIR | Alternative Fuels Infrastructure Regulation |
| CAT | Core Alignment Team |
| C-ITS | Cooperative Intelligent Transport Systems |
| EC | European Commission |
| EPICS | European Platform on ITS and C-ITS Services |
| ITS | Intelligent Transport Systems |
| LoS | Level of Service |
| MDMS | Multimodal Digital Mobility Services |
| MMTIS | Multimodal Travel Information Services |
| NAP | National Access Point |
| NAPCORE | National Access Point Coordination Organisation for Europe |
| NB | National Body |
| NIS | Network and Information Security |
| RTTI | Real-Time Traffic Information |
| SC, SCOM | Steering Committee |
| SCS | Steering Committee Support |
| SRTI | Safety Related Traffic Information |
| SSTP | Safe and Secure Truck Parking |
| SWG | Sub-working Group |
| TEN-T | Trans-European Transport Network |
| WG | Working Group |
| WP | Working Programme |

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## Overview of the Working Programme 2023

Following the feedback and experiences from NAPCORE's first Working Programme (2022), this 2023 Working Programme takes a more concise and focussed approach, with an emphasis on Milestones and other outputs.

The priority of NAPCORE is still the achievement of the Milestones laid out in the NAPCORE Grant Agreement. However, it has become apparent that urgent action within the scope of NAPCORE's goal towards a joint European harmonisation and coordination of NAPs and the data provisioning via the NAPs was and is needed.

These actions are topic specific and are part of the wider, pre-defined Milestones and/or project tasks described by the work items, and often encompass more than one NAPCORE activity. With these actions NAPCORE aims to enable better task monitoring, leading to quick-win results in 2023. The action plans describe concrete activities per topic. The defined actions will mostly take place in 2023. However, the plans are linked with relevant actions in the previous period (2022) and will be considered as guides for an update in the 2024 Working Programme. The topics are selected based on the results and conclusions of the previous tasks/Milestones, the needs of the MS involved in the project, the external stakeholders, and DG MOVE suggestions.

In response to these newly-added priorities, this Working Programme for 2023 introduces dedicated Action Plans that correspond to specific topics, listed in section 2. Some Action Plans, while producing outputs not specifically listed in the Milestones, are nonetheless related to certain NAPCORE Milestones. When this is the case, that Milestone is referenced. The first Action Plans were drafted and started in the Summer of 2022. The most important actions are listed, also including those actions that already took place in 2022 (marked as grey lines in the corresponding Action Plan tables).

Concretely, the following Action Plans have been defined for 2023:

- Action Plan for the Implementation of the Revision of the RTTI Delegated Regulation
- Action Plan on Parking Data Standard Alignment
- Action Plan on Cycling and Cycling Infrastructure Data
- Action Plan for a NAP reference architecture
- Action Plan for examining the opportunities of NAPs regarding Mobility-as-a-Service solutions (MaaS)

Overall, there are three elements in this Working Programme for 2023:

1. **Overview Table of Milestones** with status indication
2. **Action Plans**
3. **Work Items**

The overview table of Milestones will be a working document that will be regularly updated (based upon the Milestone tracking process which is part of the risk and quality management task of S.1) and shared with the EC DG MOVE via a dedicated SharePoint channel that has been set up in 2022.

The Action Plans listed here will also be tracked and updated throughout the year as the ongoing process evolves, new situations develop and new actions become necessary. Some Action Plans are elaborated only to a certain point in 2023 when new actions will be defined for a continuation of the Action Plan. Some Action Plans might end and will not (need to) be continued after the end of 2023, others might be carried forward with new dedicated actions for 2024.

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Not all goals of NAPCORE as laid out in the Grant Agreement can be well described in Action Plans, but are longer, more complex work processes involving intensive work within individual (Sub-)Working Groups or cross-(S)WGs. Some of those Work Items (that generally lead to a defined Milestone) have already been described in the WP 2022 (or at least the start of those activities). The Work Items (in some cases, continuing from 2022) are listed and described in the third section of the WP 2023.

## 1. Overview Table of Milestones

The following is the overview table of the NAPCORE Milestones as defined by the Grant Agreement, but updated in the following way:

1. The status of the Milestone is indicated, including completion date, or the forecasted new completion date if different from the originally indicated completion date
2. Changes/Updates to Milestones that have been described in the Working Programme 2022 are reflected in this list. This includes e.g. splits of Milestones into two individual Milestones, name changes of Milestones, and updates in the completion dates.
3. Changes/Updates to Milestones that are described in this Working Programme 2023.

It is important to note, that this list as printed here is as of 24 November 2022. The Milestones' status changes regularly as NAPCORE progresses: Milestones will be completed, postponed, or otherwise changed. Forthcoming changes are not reflected in this version of the table in this document, as this Working Programme 2023 document will remain stable after SCOM approval. The working version of the Milestone overview table is a "live" document of which snapshots will be shared in regular intervals throughout the year 2023 with DG MOVE for information and task/Milestone tracking purposes. The live document can be sorted according to Milestone number, completion status, or other criteria. In this document, the Milestones are ordered by their planned submission date in the Working Programme 2023.

| Milestone number | Milestone name | WG | Short name of lead beneficiary | External Milestone (Y/N) | Delivery date (GA) | Delivery date (WP 2022) | Delivery date (WP 2023) | Actual/ forecast submission date |
|---|---|---|---|---|---|---|---|---|
| MH.1.1 | Steering Committee Meeting | H1 | AT-ATE | N | Sep-21 | Sep-21 | Sep-21 | Sep-21 |
| M4.1.202 | Workplan 2022 | SWG4.1 | NL | N | Oct-21 | Oct-21 | Oct-21 | Oct-21 |
| MH.3.1 | Communication plan | H3 | IT | N | Dec-21 | Mar-22 | Nov-21 | Nov-21 |
| M2.3 | Presentation of the Annual Work Plan 2022 | WG2 | PT-IMT | N | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| M4.1.300 | Existing material handed over from DATEX II PSA and embedded in project | SWG4.1 | NL | Y | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| M4.1.305 | D2 Academy running and used | SWG4.1 | NL | Y | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| M4.1.404 | Standardisation proposals (either direct or via ITS rolling workplan) 2022 | SWG4.1 | NL | N | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| M4.3.1 | SubWG4.3 working programme 2022 | SWG4.3 | ITxPT | N | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| M5.1 | WG5 Working Programme | WG5 | AT-ATE | N | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| MH.1.2 | Steering Committee Meeting | H1 | AT-ATE | Y | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| MS.1.1 | Working Programme 2022 | S1 | DE-BASt | Y | Dec-21 | Dec-21 | Dec-21 | Dec-21 |
| M4.1.201 | Progress report 2021 | SWG4.1 | NL | N | Dec-21 | Mar-22 | Feb-22 | Feb-22 |
| MS.1.12 | Core Alignment Team report of main activities and decisions | S1 | DE-BASt | Y | Nov-21 | Feb-22 | Feb-22 | Feb-22 |
| MS.1.16 | Financial Statement 2021 | S1 | DE-BASt | N | Feb-22 | Feb-22 | Feb-22 | Feb-22 |
| MS.1.4 | Project Progress Report 2021 | S1 | DE-BASt | Y | Dec-21 | Feb-22 | Feb-22 | Feb-22 |
| MS.1.8 | Quality and Risk Management (QRM) Plan | S1 | DE-BASt | Y | Feb-22 | Feb-22 | Feb-22 | Mar-22 |
| M4.2.3 | Project management procedures in place | SWG4.2 | ERTICO | N | Dec-21 | Sep-21 | Mar-22 | Mar-22 |
| M3.2 | First report on NAP data availability | WG3 | GR | Y | Mar-22 | Mar-22 | May-22 | Nov-22 |
| MH.3.6 | Outreach and Training Plan | H3 | IT | N | Mar-22 | Apr-22 | May-22 | May-22 |
| M4.1.103 | Initiation of STAB | SWG4.1 | NL | Y | Dec-21 | Jun-22 | Jun-22 | TBC |
| MH.1.3 | Advisory Board is set up | H1 | AT-ATE | Y | Mar-22 | May-22 | Jun-22 | Jun-22 |
| MH.1.4 | Steering Committee Meeting | H1 | AT-ATE | Y | Jun-22 | Jun-22 | Jun-22 | Jun-22 |
| MH.3.2 | Website goes live | H3 | IT | N | Feb-22 | Apr-22 | Aug-22 | Aug-22 |

| M4.1.309 | DATEX II webtool supporting full RAV scope | SWG4.1 | NL | N | Jun-22 | Jun-22 | Sep-22 | Sep-22 |
|----------|--------------------------------------------|--------|----|---|--------|--------|--------|--------|
| M4.1.400 | Version 3.3 with accompanying RRP's and RSP's | SWG4.1 | NL | Y | RSPs | Jun-22 | Sep-22 | Sep-22 |
| M4.1.405 | Standardisation proposals (either direct or via ITS rolling workplan) 2023 | SWG4.1 | NL | N | Sep-22 | Sep-22 | Sep-22 | |
| M4.1.500 | Change requests on methodology | SWG4.1 | NL | Y | Sep-22 | Sep-22 | Sep-22 | Sep-22 |
| M4.1.501 | Impact assessment on content models | SWG4.1 | NL | N | Mar-22 | Mar-22 | Sep-22 | Sep-22 |
| M4.1.502 | Change requests on models | SWG4.1 | NL | Y | Sep-22 | Sep-22 | Sep-22 | |
| M4.1.600 | User requirements on identified topics | SWG4.1 | NL | Y | Mar-22 | Mar-22 | Sep-22 | Sep-22 |
| M2.1 | Typology of NAPs based on the description of levels of service and assessment of associated costs and benefits | WG2 | PT-IMT | Y | Jun-22 | Aug-22 | Oct-22 | Oct-22 |
| M2.4 | A list of requirements concerning (the use of) data standards, reference profiles and metadata to be handed, over to subWGs on standardisation and/or standardisation organisations. | WG2 | PT-IMT | Y | Dec-21 | Jun-22 | Oct-22 | Oct-22 |
| M2.5 | Presentation of the following Annual Work Plan 2023 | WG2 | PT-IMT | N | Oct-22 | Oct-22 | Oct-22 | Oct-22 |
| M4.1.100 | Change requests for relevant parts of DATEX II for alignment of agreed topics (yearly updated) | SWG4.1 | NL | Y | Dec-21 | Mar-22 | Oct-22 | Oct-22 |
| M4.1.200 | Updated DATEX II Rules of Procedure incl. governance of RRP's and RSP's | SWG4.1 | NL | N | Dec-21 | Mar-22 | Oct-22 | Oct-22 |
| M4.1.310 | Report on provided support, dissemination, education and training | SWG4.1 | NL | N | Dec-21 | Mar-22 | Oct-22 | Oct-22 |
| M4.3.2 | SubWG4.3 working programme 2023 | SWG4.3 | ITxPT | N | Oct-22 | Oct-22 | Oct-22 | Oct-22 |
| M5.2 | Best Practices and recommendations for harmonised compliance assessment identified | WG5 | AT-ATE | Y | Mar-22 | Sep-22 | Oct-22 | Oct-22 |
| M5.3 | Synchronised compliance assessment processes and self-declaration forms defined | WG5 | AT-ATE | N | Mar-22 | Sep-22 | Oct-22 | Oct-22 |
| M5.5 | WG5 Working Programme | WG5 | AT-ATE | N | | Oct-22 | Oct-22 | Oct-22 |
| M4.1.301 | DATEX II user forum | SWG4.1 | NL | Y | Jun-22 | Jun-22 | Nov-22 | Nov-22 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| M4.2.4 | Technical specifications | SWG4.2 | ERTICO | Y | | Nov-22 | Nov-22 | Nov-22 | |
| MH.2.1 | Actions needed and recommendations reported in Project Progress Report 2022 | H2 | NL | Y | | Nov-22 | Nov-22 | Nov-22 | |
| MH.3.3 | First NAPCORE Multi-Day Event | H3 | IT | Y | | May-22 | Nov-22 | Nov-22 | Nov-22 |
| M1.1 | Develop strategic position and a common strategy for EU policies and developments | WG1 | DE-BASt | Y | | Sep-22 | Oct-22 | Dec-22 | Nov-22 |
| M3.3 | Second report on NAP data availability | WG3 | GR | Y | | Sep-22 | Sep-22 | Dec-22 | |
| M4.0.1 | Ecosystem described and role of standards in relation to services documented. | WG4 | FR | N | | Jun-22 | Jun-22 | Dec-22 | |
| M4.1.101 | Change requests for relevant parts of DATEX II for alignment of agreed additional topics | SWG4.1 | NL | Y | | Dec-22 | Dec-22 | Dec-22 | |
| M4.1.203 | Progress report 2022 | SWG4.1 | NL | N | | Dec-22 | Dec-22 | Dec-22 | |
| M4.1.204 | Workplan 2023 | SWG4.1 | NL | N | | Oct-22 | Dec-22 | Dec-22 | Nov-22 |
| M4.1.311 | Report on provided support, dissemination, education and training | SWG4.1 | NL | N | | Dec-22 | Sep-22 | Dec-22 | |
| M4.1.401 | Version 3.4 with accompanying RRP's and RSP's | SWG4.1 | NL | Y | | Dec-22 | Dec-22 | Dec-22 | |
| M4.1.408 | Roadmap Harmonised profiles | SWG4.1 | NL | Y | | Dec-22 | Dec-22 | Dec-22 | |
| M4.1.503 | Inventory taking of future work | SWG4.1 | NL | N | | Dec-22 | Dec-22 | Dec-22 | |
| M4.1.602 | User requirements on identified topics | SWG4.1 | NL | N | | Dec-22 | Dec-22 | Dec-22 | |
| M4.1.604 | Annual inventory of new topics | SWG4.1 | NL | N | | Dec-22 | Dec-22 | Dec-22 | |
| M4.2.10 | TN-ITS network meeting reports | SWG4.2 | ERTICO | Y | | Jun-22 | Jun-22 | Dec-22 | |
| MH.1.5 | Steering Committee Meeting | H1 | AT-ATE | Y | | Dec-22 | Dec-22 | Dec-22 | |
| MH.1.6 | Mid-term report on strategic exchange, cooperation or collaboration with externals and identification of further recommendations | H1 | AT-ATE | Y | | Dec-22 | Dec-22 | Dec-22 | |
| MS.1.2 | Working Programme 2023 | S1 | DE-BASt | Y | | Nov-22 | Dec-22 | Dec-22 | |
| M4.1.306 | Masterclass DATEX II Programme | SWG4.1 | NL | Y | | Jun-22 | Jun-22 | Jan-23 | |
| M3.1 | Data content requirements, existing gaps, data dictionaries and supporting material | WG3 | GR | Y | | Jun-22 | Jun-22 | Feb-23 | |
| M4.1.601 | Standardisation proposals (either direct or via ITS rolling workplan) | SWG4.1 | NL | N | | Sep-22 | Sep-22 | Feb-23 | |

| MS.1.13 | Core Alignment Team report of main activities and decisions | S1 | DE-BASt | N | Nov-22 | Feb-23 | Feb-23 | |
|---|---|---|---|---|---|---|---|---|
| MS.1.17 | Financial Statement 2022 | S1 | DE-BASt | N | Feb-23 | Feb-23 | Feb-23 | |
| MS.1.5 | Project Progress Report 2022 | S1 | DE-BASt | Y | Nov-22 | Dec-22 | Feb-23 | |
| MS.1.9 | NAPCORE – EU Commission communication summary | S1 | DE-BASt | N | Nov-22 | Feb-23 | Feb-23 | |
| M3.4 | Third report on NAP data availability | WG3 | GR | Y | Mar-23 | Mar-23 | Mar-23 | |
| M4.0.2 | Roadmap for harmonisation tasks incl. qualitative impact assessment | WG4 | FR | N | Jun-22 | Dec-22 | Mar-23 | |
| M4.2.1 | Contribution to the Roadmap for harmonisation | SWG4.2 | ERTICO | N | Feb-22 | Nov-21 | Mar-23 | |
| M4.4.4 | Draft concept for a Metadata Interoperability Demonstrator | SWG4.4 | DE-BASt | N | Mar-23 | Mar-23 | Mar-23 | |
| M2.2 | Overview of gaps and actions needed | WG2 | PT-IMT | N | Jun-22 | Aug-22 | Jun-23 | |
| M2.6 | A first demonstrator with real-world use of data and different Levels of Service – 1st round | WG2 | PT-IMT | Y | Dec-22 | Jun-23 | Jun-23 | |
| M4.1.302 | DATEX II user forum | SWG4.1 | NL | Y | Jun-23 | Jun-23 | Jun-23 | |
| M4.1.307 | Masterclass DATEX II Programme | SWG4.1 | NL | Y | Jun-23 | Jun-23 | Jun-23 | |
| M4.2.6 | Requirements on trust, quality, integrity, and security of data established. Concepts of data evaluation tools (draft) | SWG4.2 | ERTICO | Y | Jun-23 | Jun-23 | Jun-23 | |
| M4.2.8 | Recommendations for DG MOVE for TN-IST deployment in EU Member States | SWG4.2 | ERTICO | N | Jun-23 | Jun-23 | Jun-23 | |
| M4.4.1 | Publication of napDCAT-AP Version 1.0 | SWG4.4 | DE-BASt | Y | Mar-22 | Sep-22 | Jun-23 | |
| M4.4.2 | Inauguration of a napDCAT-AP back office | SWG4.4 | DE-BASt | N | NA | Oct-22 | Jun-23 | |
| MH.1.7 | Steering Committee Meeting | H1 | AT-ATE | Y | Jun-23 | Jun-23 | Jun-23 | |
| M5.4 | Common quality & evaluation criteria for compliance assessment defined | WG5 | AT-ATE | Y | May-22 | Mar-23 | Jun-23 | |
| M5.6 | Strategies and actions to address (private, international) organisations defined | WG5 | AT-ATE | Y | Dec-22 | Apr-23 | Jun-23 | |
| M3.5 | Fourth report on NAP data availability | WG3 | GR | Y | Sep-23 | Sep-23 | Sep-23 | |

| M4.1.406 | Standardisation proposals (either direct or via ITS rolling workplan) 2024 | SWG4.1 | NL | Y | Sep-23 | Sep-23 | Sep-23 | |
| M4.1.603 | Standardisation proposals (either direct or via ITS rolling workplan) | SWG4.1 | NL | N | Sep-23 | Sep-23 | Sep-23 | |
| M1.2 | Develop strategic position and a common strategy for cooperation with global players and related activities | WG1 | DE-BASt | Y | Sep-22 | Oct-22 | Oct-23 | |
| M2.8 | Presentation of the following Annual Work Plan 2024 | WG2 | PT-IMT | N | Oct-23 | Oct-23 | Oct-23 | |
| M4.1.206 | Workplan 2024 | SWG4.1 | NL | N | Oct-23 | Oct-23 | Oct-23 | |
| M4.3.4 | SubWG4.3 working programme 2024 | SWG4.3 | ITxPT | N | Oct-23 | Oct-23 | Oct-23 | |
| M5.7 | WG5 Working Programme | WG5 | AT-ATE | N | Oct-23 | Oct-23 | Oct-23 | |
| M4.3.3 | Report on gaps, overlaps of standards for multimodal data exchange | SWG4.3 | ITxPT | Y | Nov-23 | Nov-23 | Nov-23 | |
| MH.2.2 | Actions needed and recommendations reported in Project Progress Report 2023 | H2 | NL | Y | Nov-23 | Nov-23 | Nov-23 | |
| MH.3.4 | Second NAPCORE Multi-Day Event | H3 | IT | Y | May-23 | Nov-23 | Nov-23 | |
| MH.3.8 | 2023 Dissemination activity report (separate or as part of project progress report) | H3 | IT | N | Nov-23 | Nov-23 | Nov-23 | |
| MS.1.10 | NAPCORE – EU Commission communication summary | S1 | DE-BASt | N | Nov-23 | Nov-23 | Nov-23 | |
| MS.1.14 | Core Alignment Team report of main activities and decisions | S1 | DE-BASt | N | Nov-23 | Nov-23 | Nov-23 | |
| MS.1.3 | Working Programme 2024 | S1 | DE-BASt | Y | Nov-23 | Nov-23 | Nov-23 | |
| M1.1-2023 | Develop strategic position and a common strategy for EU policies and developments | WG1 | DE-BASt | Y | | | Dec-23 | |
| M1.3 | Develop strategy and structure for future long-term governance of the NAP/ NB platform | WG1 | DE-BASt | Y | Dec-23 | Dec-23 | Dec-23 | |

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|---|---|---|---|---|---|---|---|---|
| M2.7 | An updated list of requirements concerning (the use of) data standards, reference profiles and metadata to be handed over to SWGs on standardisation and/or standardisation organisations. | WG2 | PT-IMT | Y | | Dec-23 | Dec-23 | Dec-23 |
| M2.9 | Harmonisation of EU NAP architectures and first layout of potential NAP federation | WG2 | PT-IMT | Y | | Dec-23 | Dec-23 | Dec-23 |
| M4.0.3 | Update of Roadmap | WG4 | FR | N | | Jun-23 | Jun-23 | Dec-23 |
| M4.1.102 | Change requests for relevant parts of DATEX II for alignment of agreed additional topics | SWG4.1 | NL | Y | | Dec-23 | Dec-23 | Dec-23 |
| M4.1.205 | Progress report 2023 | SWG4.1 | NL | N | | Dec-23 | Dec-23 | Dec-23 |
| M4.1.312 | Report on provided support, dissemination, education and training | SWG4.1 | NL | N | | Dec-23 | Dec-23 | Dec-23 |
| M4.1.402 | Version 3.5 with accompanying RRP's and RSP's | SWG4.1 | NL | Y | | Dec-23 | Dec-23 | Dec-23 |
| M4.1.605 | Annual inventory of new topics | SWG4.1 | NL | N | | Dec-23 | Dec-23 | Dec-23 |
| M4.2.11 | TN-ITS network meeting reports | SWG4.2 | ERTICO | Y | | Jun-23 | Jun-23 | Dec-23 |
| M4.2.2 | Contribution to the Roadmap for harmonisation | SWG4.2 | ERTICO | N | | Nov-22 | Nov-22 | Dec-23 |
| M5.9 | National Body Reference Architecture defined and agreed | WG5 | AT-ATE | N | | Dec-23 | Dec-23 | Dec-23 |
| MH.1.8 | Steering Committee Meeting | H1 | AT-ATE | Y | | Dec-23 | Dec-23 | Dec-23 |
| MH.3.7 | 2022 Dissemination activity report (separate or as part of project progress report) | H3 | IT | N | | Nov-22 | Nov-22 | Dec-23 |
| M5.10 | Prototypical multi-national compliance assessment demonstrated | WG5 | AT-ATE | Y | | Jul-24 | Jul-24 | Dec-23 |
| MS.1.18 | Financial Statement 2023 | S1 | DE-BASt | N | | Feb-24 | Feb-24 | Feb-24 |
| MS.1.6 | Project Progress Report 2023 | S1 | DE-BASt | Y | | Nov-23 | Nov-23 | Feb-24 |
| M3.6 | Fifth report on NAP data availability | WG3 | GR | Y | | Mar-24 | Mar-24 | Mar-24 |
| M2.11 | NAP reference architecture | WG2 | PT-IMT | N | | TBD | Jun-24 | Jun-24 |
| M4.1.303 | DATEX II user forum | SWG4.1 | NL | Y | | Jun-24 | Jun-24 | Jun-24 |
| M4.1.308 | Masterclass DATEX II Programme | SWG4.1 | NL | Y | | Jun-24 | Jun-24 | Jun-24 |
| M4.2.5 | Technical specifications | SWG4.2 | ERTICO | Y | | Jun-24 | Jun-24 | Jun-24 |

| MH.1.9 | Steering Committee Meeting | H1 | AT-ATE | Y | Jun-24 | Jun-24 | Jun-24 | |
|---|---|---|---|---|---|---|---|---|
| M3.8 | Data quality assessment framework and processes | WG3 | GR | Y | Mar-23 | Mar-23 | Jun-24 | |
| M5.8 | Strategies and actions for non-compliance defined | WG5 | AT-ATE | N | Dec-23 | Dec-23 | Jun-24 | |
| M4.1.407 | Standardisation proposals (via ITS rolling workplan) 2025 | SWG4.1 | NL | Y | Sep-24 | Sep-24 | Sep-24 | |
| M4.2.9 | Recommendations for DG MOVE for TN-IST deployment in EU Member States | SWG4.2 | ERTICO | N | Sep-24 | Sep-24 | Sep-24 | |
| M4.3.5 | Mapping of multimodal data standards and recommendations | SWG4.3 | ITxPT | Y | Sep-24 | Sep-24 | Sep-24 | |
| M4.4.3 | Two-year-anniversary of napDCAT-AP review session and stakeholder workshop | SWG4.4 | DE-BASt | N | Oct-23 | Oct-23 | Sep-24 | |
| M1.1-2024 | Develop strategic position and a common strategy for EU policies and developments | WG1 | DE-BASt | Y | | | Oct-24 | |
| MH.1.10 | Final report on strategic exchange, cooperation and collaboration with externals and relevant stakeholder | H1 | AT-ATE | Y | Oct-24 | Oct-24 | Oct-24 | |
| MH.2.3 | Actions needed and recommendations reported in Final Project Report | H2 | NL | Y | Nov-24 | Nov-24 | Nov-24 | |
| MH.3.5 | Final NAPCORE Multi-Day Event | H3 | IT | Y | Nov-24 | Nov-24 | Nov-24 | |
| MS.1.11 | NAPCORE – EU Commission communication summary | S1 | DE-BASt | N | Nov-24 | Nov-24 | Nov-24 | |
| MS.1.15 | Core Alignment Team report of main activities and decisions | S1 | DE-BASt | N | Nov-24 | Nov-24 | Nov-24 | |
| MS.1.7 | Final Project Report | S1 | DE-BASt | Y | Nov-24 | Nov-24 | Nov-24 | |
| M1.4 | Long-term governance structure implemented | WG1 | DE-BASt | Y | Dec-24 | Dec-24 | Dec-24 | |
| M2.10 | At least two further demonstrators with real-world use of data and different Levels of Service – 2nd round | WG2 | PT-IMT | Y | Dec-24 | Dec-24 | Dec-24 | |
| M3.10 | Technical options for data visualisation | WG3 | GR | Y | Dec-24 | Dec-24 | Dec-24 | |

| M3.11 | Terms and conditions for data reuse (incl. GDPR implications) | WG3 | GR | Y | | Jun-24 | Jun-24 | Dec-24 | |
|-------|-------|-----|----|----|--|--------|--------|--------|--|
| M3.12 | European NAPs added value scenarios in key application areas | WG3 | GR | Y | | Dec-24 | Dec-24 | Dec-24 | |
| M3.13 | Final training material for NAP content and accessibility and training events' completion | WG3 | GR | N | | Dec-24 | Dec-24 | Dec-24 | |
| M3.7 | Final report on NAP data availability | WG3 | GR | Y | | Dec-24 | Dec-24 | Dec-24 | |
| M3.9 | Report on pilot data quality certifications | WG3 | GR | Y | | Jun-24 | Jun-24 | Dec-24 | |
| M4.1.207 | Final report 2024 | SWG4.1 | NL | Y | | Dec-24 | Dec-24 | Dec-24 | |
| M4.1.304 | Enhanced user documentation on profiles | SWG4.1 | NL | Y | | Dec-24 | Dec-24 | Dec-24 | |
| M4.1.313 | Report on provided support, dissemination, education and training | SWG4.1 | NL | N | | Dec-24 | Dec-24 | Dec-24 | |
| M4.1.403 | Version 3.6 / 4.0 with accompanying RRP's and RSP's | SWG4.1 | NL | Y | | Dec-24 | Dec-24 | Dec-24 | |
| M4.1.606 | Annual inventory of new topics | SWG4.1 | NL | N | | Dec-24 | Dec-24 | Dec-24 | |
| M4.2.12 | TN-ITS network meeting reports | SWG4.2 | ERTICO | Y | | Jun-24 | Jun-24 | Dec-24 | |
| M4.2.13 | TN-ITS network meeting reports | SWG4.2 | ERTICO | Y | | NA | Dec-24 | Dec-24 | |
| M4.2.7 | Guide on ensuring potential deployment of trust, quality, integrity, and security of data established. Concepts of data evaluation tools (update). | SWG4.2 | ERTICO | Y | | Dec-24 | Dec-24 | Dec-24 | |
| MH.1.11 | Steering Committee Meeting | H1 | AT-ATE | Y | | Dec-24 | Dec-24 | Dec-24 | |
| MH.3.9 | 2024 Dissemination activity report (separate or as part of project progress report) | H3 | IT | N | | Dec-24 | Dec-24 | Dec-24 | |
| MS.1.19 | Financial Statement 2024 | S1 | DE-BASt | N | | Feb-25 | Feb-25 | Feb-25 | |

## 2. Action Plans

### 2.1 Action Plan for the implementation of the RTTI DR revision

**Action Plan summary**

| Action Plan ID | AP221 |
|---|---|
| Action Plan lead activity | WG1 |
| Action Plan lead partner | NL (NDW) |
| Action Plan contributing partners | All active WG1 partners, WG3 |
| Related Milestone(s) | MH2.1, MH2.2, MH2.3 |

**Description of the topic and goal for NAPCORE**

The Real-Time Traffic Information) Delegated Regulation (DR), published December 18, 2014 (2015/962), was revised in February of 2022 (2022/670). Even though the parent ITS Directive 2010/40 is currently under revision, the revised RTTI DR includes an extension of the network. A phased implementation is foreseen to gradually increase the geographical scope of accessible data:

- 1 January 2023 – provide a list and map visualisation of roads included in the 'primary road network'
- 1 January 2025 – provide all crucial data categories for the entire network, other data for primary road network
- 1 January 2025 – 1 January 2027 – provide all data categories for the entire network.

The revised RTTI DR also implies alignment on several aspects, preferably on EU-level:

- Agreement on data definition, data format and metadata
- Alignment of methods for location referencing
- Agreement on common definitions of data quality to use common data quality indicators, including how to measure and monitor quality.
- Agree with stakeholders on what the minimum quality requirements should be
- Agreement on additional or alternative standards (if necessary)
- Defining common FRAND terms
- Harmonising compliance assessment.

The revised RTTI DR not only has implications for road authorities, but for private organisations as well:

- Digital map producers should be encouraged to integrate relevant data updates into their existing map and map update services in timely manner.
- Service providers shall process and include, without additional costs to end users, in the relevant services they provide, any temporary traffic management measures developed by the competent authorities and made accessible by the NAPs in a machine-readable format.
- To comply with public policies such as road safety, service providers and digital map producers should collaborate with public authorities to correct inaccuracies in their data (feedback loop).

Each MS within NAPCORE must provide a list and map visualisation of roads included in the 'primary road network'. To be able to provide this list and map, it is important to have an overview of the 'as is' situation per MS as well as a roadmap on how gradually implement the revised RTTI DR. By reaching an agreement in an early phase, both on public and private sides, on which particular elements it is necessary to align at EU-level - in order to best facilitate the deployment of services –divergent implementation of the revised RTTI DR can be prevented. In the RTTI Action Plan the focus will be on use cases, how public authorities and private service providers can best work together on these use cases and then see what this means for the data to be provided on a NAP, including all relevant elements (data quality, feedback loop, data processing, etc.).

| Action description | Goal | Output(s) and relevant MS | NAPCORE activities, tasks / partners leading | Est. time |
|---|---|---|---|---|
| Organise a workshop at the NAPCORE Data Days | Open, first debate on revision of the Regulation: (1) what is the impact of the extension of the geographical scope, (2) what do the requirements for the private parties mean, (3) how can we as NAPCORE address (1) and (2)? | Internal note | WG1, H2 | 11/22 |
| Get an overview of current RTTI data on all NAPs (survey and/or research on NAP's) | State of the actual implementation of the Delegated Regulation (which data for which type of roads, data format/standard/current quality criteria and scores on these quality criteria) | - | WG2 / WG3 | 01/23 |
| Organise a webinar together with partners from the Advisory Board (service providers, TISA, TM2.0, POLIS, CEDR) | to (1) give an overview of the revised RTTI DR, (2) to hold on to and to proceed on the awareness raised during the NAPCORE Data Days, (3) get an overview of challenges road authorities are currently encountering in the information and route advice given by service providers. Result: use cases to work | Webinar plus short questionnaire send out in advance to all the Member States | NL, Advisory Board members | 01/23 |

| | | | | |
|---|---|---|---|---|
| | on together and a first categorisation in levels of cooperation needed with service providers. | | | |
| Discussion in the physical TM2.0 meeting on February 22nd in Brussel on what the overview of use cases and the levels of complexity mean for the levels of collaboration defined a few years ago in TM2.0. | To update the levels of collaboration for TM2.0 and align them with what is necessary to work together in the defined use cases. | Updated levels of cooperation for TM2.0 | NL, Advisory member TM2.0 together with other Advisory members | 02/23 |
| Physical meeting with road authorities and service providers at TomTom headquarter in Berlin | To classify the use cases on level of cooperation needed and start elaborating. | Agreement on use cases to align on | NL, Advisory member TomTom together with other Advisory members | 03/23 |
| Update of the RTTI Action Plan | Bring more focus in the RTTI Action Plan and elaborate on concrete steps to work on | Updated RTTI Action Plan | NL | 03/23 |
| SCOM approval of the RTTI Action Plan | Agreement within NAPCORE on which aspects to address within NAPCORE | SCOM decision | WG1 | 03/23 |
| Implementation of NAPCORE elements of RTTI Action Plan in Working Programme 2023 | Addressing NAPCORE tasks concerning the RTTI DR to the relevant WG's | Draft working programme | WG1 | Starting in 03/23 |

**Description of outcomes**

This Action Plan only lists the first steps to further define more actions in an updated Action Plan on this topic. The main goal of the activities described above is to come to agreement on use cases to elaborate in public private collaboration. The RTTI Action Plan will be updated with the outcome of this first steps. For this Action Plan update, a further SCOM approval is going to be needed.

### 2.2 Action Plan on Parking Data Standards Alignment

#### Action Plan summary

| Action Plan ID | AP222 |
|---|---|
| Action Plan lead activity | WG4 (specifically SWG 4.1 and SWG4.2) |
| Action Plan lead partner | NAPCORE Parking Ambassadors ERTICO and DE-BASt |
| Action Plan contributing partners | All (S)WG4 partners |
| Related Milestone(s) | Multiple |

#### Description of the topic and goal for NAPCORE

The objective of this action plan is related to different aspects of parking data exchange and publication. The main focus for 2023 is the following:
- Alignment of parking data model between CEN standards, by deciding on reference data model for overlapping data categories between ITS delegated regulations.
- The NAPCORE Ambassador role, devised for the purpose of horizontal alignment among WGs, will support the implementation of the Action Plan on parking data, as liaison officer role between the stakeholders of the ecosystem and the NAPCORE project (partners). It ensures mutual information exchange and contributes to ensuring that NAPCORE deliverables align with ecosystem partners' expectations.

#### List of planned actions towards goal

| Action description 2023 | Goal | Output(s) and relevant MS | NAPCORE activities, tasks /partners leading | Est. time |
|---|---|---|---|---|
| Inventory on involved standards:<br>- Review results of previous standardisation work<br>- Identify use cases for data reusage in the parking ecosystem<br>- Investigate overlaps and gaps in previous work | Preparatory action: Get clarity and agreement between standards DATEXII, NETEX, ADPS. Explain co-existence, overlap, usage of these standards related to parking data on NAPs | M.4.0.1 | WG4, SWG4.1, SWG4.3 WG4.0 leading | Spring 2023 |

| | | | | |
|---|---|---|---|---|
| - Create a summary of what is missing to enable harmonisation | | | | |
| Alignment on involved standards:<br>- Define the constellation between NAPs, the data delivery stipulations from the EC Delegated Regulations, and the roles & actors from the parking ecosystem as data providers/consumers.<br>- Align terms and definitions with the existing data models based on detailed mapping<br>- Deliver a mapping of concurrent data models, based on, e.g., the converter tool APDS / NeTEx French profile<br>- Prepare training material and guidelines to indicate recommended data model and data exchange formats for parking data | Agreement between standards DATEXII, NETEX, ADPS | M.4.0.2<br>M.4.3.2 (for MMTIS) | WG4, SWG4.1, SWG4.3, EPA (as Cooperation Partner)<br>WG4.0 leading | Fall 2023 |
| Attend EPA congress 12-14 September 2022 Brussels<br><br>Align conclusions on the outcome of the congress<br><br><br>Define the role of NAPCORE and follow-up actions | Understanding the role of parking in the changing world, addressing the societal benefits and see what the role of NAP(CORE) can be to further contribute ---Mutual win -win situation between NAPS and the parking Eco system<br><br>Detailed workplan 2023 | a. EPA congress visiting reports & congress minutes<br>b. Preparatory Report for input on Digital Days Paris Nov 2022<br>c. Workshop Parking Digital Days 2022 | WG1, Parking Ambassadors | done |
| Set up a Cooperation Agreement between EPA and NAPCORE | Define operation pieces of work, where EPA and NAPCORE want to cooperate | Cooperation Agreement Input to MH1.6 | H1/WG4/CAT | 11/22 |
| Decision on Cooperation Agreement (SCOM) | | | H1/SCOM | 12/22 |

| Signature of Cooperation Agreement | | | General Secretary | 12/22 |
|---|---|---|---|---|
| Address the innovation part:  Define the roadmap towards automation, with AVP (Automated Valet Parking) as a first focus topic<br>Link with the mobility data space | Provide consultation and training to MS, cities, and regional authorities | Roadmap, Training (ERTICO ACADEMY)<br>Webinars | Link with EAVP ERTICO partners<br>WG1<br>SWG4.3<br>2 workshops | 12/23 |
| Intensify stakeholder interactions (e.g., parking sessions at selected congresses, workshops with EPA) | Take into account stakeholder's perspectives within NAPCORE work | Documentation of stakeholder interactions | Parking Ambassadors | 12/23 |
| Define and agree on further actions for the parking topic | Further Actions | Input for Working Programme 2024 | Parking Ambassadors | 12/23 |

**Description of outcomes/output  (31 Dec 2024)**

The main outcome/output during 2023 will be an inventory on involved standards touching on data in the parking ecosystem, as well as first steps to reach an alignment of such standards, at least for data categories and uses cases covered by the EC Delegated Regulations. This work is based on an exhaustive analysis of previous standardisation items, a bird's eye view on potential data use cases and roles of data actors, and involvement of important industry stakeholders such as the European Parking Association (EPA). For EPA, first cooperation steps were already done in 2022: attending the EPA congress (September 2022) and signing of a Cooperation Agreement between EPA and NAPCORE (November 2022).
Further steps will be a holistic view of the standardisation landscape, involving all the relevant standards Working Groups in NAPCORE, and an elaboration of guidelines/recommendations for applying the standards in an integrated data ecosystem.

## 2.3 Action Plan for cycling and cycling infrastructure data

**Action Plan summary**

| Action Plan ID | AP223 |
|---|---|
| Action Plan lead activity | No specific lead activity |
| Action Plan lead partner | Cycling data ambassadors (Cristina Buraga, Ronald Jorna) |
| Action Plan contributing partners | Mainly NDW, Cerema, CERTH/HIT, ITxPT |
| Related Milestone(s) | - |

**Description of the topic and goal for NAPCORE**

A number of developments have led to more political attention for cycling as a green mode of transport, such as the Covid-19 pandemic (during which cycling proved to be good alternative for public transport), the war in Ukraine (which led to efforts to reduce energy consumption), the climate crisis (efforts to reduce $CO_2$ emissions), and health concerns (bolstered by the knowledge that cycling can improve cardiovascular health and reduce air pollution).

The Green Deal (2019) and the Urban Mobility Framework (December 2021) are EU building blocks supporting the increased focus on cycling in the urban environment. The latter provides clear objectives concerning cycling:

- Promote active mobility (walking and cycling), including revised SUM
- P guidance documents, with more focus on walking and cycling.
- Protect vulnerable road users, including guidance on safe use of micro-mobility devices and quality infrastructure for vulnerable road users.
- Dedicate funding for cities under the EU Mission on Climate-neutral and Smart Cities.
- Incorporate urban mobility in the legislative work on the provision and processing of commercially sensitive data for multimodal digital mobility services (e.g. MaaS) and provide common European mobility data space to facilitate access to and sharing of mobility data.

Based on inputs from all WG, SWG and activity leaders in NAPCORE, an inventory has been made of the position of cycling data in NAPCORE and how/where this can be improved. As a result of this exercise, the following actions have been defined by the NAPCORE cycling data ambassadors in to improve the presence and visibility of cycling data in the NAPs in Europe.

**List of planned actions towards goal**

| Action description | Goal | Output(s) and relevant MS | NAPCORE activities, task /partners leading | Est. time |
|---|---|---|---|---|
| Set up a cooperation Agreement between CIE and NAPCORE | Define operation pieces of work, where Cycling Industries Europe and NAPCORE want to cooperate; | Cooperation Agreement Input to MH1.6 | H1/WG4/WG3/WG1/CAT | 11/22 |
| Decision on Cooperation Agreement (SCOM) | Get approval from SCOM | Approval of SCOM | H1/SCOM | 12/22 |
| Signature of Cooperation Agreement | Formalise cooperation between NAPCORE and CIE | Signed Cooperation agreement with CIE | General Secretary | 12/22 |
| Inventory of activities in NAPCORE relevant for cycling and cycling infrastructure data | State of the art of actual implementation of the Delegated Regulation | Deliverables | Cycling ambassadors | done |
| Organise a workshop at the NAPCORE Data Days | Discuss the initial results related to cycling data and agree on action plan | Internal note | Cycling ambassadors | done |
| Set up a cross cutting standardisation workshop on cycling data | Identify cycling data priorities and develop standards and/or profiles for these data types together with the cycling sector. | Standards for prioritised cycling data | WG4 + cycling ambassadors | 12/24 |
| Share knowledge on cycling data through section on NAPCORE website | Sharing available knowledge in the field of cycling and cycling infrastructure data | Website section with relevant information on cycling data | cycling ambassadors | 09/23 |
| Make overview of cycling data available in NAPs | Make use of existing knowledge from countries already publishing cycling data on NAPs | Report (available on website) | WG3 | 06/23 |
| Determine whether additional data categories/elements could enrich the data categories covered by MMTIS | Collect additional needs about data types missing from revised MMTIS del.reg. from different stakeholders. These can then be added to NAPs on a voluntary basis, and later included in a future revision. | Draft Paper | sWG4.3 | 06/23 |

| Decide on validation tool for cycling data in NeTEx format | Tool can assist authorities in validating whether data are published in correct NeTEx format | Decision on recommendation of tool | sWG4.3 | 10/23 |
|---|---|---|---|---|
| Decide on demonstration of NAP added value for cycling and cycling infrastructure data | Demonstrator will be a best practice for cycling data, thus serving as an example for other NAPs | Decision on creating a cycling data demonstrator | WG3 | 06/23 |
| Provide dedicated training on cycling data in NAPs | Training specifically aimed at cycling and cycling infrastructure data. Action for 2024 | Training | All WG/Act + ambassadors | 06/24 |

**Description of outcomes/output /impact**

See column of 'outputs' in table above.

**2.4 Action Plan for a NAP Reference Architecture**

**Action Plan summary**

| Action Plan ID | AP224 |
|---|---|
| Action Plan lead activity | WG2 |
| Action Plan lead partner | PT |
| Action Plan contributing partners | GR, DE-BASt |
| Related Milestone(s) | M2.9 |

**Description of the topic and goal for NAPCORE**

NAP architecture is one of the most critical drivers of the NAP ecosystem; it describes and documents all the different organisational layers (e.g., data collection layer, processing layer, user interface layer). The main target of a NAP reference architecture is (or should be) the description of how all these layers interact with each other, thus supporting their solid, smooth unification towards a common vision (i.e., the provision of reliable data to the ITS ecosystem). The NAP reference architecture related to the NAPCORE project focuses on multiple NAPs by gathering all minimum needed functionalities, processes, and interfaces to enable a harmonised exchange of information (data and metadata), creating the basis for an EU-wide mobility data space.

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The vision of this Action Plan is multifarious. First, it should collect and identify all the necessary requirements to ensure that all aspects of interoperability have been considered. Second, it will define and document a NAP reference architecture in-line with the main goal of NAPCORE, which is the harmonisation of NAPs across Europe. Third, it aims to extend the role that NAPs can play by considering other ecosystems (e.g., Traffic Management, Trip Planning, UVAR, AFID). Finally, this Action Plan will position and specify the role of NAPs within a wider European ecosystem governed by new concepts, such as GAIA-X hubs and the European Mobility Data Space (MDS).

To achieve this vision, the following actions are planned for 2023.

**List of planned actions towards goal**

| Action description | Goal | Output(s) and relevant MS | NAPCORE activities, task /partners leading | Est. time |
|---|---|---|---|---|
| Define a common terminology to be adopted by the NAP reference architecture | That is a needed step for having a common understanding. | Relevance with M3.1 | WG3 | 02/2023 |
| Define the types of NAP architecture (feedback also from T2.1 and WG3). | Each type of NAP requires a different approach and a different NAP architecture thereof. The goal is to define types and their basic description. | Internal note | WG2 | 03/2023 |
| Review results of previous related work/projects and develop a roadmap of what is missing and should be done (gap analysis with FRAME architecture). | Preparatory step to acquire a complete overview of what actions have been done within that field (and should not be repeated). | Internal note | WG2 | 05/2023 |
| Define all the artifacts/objects associated with NAPs and describe the interactions amongst them. | It is an important action before the development of the NAP reference architecture. | Internal note | WG2 | 06/2023 |
| Define basic minimum NAP functionalities and requirements that needs to be harmonised considering all NAPCORE activities/developments (e.g., interoperability demonstrators, added value use cases) | Since each country has implemented their NAP individually, each NAP has different functionalities and specifications. Thus, this step is required to figure out which are the minimum functionalities that needs to be harmonised. Across development discussed in other working groups. | Internal note | WG2 | 10/2023 |

| Develop models reflecting the minimum NAP architecture considering each NAP type. | This action includes development of draft models of NAP reference architectures with respect to required views and all artefacts/objects of the architecture. | Internal note | WG2 | 10/2023 |
|---|---|---|---|---|
| Harmonisation of EU NAP architectures and first layout of potential NAP federation. | Develop a set of documents describing NAP reference architecture(s), using possibly a FRAME approach. The goal of the document is to define a reference architecture enabling NAP operation. | External Milestone 2.9 | WG2 | 12/2023 |

**Description of outcomes/output /impact**

An ITS architecture provides a view on how an ITS implementation should look from a system design perspective. It also describes the organisational, functional, and technical structures of different components, systems, or even external relations (e.g., relations among different stakeholders). The main output of certain tasks will be the designing of technical specifications for implementing a real-world system. Therefore, the NAP reference architecture will focus on all functionalities, specifications, and standards, which are necessary to be established, in order to exchange metadata and/or data in a harmonised and interoperable EU way. Another equally important mission will be the definition of the NAP position in a much wider data-sharing community (Mobility Data Space), giving added value to NAPs and steering them one step further in the mobility future.

## 2.5 Action Plan for examining the opportunities of NAPs regarding Mobility-as-a-Service solutions (MaaS)

| Action Plan ID | AP225 |
|---|---|
| Action Plan lead activity | WG1 in collaboration with WG2, WG3 and sWG4.3 |
| Action Plan lead partner | BE (Mélisa Blot and David Schoenmaekers) |
| Action Plan contributing partners | All active partners |
| Related Milestone(s) | M1.1-2023 |

**Description of the topic and goal for NAPCORE**

Since NAPs have made numerous datasets accessible, the question arises concerning how to increase their use and reuse. At least for MMTIS data, and partially RTTI data as well, MaaS might be a key use case.

The goal is twofold:

1. Explore to what extent NAPs are already being used for MaaS applications and how to increase the usefulness of NAPs for MaaS
2. Contribute to the policy developments at a European level, major initiatives being the revision of the ITS Directive and its Delegated regulation with regard to the provision of EU-wide multimodal travel information services (Commission Delegated Regulation (EU) No 2017/1926) and the announced legislative project on Multimodal Digital Mobility Services (MaaS).

Concerning the contribution to EU policy, it is important to note that two actions are being treated in dedicated actions for the revision of the ITS Directive and MMTIS as part of the WG1 work (see M1.1). The MDMS initiative is outside the scope of the ITS Directive and is being prepared (2022/2023) in the Multimodal Passenger Mobility Forum (MPMF). This latter initiative is part of this Action Plan, although the consequences for NAPs are likely much more related to MMTIS then to the future MDMS regulation.

This Action Plan will be developed in close cooperation with the NAPCORE MaaS Ambassadors. The MaaS Alliance (member of the Advisory Board) is indicated as an important partner.

**List of planned actions towards goal**

| Action description | Goal | Output(s) and relevant MS | NAPCORE activities, tasks / partners leading | Est. time |
|---|---|---|---|---|
| Organise a workshop at the NAPCORE Data Days 2022 | Collect information on current use of NAPs for MaaS and open the discussion towards opportunities to increase their use | Internal note | WG1/BE MaaS Ambassadors | 11/22 |
| Get an overview of current topics related to MaaS services within NAPCORE | Increase knowledge on current use related to MaaS | Internal note | WG1/BE MaaS Ambassadors | 01/23 |
| Bilateral meeting with MaaS Alliance | Discuss perspective of MaaS Alliance on the role of NAPs as a tool for MaaS solutions | Ideas for non-paper | MaaS Ambassadors | 02/23 |

| | | | | |
|---|---|---|---|---|
| Evaluate opportunities towards MaaS being a key use case for NAPs | Prepare a proposal for possible actions and opportunities, thus increasing NAPs' usefulness | Non-paper | WG1/BE<br><br>MaaS Ambassadors | 05/23 |
| NAPCORE workshop on the proposal (non-paper) towards MaaS as a use case | Receive input from members and Advisory Board members and adapt draft including future actions | Ideas for decision memo | WG1/BE<br><br>MaaS Ambassadors | 06/23 |
| WG1 decision for strategy towards NAPs for SCOM approval | Decision memo for SCOM | NAPCORE strategy proposal | WG1/BE | 07/23 |
| SCOM approval of NAPCORE strategy towards MaaS | SCOM approved NAPCORE strategy | Approved NAPCORE strategy | H.1 | 09/23 |
| Contribute to the action plan for the ITS Directive | Integrate possible relevant points for MaaS in the revised ITS Directive | | WG1/BE | TBC |
| Contribute to the revision of the MMTIS Delegated Regulation | Integrate possible relevant points for MaaS in the revised MMTIS Regulation | | WG1 / BE | TBC |
| Verify relevance of MDMS proposal for NAPs | Determine the added value of a NAPCORE position to align the Commission's MDMS proposal with NAP related issues | Internal note | WG1 / FR | After proposal COM 2023 |
| Organise a workshop at the NAPCORE Data Days 2023 (tbd) | Present and discuss strategy on MaaS as a use case for NAPs and reflect on importance of Commission's MDMS proposal for NAPs | | WG1/BE MaaS Ambassadors | 2023 |

**Description of outcomes/output**

The action plan MaaS will result in a NAPCORE-coordinated, SCOM-approved strategy for NAPs to increase their usefulness towards MaaS services.

## 3. Work Items

In this section, all work items toward milestones are listed that are not already covered in Action Plans in the previous section.

### 3.1 Work Items of S.1

| Work Item | S.1.1.1: Financial Reporting for 2023 |
|---|---|
| Lead: | DE (BASt) / Project Secretariat |
| Contributing partners: | All partners |
| Start: | 12/22 |
| End: | 2/23 |
| Output Milestone: | MS.1.17 "Financial Statement 2022" |
| Description: | Managing internal financial reporting as well as official financial reporting to the EC |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Every partner's financial records | • Create financial statements<br>• Submit to Project Coordinator<br>• Check and validate financial statements for validity<br>• Identify missing supporting documents and records<br>• Consolidate the financial reports into a joint financial report | • Financial Statements as required by Grant Agreement (MS.1.17) |

| Work Item | S.1.1.2: NAPCORE Project Management |
|---|---|
| Lead: | DE (BASt) / Project Secretariat |
| Contributing partners: | AT-ATE, NL, IT, PT-IMT, GR, FR, ERTICO, ITxPT |
| Start: | ongoing |
| End: | ongoing |
| Output Milestone: | - |
| Description: | Strategic alignment of WG objectives, tracking milestones, risk and quality management |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Internal and external milestones<br>• Progress Reports and financial statements<br>• CAT Meetings<br>• Quality and Risk management plan (MS.1.8) | • Monitor the expenses versus the budget<br>• Milestone and project status monitoring<br>• Risk identification and tracking<br>• Escalation management<br>• Set up and generate project templates, procedures, and tooling | • Topics for CAT meetings<br>• Escalated issues for communication with SCOM |

| | • operate and support project collaboration tools | |
|---|---|---|

| Work Item | S.1.1.3: Progress reporting |
|---|---|
| Lead: | DE (BASt) / Project Secretariat |
| Contributing partners: | AT-ATE, NL, IT, PT-IMT, GR, FR, ERTICO, ITxPT |
| Start: | 10/23 |
| End: | 12/23 |
| Output Milestone: | MS.1.5 "Project Progress Report 2022" |
| Description: | Managing internal progress reporting as well as official progress reporting to the EC |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Requirements for progress reporting from Grant Agreement<br>• Input from all partners<br>• Input from all Activity chairs | | • Track submissions for progress report<br>• Consolidate submissions to create a consolidated NAPCORE project progress report | | • Project Progress Report (MS.1.5) |

| Work Item | S.1.1.4: Creation of the consolidated NAPCORE Working Programme 2024 |
|---|---|
| Lead: | DE (BASt) / Project Secretariat |
| Contributing partners: | AT-ATE, NL, IT, PT-IMT, GR, FR, ERTICO, ITxPT |
| Start: | 8/23 |
| End: | 11/23 |
| Output Milestone: | MS.1.3 "Working Programme 2024" |
| Description: | Creating the document structure, drafting and collecting input to the document, and polishing the final draft |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Previous Working Programme<br>• Risk Tracking<br>• CAT decisions, meeting minutes | | • Create Working Programme for each Activity/ (S)WG<br>• Review and align Working Programmes<br>• Consolidate into join Working Programme | | • Project Working Programme (MS.1.3) |

| Work Item | S.1.2.1: Communications with the European Commission |
|---|---|
| Lead: | DE (BASt) / Project Secretariat |
| Contributing partners: | AT |
| Start: | 11/23 |
| End: | 11/23 |
| Output Milestone: | MS.1.10 "NAPCORE – EU Commission communication summary" |
| Description: | Inputs, actions, and outputs are detailed below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Mail communication<br>• Decisions of the SCOM<br>• Decisions of the CAT<br>• External Milestones of the Activities/ (S)WGs | ⇒ | • Communication or meetings with the Project Officer of the EU Commission<br>• Communications or meetings with other EU Commission staff | ⇒ | • Notes/ minutes from meetings and calls<br>• Feedback from the European Commission<br>• Chapter (MS.1.10) in Project Progress Report (MS.1.5) |

| Work Item | S.1.3.1: Internal Alignment - Core Alignment Team Meetings |
|---|---|
| Lead: | DE (BASt) / Project Secretariat |
| Contributing partners: | AT-ATE, NL, IT, PT-IMT, GR, FR, ERTICO, ITxPT |
| Start: | ongoing |
| End: | ongoing |
| Output Milestone: | - |
| Description: | Inputs, actions, and outputs are detailed below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Via chairs of all NAPCORE Activities and (S)WGs | ⇒ | • Write meeting minutes<br>• Identify issues to be addressed and track them<br>• Discuss options to resolve<br>• Decide on actions to take | ⇒ | • Meeting minutes including documentation of decisions |

## 3.2 Work Items of H.1

| Work Item | Steering Committee Meeting |
|---|---|
| Lead: | AT |
| Contributing partners: | CAT, H.1 Active partners, NAPCORE Chairperson, SCOM Members |
| Start: | 4 times a year (March, June, September, December) |
| End: | 4 times a year (e.g., Thursday, 9th March 2023; Wednesday, 21st June 2023; Tuesday, 26th September 2023; Tuesday, 12th December 2023) |
| Output Milestone: | MH1.7 (June 2023), MH1.8 (December 2023) |
| Description: | NAPCORE Steering Committee Meetings are arranged by Horizontal Activity H.1 Steering Committee Support, which as well prepares the agenda and minutes, in accordance with the chairperson. Decision points need to be clearly indicated in the agenda and supporting documents need to be delivered beforehand. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Decision Points<br>• Activity/WG Inputs | ➡ | • Organisation of a physical Steering Committee Meeting:<br>• Discussion and strategic alignment on all decision points in the CAT<br>• Elaboration of agenda as well as preparation of decision points and supporting documents in H.1 Working meeting<br>• Send out agenda and decision points to chairperson<br>• Send out agenda and decision points to SCOM<br>• NAPCORE Steering Committee Meeting<br>• Elaboration of minutes<br>• Approval of meeting minutes | ➡ | • (Physical meetings are organised)<br>• Approved decision points and supporting documents for the SCOM in CAT<br>• Draft agenda, decision points and supporting documents for the SCOM in H.1 working meeting<br>• Decision on all points in SCOM<br>• Send out of elaborated meeting minutes<br>• Steering Committee Meeting minutes are approved |

| Work Item | Identify further strategic relevant issues to set up Cooperation Agreements |
|---|---|
| Lead: | AT |
| Contributing partners: | H.1 Active Partners |
| Start: | ongoing |
| End: | ongoing |
| Output Milestone: | MH1.10 |
| Description: | Inputs, actions, and outputs are detailed below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Identification of key domains, topics or gaps within NAPCORE.<br>• Determination of relevant associations for potential cooperation (with support of NAPCORE's H.2 activity)<br>• Assessment of request for Cooperation Agreements | ➡ | • Identify suitable links to relevant stakeholders<br>• Get in contact with the related stakeholders and discuss possible content of a cooperation agreement<br>• Set up cooperation agreements (e.g. with C-Roads, TISA, … )<br>• Signature process | ➡ | • Possible partners for Cooperation Agreements<br>• Signed Cooperation Agreements |

| Work Item | Advisory Board Meeting |
|---|---|
| Lead: | AT |
| Contributing partners: | H.1 Active Partners |
| Start: | 2 times a year |

| End: | 2 times a year |
|---|---|
| Output Milestone: | - |
| Description: | The Advisory Board is an advising body for solicited and unsolicited advice to the NAPCORE Steering Committee and NAPCORE Activities regarding the project and its interactions in the European ITS ecosystem. The main task of the Advisory Board is to give overall non-binding strategic advice to serve the common objectives and vision of NAPCORE. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Define strategic questions out of NAPCORE activities/ WGs<br>• Specific Milestone reports, dedicated to Advisory Board | • (Organisation of a physical Meeting)<br>• Discussion and strategic alignment on strategic questions in the CAT<br>• Elaboration of agenda as well as preparation of strategic questions (supporting documents) in H.1 Working meeting<br>• Send out agenda and decision points to AB<br>• NAPCORE Advisory Board Meeting<br>• Post-preparation and Elaboration of minutes<br>• Approval of meeting minutes | • Solicited and unsolicited advice to the NAPCORE Steering Committee and NAPCORE Activities |

| Work Item | Regular management of the Advisory Board Members List |
|---|---|
| Lead: | AT |
| Contributing partners: | |
| Start: | ongoing |
| End: | ongoing |
| Output Milestone: | - |
| Description: | Keeping the Advisory Board Members List up-to-date |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Advisory Board members | • Management of List | • Updated Advisory Board Members List |

## 3.3 Work Items of H.2

| Inputs: | Actions: | Outputs: |
|---|---|---|
| **Internal**<br>• WG 1: ongoing<br>• WG 2: overview of gaps and actions needed (6/2022) | • Create template for the list of relevant internal and external sources and topics (Policy/action, innovation, | • Template for listing relevant sources and topics |

- WG 3: Data content existing gaps (6/2022)
- WG 3: data quality assessment report (3/2023)
- WG 4: change requests (12/'21, '22, '23)
- WG 4: Inventory future work/net topics (12/'22, '23, '24)
- WG 4: Report on gaps, overlaps standards for multimodal data exchange (11/'23)
- WG 5: Strategies and actions to address (12/'22)
- CAT meetings

**External**
- EU policy papers / EU website
- Mobility Data Space concepts and documents
- Revised ITS Directive and DR's
- Sustainable and Smart Mobility Strategy 2020
- European Data Strategy
- H2020/CEF funded projects
- Other Platforms (CCAM, C-Roads, MaaS Alliance, …)
- other

WG, relation to NAPCORE / NAP / NB
- also: relevance, stakes and stakeholders, contact persons
- Define "Gap" criteria
- Define criteria for structuring / categorising Gaps
- Identify internal gaps (other WGs)
- Identify gaps based on external sources (Meeting representatives from the EU Commission, Interview/talk with relevant stakeholders (EC, Advisory board, MS etc.)
- Create list of "Gaps" and structure them

- List of gap identification criteria (relevance, for who)
- List of gap structuring criteria (priorities, recipient)
- Yearly document with a structured / categorised list of further topics and gaps to be addressed within NAPCORE and/or else

| Task leader/task | Active | Follower | I cannot contribute |
|---|---|---|---|
| **2022: NL**<br>**2023: NL**<br>**2024: NL** | AT, CZ, FR, DE-AB, GR, IT, LV, RO, SI | BE, HR, CY, DK, EE, FI, DE-Bast, GR-EG, HU, LT, LU, MT, PL, PT, ES, SE, UITP, ITxPT | |
| **Create template for the list of relevant internal and external sources and topics.** | Task leader (NL) + AT + IT | - | |
| **Define "Gap" criteria** | GR + RO | - | |
| **Define criteria for structuring / categorising Gaps** | CZ + LV | - | |
| **Identify/monitor internal gaps (other WGs)**<br>1. monitor WG1<br>2. monitor WG2<br>3. monitor WG3<br>4. monitor WG4<br>5. monitor WG5 | <br>RO<br>SI<br>LV / GR<br>FR<br>AT | - | |

| 6.  monitor CAT/SCOM | NL | | |
|---|---|---|---|
| **Identify gaps based on external sources** | n/a in 2022 | - | |
| **Create list of "Gaps" and structure them** | Task leader + AT, FR, CZ | | |
| **Review Gap list** | All | All | |
| **Participate in task meetings** | All | - | |
| **Participate in bi-annual progress meetings (combined task/activity meeting)** | All | All | |

## 3.4 Work Items of H.3

| Work Item | Second NAPCORE Multi-Day Event |
|---|---|
| **Lead:** | IT/HU |
| **Contributing partners:** | Active partners H.3: IT/HR/CY/CZ/FR/DE-BASt/GR/HU/NL/MT/RO/SI/UITP/ITxTP |
| **Start:** | 01/2023 |
| **End:** | 11/2023 |
| | |
| **Description:** | M.H.3.4 - Organisation of the second NAPCORE multi-day event in Hungary |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Second NAPCORE Multi-Day Event | → | • Organise the event and plan the sessions<br>• Present the results so far achieved<br>• Take a glance into the future<br>• Discuss current and future policies concerning the strategies promoted by the European Commission<br>• Ensure interaction with stakeholders, experts, data providers, data users and related communities<br>• Involve representatives of the Ministry of the hosting country<br>• Promote interactions among participants during opening session/Social event/closing session for initiatives concerning NAPs | → | • Proceedings of the event: publication, articles, highlights, news, posts<br>• Share experiences and good practices, together with external stakeholders, to reinforce European cooperation<br>• Create and keep open an information channel in both directions with: stakeholders, experts, data providers, data users and related communities<br>• Organisation of technical visits during the event<br>• Networking of participants |

| Work Item | 2023 Dissemination activity report (separate or as part of project progress report) |
|---|---|
| Lead: | IT |
| Contributing partners: | Active partners H.3: IT/HR/CY/CZ/FR/DE-BASt/GR/HU/NL/MT/RO/SI/UITP/ITxTP |
| Start: | 01/2023 |
| End: | 11/2023 |
| Output Milestone: | MH3.8 |
| Description: | MH.3.8 - Writing of the Dissemination report on the activities carried out during the 2023 |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| 2023 Dissemination activity report (separate or as part of project progress report) | • Consider and report all main topics discussed in the activity<br>• Focus on the activities developed<br>• Collection of contributions from partners<br>• Report the cooperation with other (s)WG leaders for activity of dissemination<br>• Presentation of trainings and dedicated workshops<br>• Mention the internal and external support of trainings | • Report on all dissemination activities and on the main progresses in collaboration with WGs<br>• Develop appropriate communication tools (improvement of website)<br>• Establishment of a link to other European initiatives<br>• Show the results of trainings and workshops |

## 3.5 Work Items of WG1

**Task 1.1 "Strategy towards EU policies and developments"**

| Work Item | 1.1: Update of Strategy toward EU policies and developments MS |
|---|---|
| Lead: | DE (BASt) |
| Main contributing partners: | AT-ASFINAG, AT-ATE, BE, CZ, DK, GR, NPRA, PT, RO, SE |
| Start: | 1/23 |
| End: | 10/23 |
| Output Milestone: | M1.1-2023 "NAPCORE strategic position and a common strategy for EU policies and developments - 2023" |
| Description: | The initial M1.1 document only contained (next to a common position on the ITS Directive revision) an overview of relevant EU policies and developments together with a prioritisation and planned actions towards those, it is foreseen to continue the work begun and both monitor ongoing developments and consolidate a strategic positioning and actions regarding the most important and urgent policies and developments on EU level. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • M1.1-2022 milestone document<br>• Prioritised list of EU policies and developments | ➡ | • Monitor for new EU policies and developments and add to and prioritise in tracking list<br>• Track ongoing developments of EU policies and developments<br>• Create list of general strategic positions and actions that NAPCORE can have/make in relation to EU policies and developments<br>• Discuss and agree on actions in regards to highest prioritised EU policies and developments<br>• Carry out those actions<br>• Report on those actions and positions in updated MS document M1.1-2023 | ➡ | • Updated MS document "NAPCORE Strategy towards EU policies and developments - 2023" (M1.1-2023) |

**Task 1.2 "Strategy towards stakeholders and activities (non-EU policy related)"**

| Work Item | 1.2: Strategy towards stakeholders and activities |
|---|---|
| Lead: | DE (BASt) |
| Main contributing partners: | BE, DK, ES, GR, NL, RO-ITS, UITP |
| Start: | 10/22 |
| End: | 10/23 |
| Output Milestone: | M1.2-2023 "Develop strategic position and a common strategy for cooperation with global players and related activities - 2023" |
| Description: | Goal of this work item is to create the M1.2 document on a strategic position and common strategy for cooperation with global players and related activities. It serves to identify and monitor existing and upcoming organisations, projects, activities or initiatives in the mobility data and data exchange domain outside of the EU policy related activities, to consider or incorporate relevant or valuable results, e.g. via regular liaisons. A common communication guideline shall be established, especially towards global players and international organisations and activities. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • List of Advisory Board member organisations | ➡ | • Create template for a stakeholder list (built upon the Advisory Board list) not only of the stakeholders and activities, but also: relevance, stakes "why is this relevant for you as beneficiary/ partner"), players/ contact persons, …<br>• Grouping of stakeholders / global players<br>• Define criteria for prioritisation<br>• Overview of challenges in NAP/ NB relations with stakeholders or stakeholder groups<br>• Finding communalities in/ common areas of stakes/ relevance for the beneficiaries | ➡ | • NAPCORE strategic plan towards stakeholders and activities |

| | |
|---|---|
| | (relating to specific stakeholder groups) => goals of NAPCORE for all partners<br>• Analysing the benefits and downsides of the various strategy options<br>• Creation of an overview of possible strategies towards stakeholders<br>• Select challenges that can be tackled and benefits gained with/ using NAPCORE considering the communalities in the goals of the beneficiaries<br>• Select the strategy options for the individual stakeholder groups and activities |

**Task 1.3 "Future and sustainable governance structure of the NAP/ NB platform"**

| Work Item | 1.3: Future and sustainable governance structure of NAPCORE |
|---|---|
| Lead: | DE (BASt) |
| Main contributing partners: | AT-ASFINAG, AT-ATE, CZ, ES, GR, NL, HR, HR-CESTE, RO-NCRIA, UITP |
| Start: | 10/22 |
| End: | 12/23 |
| Output Milestone: | M1.3 "Develop strategy and structure for future long-term governance of NAPCORE" |
| Description: | The runtime of the NAPs is not limited according to the ITS Directive and its Delegated Regulations. Also, the work needed to ensure continued harmonised and coordinated operation of the European NAPs will not be finished – there will always be a need to improve interoperability, work on standards and recommendations, discuss data quality improvement campaigns etc. This is stark contrast to the limited runtime that NAPCORE has in the framework of the current CEF PSA project.<br>This task is to develop a position and strategy for NAPCORE for a suitable long(er) term operation including the governance structure and setup needed for that. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • M1.1 | • Collect experiences of NAPCORE partners that are international organisations about the pros and cons of becoming a Belgian AISBL or similar<br>• Evaluate possibilities regarding prolonging current CEF PSA project<br>• Evaluate possibilities regarding a new DG MOVE call that would suit for a "NAPCORE 2.0" project<br>• Evaluate other possibilities for organisational, administrative and financial setup for a continuation of NAPCORE | • M1.3 "Strategy and structure for future long-term governance of NAPCORE" |

| | |
|---|---|
| | • Benchmark and review other domains on how similar situations/challenges have been approached<br>• Decide on recommendation for a governance structure and organisational setup and detail this out in M1.3 | | |

**Task 1.4 "Facilitate decision making on strategic questions raised from within NAPCORE"**

| Work Item | 1.4 Facilitate decision making on strategic questions |
|---|---|
| Lead: | DE-BASt |
| Main contributing partners: | AT, BE, HR, CZ, FR, GR, IT, LV, LU, NL, PL, PT, RO, ES, SE, UITP, NPRA |
| Start: | 12/22 |
| End: | 12/23 |
| Output Milestone: | none (possibly indirect) |
| Description: | Task 1.4 is a new task, not explicitly listed in the Grant Agreement or previous NAPCORE Working Programme. Nevertheless, the work on this task was deemed to be of crucial importance for NAPCORE and WG1 seemed to the CAT as "natural place" to locate the work towards it in.<br>Goal of this task is to create the NAPCORE internal organisational structure and process to facilitate decision making on strategic questions raised from within NAPCORE and then to use those established structures to create "NAPCORE-approved" positions.<br>For example, this task could take on identified gaps from within WG1, H.2 or any other NAPCORE activity that are NAPCORE internal and strategic in nature, organise workshops, meetings, discussions with internal and external stakeholders considering work, results, or input from other NAPCORE activities, prepare a recommendation or decision document for SCOM decision/approval.<br>Rather than doing this over and over from scratch, this task would create a workflow and procedure template that can be reused for multiple questions at hand. With this we hope to be more efficient, faster and also more transparent. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Example strategic questions from WG1, H.2 and CAT | | • Decide on 2 topics/questions that act as examples and testcases<br>• Create first draft of a decision-making workflow and process based on first selected topic/question<br>• Trial of the draft workflow for both first and second topic/question selected<br>• Review of process/workflow and enhance and improve it<br>• Get SCOM approval for this workflow | | • Workflow/process for NAPCORE decision-making<br>• First decisions created/approved using the workflow created |

## 3.6 Work Items of WG2

| Work Item | 2.1.1 NAP state of practices, ambitions and needs |
|---|---|
| Lead: | NL |
| Contributing partners: | AT, CZ, DE, GR, HU, MT, NL, PT |
| Start: | 11/21 |
| End: | 12/22 |
| Output Milestone: | |
| Description: | Desk research and MS consultation on NAP state of practices. |

**Inputs:**
- Current experiences from Member States NAP pre-studies
- NAP reference architectures
- NAP impact assessments

**Actions:**
- Identification and contact of each MS representative to support info collection
- Definition of a structured list of topics and subjects to be assessed by MS including:
  - a. Overview of existing functionalities, capabilities, technical interfaces, etc.
  - b. Current definitions of NAP Level Services by Member States.
  - c. Member States practices regarding access to data under terms and conditions, via the NAPs.
  - d. State of practice on NAPs sustainability models (e.g. local language barriers, search functionality, guest/registration, …).
  - e. Assessment of costs and benefits of the different NAP architectures.
- Provide each MS with a structured list of topics and collect input
- Analysis (pre-assessment) and harmonisation of the collected information into a structured format.
- Organisation of workshop(s) for the validation and assessment of the NAP state of practices, ambitions and needs.

**Outputs:**
- Overview of existing functionalities, capabilities, technical interfaces, etc. of the NAPs at European level (in cooperation with WG3)
- Repository of documents of experiences with the preparation and deployment of individual NAPs

|  | • Repository of documents of experiences with the preparation and deployment of individual NAPs: |  |  |
|--|--|--|--|
|  |   a.    Setup a process for collection, storage and access to the documents |  |  |
|  |   b.    Conclude the drafting of a position paper/executive summary regarding the various European approaches towards NAPs' LoS |  |  |

| Work Item | 2.1.2 NAP Levels of Services definitions |
|--|--|
| Lead: | NL |
| Contributing partners: | AT, CZ, ES, GR, HU, IT, MT, NL, PT, |
| Start: | 11/21 |
| End: | 12/22 |
| Output Milestone: | Report - M2.1 Typology of NAPs based on the description of levels of service and assessment of associated costs and benefits |
| Description: | Definition of several fixed levels of service of NAPs |

| Inputs: | | Actions: | | Outputs: |
|--|--|--|--|--|
| • Results from work item 2.1.1 | → | • Workshop(s) to review EU EIP documents and identify complementary characteristics or topics of the NAP Level of Service definition including the following perspectives:<br>  a.    Technological substance (e.g., cloud-like, metadata repository-like, etc.)<br>  b.    Identification of centralised/decentralised/hybrid operations<br>  c.    Security requirements<br>  d.    Connectivity requirements<br>  e.    User management requirements<br>  f.    Visibility rules<br>  g.    Governance structure<br>  h.    Monitoring & Analytic requirements<br>  i.    Added value requirements | → | • M2.1 Typology of NAPs based on the description of levels of service and assessment of associated costs and benefits |

|  |  |
|---|---|
| j. (Compliance assessment requirements) k. Accounting (or not) for the existence of Mobility Data Space<br>• Definition of criteria for assessing and ranking NAPs level of service<br>• Development of draft report "Typology of NAPs based on the description of levels of service and assessment of associated costs and benefits"<br>• Review of draft report by Member States representative<br>• Completion of the report "Typology of NAPs based on the description of levels of service and assessment of associated costs and benefits" |  |

| Work Item | 2.1.3 Listing of gaps and actions towards interoperability of Level of Services |
|---|---|
| Lead: | NL |
| Contributing partners: | AT, CZ, DK, ES, GR, HU, IT, MT, NL, PL, PT |
| Start: | 11/21 |
| End: | 12/22 |
| Output Milestone: | Report - M2.2 Overview of gaps and actions needed |
| Description: | This work item intends to identity and list the gaps and necessary actions regarding interoperability and levels of service. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Reports from task 2.3 – NAP Architectures<br>• Outcomes from work item 2.4.5 (European Access Point)<br>• Outcomes from previous work items of this task (2.1.1 and 2.2.2), especially the report related to Milestone M2.1 | • Workshop for identification and listing of gaps & action needed regarding interoperability (technical, legal, and organisational interoperability) and level of service for the adoption of NAPs by the different Member States<br>• Development of recommendations for stepwise approach to support Member States the road mapping into more complex NAP architectures<br>• Development of the first layout of potential European NAP or federation of European NAPs (in cooperation with WG1 and subWG4.4<br>   a. Technological substance (e.g., cloud-like, metadata repository-like, etc.) | • M2.2 Overview of gaps and actions needed (due 12/22)<br>• Overview of gaps, short comings, barriers, and actions needed<br>• First layout of potential European NAP or federation of European NAPs (in cooperation with WG1 and subWG4.4 |

| | | |
|---|---|---|
| | b.      Identification of centralised/decentralised/hybrid operations<br>c.      Security requirements<br>d.      Connectivity requirements<br>e.      User management requirements<br>f.      Visibility rules<br>g.      Governance structure<br>h.      Monitoring & Analytic requirements<br>i. Added value requirements<br>j. Compliance assessment requirements<br>k.      Accounting (or not) for the existence of Mobility Data Space | |

| Work Item | 2.1.4 Repository of documents of experiences with the preparation and deployment of individual NAPs |
|---|---|
| Lead: | NL |
| Contributing partners: | CZ, DK, GR, HU, NL, PL, PT, AT, IT, CY, MT, ES |
| Start: | 11/21 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This task will facilitate the storage and accessibility to relevant documents capturing experiences with the preparation and deployment of individual NAPs. The repository will be managed by a NAPCORE organisation, nominated by the Activity Management Team. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Current experiences from Member States NAP pre-studies<br>• NAP reference architectures<br>• NAP impact assessments | ➡ | • Set up a process for collection, storage and access to the documents. The initial set of documents will include the desk research material and the tasks results.<br>• Conclude to the drafting of a position paper/executive summary regarding the various European approaches towards NAPs level of service | ➡ | • Repository of documents of experiences with the preparation and deployment of individual NAPs |

| Work Item | 2.2.1 Identification of gaps and list of requirements |
|---|---|
| Lead: | PT |
| Contributing partners: | AT, BE, CY, DE, DK, FR, GR, IT, ~~LT,~~ MT, NL, |
| Start: | 11/21 |
| End: | 06/23 |
| Output Milestone: | M2.4 Report - A list of requirements concerning (the use of) data standards, reference profiles and metadata to be handed over to SWGs on standardisation and/or standardisation organisations.<br><br>M2.7 An updated list of requirements concerning (the use of) data standards, reference profiles and metadata to be handed over to SWGs on standardisation and/or standardisation organisations. |
| Description: | This work item intends to identify the gaps and requirements related to data standards, reference profiles and metadata. |

Inputs:
- Survey from task 3.1
- Previous development on data standards – reports and outcomes from WG4 (sWG4.1, sWG4.2, sWG4.3)
- Reference profiles from NeTEx, DATEX II and SIRI
- Coordinated Metadata Catalogue
- Report from sWG4.4: "Requirements Analysis for a new Metadata Specification"

Actions:
- Comparison of existing requirements of data standards (WG4's subWG4.3 Transmodel, SIRI, and NeTEx, and WG4's DATEX II), open data, reference profiles, and metadata
- Identification of requirements and shortcomings of data standards (WG4's subWG4.3 Transmodel, SIRI, and NeTEx, and WG4's DATEX II), reference profiles, and metadata
- Handover of prioritised lists of requirements, shortcomings, and recommendations for data standards (WG4's subWG4.3 Transmodel, SIRI, and NeTEx, and WG4's DATEX II), reference profiles, and metadata to WG3, WG4, and standardisation bodies (EC, CEN, ISO, etc.)

Outputs:
- A list of requirements concerning (the use of) data standards, open data, reference profiles and metadata, developed on a regular annual basis, to be handed over to SWGs on standardisation and/or standardisation organisations, taking data quality into account
- Provide recommendations (e.g. position papers) on standardisation gaps to EC, CEN, ISO, etc.
- Recommendations for WG4 and Steering Committee (act. 1.3) concerning standards to be used and reference profiles

| Work Item | 2.2.2 Analysis of possible implications deriving from the "common EU data space" and the "mobility data space" |
|---|---|
| Lead: | PT |
| Contributing partners: | AT, BE, DE, ITxPT, IT, MT, NL, PT |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This work item aims to assess the implications of implementing data spaces such as the common EU data space and the mobility data spaces |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Not identified | • Look into possible implications from the developments of the 'common EU data space' and 'mobility data space' | • Will be used in subtask 2.4.5 |

| Work Item | 2.2.3 Interoperability and support |
|---|---|
| Lead: | PT |
| Contributing partners: | AT, BE, CZ, DE, FR, ITxPT, ~~LT,~~ MT, NL, NPRA |
| Start: | 11/21 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This work item aims to identify useful information for service interoperability and to develop support tools for NAPs |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Outputs and conclusions from Milestones M2.4 and M2.7 (Work item 2.2.1) | • Identification of basic and recommended reference data sets supported by member states for service interoperability<br>• Identification of basic and recommended delivery processes supported by member states for service interoperability<br>• Creation and maintenance of technical artefacts and support tools for NAP relevant standards and NAP development (such as the tools developed for DATEX UVAR m2m readable formats)<br>• Inventory and prioritisation of short comings concerning | • Provide a list of recommended and basic reference data sets supported by member states for service interoperability<br>• Provide a list of recommended and basic delivery processes supported by member states for service interoperability<br>• Make available Support Tools for NAPs (e.g. UVARBox), in cooperation with WG4 on standardisation and with NAPCORE Secretariat for |

| | | centralised dissemination |
|---|---|---|
| | (the use of) data standards, reference profiles and metadata, + link with CEN TC278 WG3 (ITS Public Transport where are specified TRANSMODEL/SIRI/NeTEx) for recommendations on standardisation gaps, hampering the interoperability of NAPs, in collaboration with SWG4.3 | |

| Work Item | 2.3.1 Work plan definition and task alignment |
|---|---|
| Lead: | CZ |
| Contributing partners: | AT, BE, CY, DE, DK, GR, HU, MT, NL, PT |
| Start: | 11/21 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This task aims to develop goals to be achieved by the NAP architecture and to plan and adapt annual workplan. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Other WPs outputs<br>• CAT recommendations<br>• Yearly outputs from Work-items of WG2<br>• Project FRAME NEXT materials | • Develop annual work plan<br>• Discuss what we want to achieve with NAP Architecture, how it is going to be used, what shall be put focus on (processes, interoperability, NAP federation possibility, etc).<br>• Analyse task interdependencies, Analyse dependencies with other WPs, Liaise and report and govern the task. | • Work Plan (annually updated)<br>• Key findings on NAP operators targets on Architecture<br>• A roadmap for development of NAP architectures |

| Work Item | 2.3.2 Analysis of common elements in NAP architectures |
|---|---|
| Lead: | CZ |
| Contributing partners: | AT, BE, CY, DE, DK, GR, IT, MT, NL, NPRA, PT |
| Start: | 06/22 |
| End: | 12/24 |
| Output Milestone: | M2.9 "Harmonisation of EU NAP architectures and first layout of potential NAP federation" |
| Description: | The task aims at definition of the requirements for the NAP architecture (from existing NAPs and from data sharing communities), pathfinding of how harmonisation shall be approached for the benefit of operators and users. Identification of common NAP elements by comparison of different approaches. Definition of how FRAME architecture shall be used and adapted. The task focus is analytical to provide input to task 2.3.3 |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Analyses of the level of services (task 2.1)<br>• Analyses of standards needed (task 2.2)<br>• Best practices from demonstrators<br>• Analyses on demand Problem solutions from demonstrator work | • Set common structure for NAP architecture analysis<br>• Identify and compare current NAP architectures<br>• Review new developments in B2B and B2G mobility data sharing/exchange<br>• Identify requirements from strategic documents (WG1) that affect NAP Architecture<br>• Identify requirements from each key application area (NAPs, data, data sharing principles, standards)<br>• Set up relationship with WGs where development of key concepts shall take place (WG2-WG4)<br>• Find out where and how a common NAP reference architecture should be able to support NAP operators and users.<br>• Define necessary changes of FRAME Architecture to reach the requested level of service interoperability | • NAP Architecture types, use and requirements, including the demonstrators.<br>• NAPCORE work packages review and its impact on architecture<br>• Recommendations for NAP FRAME architecture<br>• M2.9 Harmonisation of EU NAP architectures and first layout of potential NAP federation |

| Work Item | 2.3.3 Development of the NAP model architectures |
|---|---|
| Lead: | CZ |
| Contributing partners: | AT, BE, CY, DE, DK, GR, IT, MT, NL, NPRA, PT |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | M2.11 "NAP reference architecture" |
| Description: | This is the main task where development of practical outputs will happen. Task focuses on development of several types of NAP reference architectures, based on the NAP typology. Each architecture focuses on requirements and user needs, functional and physical views as present in the FRAME approach and tools. Also other architecture products could be developed: interface identification and definition, cost and benefit analysis, communications view, set of recommendations etc. The common elements like terminology, specific requirements, data concepts shall be further defined in this task. The harmonisation focuses on taking concepts from other WGs and setting a common, mutually agreed, reference (i.e. only harmonisation is done here). |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Architecture developed by FRAME Project<br>• Architecture developed by US DOT<br>• EU-EIP support materials<br>• Recommendations and analyses from (task 2.3.1)<br>• Analyses of level of services (task 2.1)<br>• Analyses of standards needed (task 2.2)<br>• Best practices from demonstrators<br>• Input from ISO and CEN standardisation activities | → | • Development of user needs and functional requirements<br>• Support other WGs in harmonisation and pathfinding tasks related to common elements.<br>• Development of common Architecture outputs (artefacts) used for harmonisation purposes (terminology, classification, common definitions, minimum requirements etc.)<br>• In cooperation with 2.1 work on cost benefit analysis for different LoS.<br>• Development of common architecture for different levels of NAP (i.e., physical view with interfaces, standards, organisational view, roles, agreements, responsibilities)<br>• Development of specific architectures per delegated regulations with feedback from demonstrators<br>• Development of output architecture materials | → | • NAP Functional requirements and user needs<br>• NAP common artefacts (classes, definitions, plans, checklists)<br>• Model architectures, including draft outputs<br>• M2.11 NAP reference architecture |

| Work Item | 2.3.4 Support the NAP Architecture user community |
|---|---|
| Lead: | AT |
| Contributing partners: | BE, CY, CZ, DE, DK, MT |
| Start: | 06/23 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This task is for maintaining and updating (FRAME) NAP architecture materials, NAP architecture website, creating several webinars, NAP FRAME tools usability workshops |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| <ul><li>Previous activities in task 2.3</li><li>Materials developed by FRAME Project</li><li>Materials developed by other parties (i.e. Arc-IT the US national ITS architecture)</li><li>EU-EIP support materials</li></ul> | <ul><li>Update of the methodology materials for architecture use and creation</li><li>Support the use of architecture tools between project members</li><li>Creations of the content of architecture presentation, webinars and leaflets</li><li>Maintaining simple architecture related website (github)</li><li>Taking over NAP parts from FRAME</li><li>Analysis of use of NAP architecture and community feedback</li></ul> | <ul><li>Website set up</li><li>Series of FRAME / NAP architecture popularisation webinars.</li><li>Methodology for architecture creation, user guide</li><li>Methodology for architecture use, user guide</li><li>NAP Architecture leaflet</li></ul> |

| Work Item | 2.3.5 Maintenance of the NAP Architecture tools |
|---|---|
| Lead: | AT |
| Contributing partners: | BE, CY, CZ, DE, DK, MT |
| Start: | 06/23 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This task focuses on maintenance and further development of the architecture tools created by project FRAME with a focus on specific need of the NAPCORE project. The tool is the content (the reference architecture itself) and the structure and supporting software features. Primary intention is to use FRAME, but also other paths will be studied. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| <ul><li>Tools and approaches from FRAME project</li></ul> | <ul><li>Review of the available tools for architecture description</li></ul> | <ul><li>Tools review and development plan</li><li>Web site set up for tools development</li></ul> |

| | | |
|---|---|---|
| • Tools from DATEX II projects<br>• EU-EIP support materials<br>• Webinars and Architect community help<br>• Tools and approaches by US DOT in architecture creation | • Creating tool maintenance plan and methodology<br>• Hosting of the architecture development tools in a source code repository<br>• Maintaining issue tracker and developer community<br>• Testing tools for development and description of architecture<br>• Getting user feedback on the tool use<br>• Further development of tools based on user experience. | • Issues and progress report (user feedback)<br>• Annual tool development update<br>• Tool manuals and documentation |

| Work Item | 2.4.1 Interoperability support of the NAP demonstrators |
|---|---|
| Lead: | CZ |
| Contributing partners: | AT, BE, CY, DE, DK, FI, GR, ITxPT, LT, MT, NL, NRPA, PL, PT |
| Start: | 11/21 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This is a horizontal Work-item that will develop activities throughout the NAPCORE project |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Developments from task 2.1 – Definitions of levels of service<br>• Developments from task 2.2 – Milestones M2.4 and M2.7<br>• Developments from task 3.4 - Data Exchange Vision to be streamlined with the WG2 cross-border demonstrator activities-M3.14<br>• Developments from task 4.4.4 - A conceptualisation for a cross-border metadata registry, resulting in a WG2 planned demonstrator<br>• Developments on the demonstrators: outcomes from the work items 2.4.2, 2.4.3 and 2.4.4 | • Conceptualisation of the NAP demonstrators (during 2022)<br>• Support, monitoring and validation of the development of Interoperable NAP demonstrators in Work-items 2.4.1, 2.4.2, 2.4.3 and 2.4.4.<br>• Assess the opportunity to develop common NAPs by two or more Member States on selected specific datasets (e.g. for cross-border data)<br>• Evaluation and assessment of these interoperability demonstrators, lessons learnt, recommendations | • Lessons learnt, recommendations on road mapping the evolution of simpler NAP architectures, into more complex ones, considering data structure, technology, etc. for marketplaces and clearing houses |

| Work Item | 2.4.2 Interoperable NAP demonstrator with real world use of the NAP information |
|---|---|
| Lead: | PT |
| Contributing partners: | AT, BE, DE, DK, ES, ITxPT, LT, MT, NL |
| Start: | 06/22 |
| End: | 06/23 |
| Output Milestone: | M2.6 A first demonstrator with real-world use of data and different Levels of Service – 1st round |
| Description: | This Work-item represents the development of the first demonstrator with real-world use of data and different Levels of Service. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Levels of Service definition and assessment: Task 2.1 – Milestone M2.1 | ➡ | • Definition and Operationalisation of interoperability demonstrators that make real world use of the NAP information, to test scenarios, e.g. cross-border, intermodal scenarios, a mix of urban and inter-urban environments, or continuity of services based upon already harmonised data sets or stable data profiles (e.g. UVAR) | ➡ | • The first interoperable demonstrator with real-world use of data and different Levels of Service (Reinforcing collaboration with T2.1) |

| Work Item | 2.4.3 Interoperable NAP demonstrator of a marketplace or clearing house NAP |
|---|---|
| Lead: | NL |
| Contributing partners: | AT, DE, MT |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | M2.10 At least two further demonstrators with real-world use of data and different Levels of Service – 2nd round |
| Description: | This Work-item represents the development of the second demonstrator with real-world use of data and different Levels of Service. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Levels of Service definition and assessment: Task 2.1 – Milestone M2.1 | ➡ | • Definition and Operationalisation of interoperability demonstrators to test the development of a marketplace or clearing house NAP | ➡ | • The second interoperable demonstrator with real-world use of data of a marketplace or clearing house NAP and different LoS (Reinforcing collaboration with T2.1) |

| Work Item | 2.4.4 Interoperable NAP demonstrator with Metadata |
|---|---|
| Lead: | DE |
| Contributing partners: | AT, CY, LT, MT, PT |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | M2.10 At least two further demonstrators with real-world use of data and different Levels of Service – 2nd round |
| Description: | This Work-item represents the development of the third demonstrator with real-world use of data and different Levels of Service. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Levels of Service definition and assessment: Task 2.1 – Milestone M2.1 | → | • Definition of concepts/requirements for interoperability implementations, e.g. the Metadata aggregator (federation of metadata), in cooperation with subWG4.4<br>• Contribute with Task 4.4.4 on a conceptual work (pre-study, IT framework), that will occur early 2023 | → | • The third interoperability demonstrators with real-world use of data with metadata aggregator and different Levels of Service (Reinforcing collaboration with T2.1) |

| Work Item | 2.4.5 European Access Point (EAP) |
|---|---|
| Lead: | DK |
| Contributing partners: | AT, CY, LT, MT |
| Start: | 03/23 |
| End: | 12/24 |
| Output Milestone: | |
| Description: | This work item represents the development of an interoperability demonstrator of a European Access Point |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Report from Task 2.1 – Milestone M2.1.<br>• Task 2.2 – Milestones M2.4 and M2.7: list of requirements for metadata<br>• Reports from sWG4.4: analysis on NAP's Metadata | → | • Elaborate concept and (optional) interoperability demonstrator of a European Access Point (EAP), allowing visibility of NAP datasets from multiple countries in one platform. As prime dataset candidates for such demonstrator - Safety Related Traffic Information or the UVARs, expected soon to be in the scope of the RTTI Delegated Regulation. | → | • European Access Point (EAP) |

| Work Item | 2.4.6 Alternative Fuels Demonstrator |
|---|---|
| Lead: | PT |
| Contributing partners: | |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | - |
| Description: | This Work Item represents the development of the fourth demonstrator focused on alternative fuels data |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Documents from IDACS<br>• Outcomes from work item 2.4.1 | → | • Explore the required elements for the development of a common EU Access Point for alternative fuels data, creating a common interface that would act as a data gateway linking all MS NAPs in a single web platform<br>• The demonstrator should explore how both static and dynamic could be made available and accessible at European level, without creating storing duplicities with Member States' NAPs repositories, considering NAP format and need for harmonisation (linked to other WG activities).<br>• The demonstrator should consider EAFO as the web platform that would host this common EU Access Point in the future, which as part of its current development and evolution would be equipped with the corresponding technical elements to this end | → | • The conceptualisation and development of a demonstrator for alternative fuels data |

### 3.7 Work Items of WG3

| Work Item | 3.1.1 NAP monitoring |
|---|---|
| Lead: | RO |
| Contributing partners: | AT, HR, CY, CZ, FI, UITP, FR, GR, HU, LV, LT, ITxPT, LU, PT, ES, NPRA |
| Start: | 11/21 |
| End: | 12/24 |
| Output Milestone: | M3.2 "First report on NAP data availability"<br>M3.3 "Second report on NAP data availability"<br>M3.4 "Third report on NAP data availability"<br>M3.5 "Fourth report on NAP data availability"<br>M3.6 "Fifth report on NAP data availability"<br>M3.7 "Final report on NAP data availability" |
| Description: | Monitoring of European NAPs in terms of data availability and utilised data formats/standards. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Results and methodology of the EU EIP project<br>• Intermediate results of NAP monitoring survey<br>• Consultation with active participants (meetings)<br>• Feedback from other parties | • Analysis and definition of the structure and content of NAP monitoring survey's questionnaire<br>• Development of the questionnaire<br>• Analysis of acquired feedback<br>• Reanalysis and redefinition of the structure and content of NAP monitoring survey questionnaire (iterative)<br>• Redevelopment of the questionnaire (iterative)<br>• Analysis of acquired feedback (iterative)<br>• Design and development of an operational tool supporting NAP monitoring | • NAP data availability reports on a 6-month basis (M3.2-M3.7)<br>• Operational tool supporting NAP monitoring |

| Work Item | 3.1.2 NAP requirements, gaps, and content |
|---|---|
| Lead: | RO |
| Contributing partners: | AT, HR, CY, CZ, FI, UITP, FR, GR, HU, LV, LT, ITxPT, LU, PT, ES, NPRA |
| Start: | 11/21 |
| End: | 02/23 |
| Output Milestone: | M3.1 "Data content requirements, existing gaps, data dictionaries and supporting material" |
| Description: | Analysis of existing and future NAP data categories and identification of relevant requirements and gaps. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Results of NAP monitoring survey<br>• Delegated Regulations No. 885/2013, 886/2013, 2015/962, 2017/1926, and 2022/670 supplementing the ITS Directive (2010/40/EU)<br>• Consultation with active participants (meetings)<br>• On-line content and relevant literature | → | • Analysis of existing and updated Delegated Regulation supplementing the ITS Directive<br>• Review of on-line content and literature about new ITS/mobility services and relevant data categories<br>• Analysis of NAP requirements and gaps<br>• Analysis of sample NAP publications per data category | → | • NAP requirements and gaps in terms of data content (part of M3.1)<br>• NAP content mapping and enhanced understanding (part of M3.1) |

| Work Item | 3.2.1 Development of quality frameworks |
|---|---|
| Lead: | DE-BASt |
| Contributing partners: | AT, BE, CZ, EE, FI, UITP, FR, GR, HU, LT, ERTICO, ITxPT, NL, RO |
| Start: | 11/21 |
| End: | 06/24 |
| Output Milestone: | M3.8 "Data quality assessment framework and processes" |
| Description: | Provision of the layout and scope of new/enhanced data quality frameworks |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Existing data quality frameworks (EU EIP and others)<br>• Consultation with active participants (meetings)<br>• Exchange of know-how among active participants | → | • Review of existing data quality frameworks<br>• Prioritise ITS thematic areas and stages of the ITS value chain to be supported by a data quality framework<br>• Workshops about ITS data quality frameworks<br>• Elaboration of new/enhanced quality frameworks by following a case-based approach<br>• Interaction with WG5 (to support National Body processes) | → | • Context and scoping of Quality Frameworks (internal document)<br>• Data quality assessment framework and processes (M3.8) |

| Work Item | 3.2.2 Application of quality frameworks |
|---|---|
| Lead: | DE-BASt |
| Contributing partners: | AT, BE, CZ, EE, FI, UITP, FR, GR, HU, LT, ERTICO, ITxPT, NL, RO |
| Start: | 06/23 |
| End: | 12/24 |
| Output Milestone: | M3.9 "Report on pilot data quality certifications" |
| Description: | Application of the developed quality frameworks including the definition of a quality certification process and provision of certificates to selected NAP publications. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Data quality frameworks (Work Item 3.2.1)<br>• Consultation with active participants (meetings)<br>• Exchange of know-how among active participants<br>• NAP publications (sample) | ➡ | • Execution of case studies using data exchanged through NAPs<br>• Analysis of case studies results<br>• Workshops for discussing the application of the quality framework<br>• Scoping and design of quality certification process<br>• Execution of quality certification tests | ➡ | • Evidence about the developed quality frameworks (part of M3.9)<br>• Guidelines for assessing NAP data quality and certification process (part of M3.9)<br>• Provision of certificates (part of M3.9) |

| Work Item | 3.3.1 Technical options for data visualisation |
|---|---|
| Lead: | GR |
| Contributing partners: | AT, HR, CY, CZ, DK, EE, UITP, DE-BASt, ~~LT,~~ RO, NPRA |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | M3.10 "Technical options for data visualisation" |
| Description: | Elaboration of technical options for NAP data visualisation and provision of support to NAP monitoring operational tool. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • NAP monitoring results (Work Item 3.1.1)<br>• NAP content mapping (Work Item 3.1.2)<br>• Available (open source) solutions, libraries, or platforms for data visualisation<br>• Consultation with active participants (meetings)<br>• NAP publications (sample) | ➡ | • Collect visualisation needs from certain NAP operators, data providers, and/or consumers<br>• Identify visualisation requirements<br>• Review and assess the suitability of available solutions, libraries, or platforms<br>• Elaborate technical options for NAP data visualisation<br>• Support the development of an operational tool for NAP data availability monitoring (Work Item 3.1.1) | ➡ | • Technical options for NAP data visualisation (M3.10)<br>• Visualisation interfaces of the operational tool support NAP monitoring |

| Work Item | 3.3.2 Terms and conditions for data reuse |
|---|---|
| Lead: | GR |
| Contributing partners: | AT, HR, CY, CZ, DK, EE, UITP, DE-BASt, ~~LT,~~ RO, NPRA |
| Start: | 11/22 |
| End: | 12/24 |
| Output Milestone: | M3.11 "Terms and conditions for data reuse (incl. GDPR implications)" |

| Description: | Recording and harmonisation of NAP licensing frameworks, analysis of GDPR implications on NAPs, and support of NAP data valuation. |
|---|---|

| Inputs: | → | Actions: | → | Outputs: |
|---|---|---|---|---|
| • European NAP publications and procedures<br>• Relevant literature<br>• Policy documents<br>• Consultation with active participants (meetings) | | • Recording of licensing frameworks utilised by European NAPs<br>• Identification of specific needs and challenges (if any)<br>• Review and analysis of common licensing frameworks<br>• Analysis of policy documents about GDPR<br>• Analysis of followed procedures for GDPR compliance (if any)<br>• Support harmonised data licensing and GDPR compliance<br>• Analysis of data valuation and pricing principles<br>• Analysis of data providers' and data consumers' perspectives<br>• Support harmonised data valuation and fair pricing | | • Guidelines for NAP data licensing (part of M3.11)<br>• Guidelines for GDPR compliance (part of M3.11)<br>• Guidelines for data valuation and pricing (part of M3.11) |

| Work Item | 3.4.1 NAP added value scenarios |
|---|---|
| Lead: | GR |
| Contributing partners: | HR, CY, CZ, FI, UITP, DE-BASt, NL, RO |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | M3.12 "European NAPs added value scenarios in key application areas" |
| Description: | Technical demonstration of NAP added value scenarios |

| Inputs: | → | Actions: | → | Outputs: |
|---|---|---|---|---|
| • Previous EU-funded projects on ITS<br>• Recommended data formats/standards<br>• Relevant literature<br>• Consultation with active participants (meetings) | | • Definition and analysis of key application areas of ITS<br>• Definition and analysis of prioritised use cases<br>• Identification of data requirements and collection mechanisms<br>• Implementation of prioritised use cases<br>• Sharing of best practices and recorded experiences | | • Demonstrated NAP added value scenarios and use cases (part of M3.12)<br>• List of best practices and recommendations (part of M3.12) |

| Work Item | 3.5.1 Training |
|---|---|
| Lead: | GR |
| Contributing partners: | CY, CZ, DE-BASt, NL, RO |
| Start: | 01/23 |
| End: | 12/24 |
| Output Milestone: | M3.13 "Final training material for NAP content and accessibility and training events' completion" |
| Description: | Development of training material and support of training events building upon the acquired knowledge. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Results of previous work items<br>• Consultation with active participants (meetings)<br>• Training needs | ⇨ | • Determination of training purpose, target audience, and adopted training methods<br>• Definition of the format of training material<br>• Development of training material (including programme and any required interactive content)<br>• Support training events | ⇨ | • Training material<br>• Participation in training events |

### 3.8 Work Items of WG4

| Work Item | 4.0.1 Coordination task: alignment and harmonisation of data standards |
|---|---|
| Lead: | FR |
| Contributing partners: | SWGs 4.1, 4.2, 4.3, 4.4 |
| Start: | 04/21 |
| End: | 12/24 |
| Output Milestone: | M4.0.2 – Roadmap for harmonisation tasks incl. qualitative impact assessment<br>M4.0.3 – Update of the roadmap for harmonisation tasks |
| Description: | This task is aiming at the coordination between the different data standards approaches and the definition of a common roadmap for data standardisation and publication.<br>This task produces the milestones identified at WG4 level.<br>WG4 will particularly aim at joining forces towards a shared vision and effective collaboration between standards with the objective of getting a common basis to support a use case. Traffic regulations (between SWGs 4.1-Datex II and 4.2-TN-ITS) and parking data standards (between SWG4.1-Datex II and SWG4.3-Multimodal data) are specifically concerned. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Work and reports from SWGs (incl. ecosystem of the standards)<br>• Elements from other WGs and milestones such as WG2, WG3 and WG5<br>• Elements from European association (EPA and APDS mainly)<br>• WG4 Governance document | • Create a taskforce to draft the milestones (end 2022/early 2023)<br>• Cross-review work and reports from SWGs, integrate them into the milestones or plan further work needed at WG4 level, such as on parking standards in relation with parking Ambassadors, EPA and APDS<br>• Develop a methodology to identify harmonisation priorities | • WG4 Milestones<br>• Identification and edition of other deliverables<br>• Interaction with standards organisation at WG4 level |

| Work Item | Liaison with standardisation organisations (especially CEN) |
|---|---|
| Lead: | FR (WG4 leader) |
| Contributing partners: | SWGs 4.1, 4.2, 4.3, 4.4 leaders |
| Start: | 01/23 |
| End: | 12/24 |

| Output Milestone: | - |
|---|---|
| Description: | Organisation of the liaison with standardisation organisations |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Actual cooperation between WG4 and SWGs with CEN and ISO | • Analysis of contribution to standardisation bodies/organisations | • Aligned position towards standardisation bodies/organisations<br>• Proposal for formalisation of relationship towards CEN & ISO (to be decided by SCOM) |

## 3.9 Work Items of SWG4.1

| Work Item | SWG4.1. Workplan 2024 |
|---|---|
| Lead: | NL: NDW |
| Contributing partners: | Active partners: AT, BE, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK<br><br>Followers: BG, CH, DK, EE, FI, LU, LV, MT PL, SK |
| Start: | 8/23 |
| End: | 10/23 |
| Output Milestone: | Contribution to MS.1.3 "Working Programme 2024" |
| Description: | Internal milestone M4.1.206 |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Previous SWG4.1. workplan (2023)<br>• All active partners and followers<br>• SWG4.1 tasks coming from WG4 harmonisation and alignment agreements | • Get feedback from SWG4.1 partners<br>• Coordination with other WGs workplan<br>• Update of workplan | • Workplan SGW4.1 2024 to feed MS.1.3 |

| Work Item | T.4.1.1: Contribution to alignment and harmonisation Task (WG4) |
|---|---|
| Lead: | FR: CEREMA |
| Contributing partners: | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK<br>Followers: BG, CH, DK, EE, FI, LU, LV, MT PL, SK |
| Start: | Ongoing |
| End: | |

| Output Milestone: | Contribution to M.4.0.3 "Update of Roadmap for harmonisation tasks including qualitative impact assessment" |
|---|---|
| Description: | Inputs, actions, and outputs are detailed below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • The initial roadmap defined in M.4.0.2<br>• All active partners and followers<br>• Active involvement from Partner organisations:<br>  • C-Roads<br>  • TISA<br>  • Car2Car<br>  • DFRS<br>  • APDS | ➡ | • Review of the previous roadmap M.4.0.2<br>• Desktop research and partners input for new standardisation activities to be considered. That affect SWG 4.1 DATEX II work<br>• Updates on the priorities and WI's to be taken onboard of SWG 4.1<br>• Prioritisation of the activities that should take place for the alignment and coordination<br>• Proposal for liaisons to be built and/or to be maintained outside NAPCore partners.<br>• Agree with the road traffic data partners (C-Roads, TISA, Car2Car, DFRS) on alignment work and uptake of the tasks agreed regarding road-data-specific specifications | ➡ | • Identification of priorities related to SWG4.1. reflected in M4.1.102<br>• Consistent input – report for M.4.0.3 (WG4-Task 4.2. Roadmap for harmonisation)<br>• WI definitions for later sprints in 2023-2024 in T4.1.4- T4.1.5 and/or T4.1.6<br>  that will take up the change proposals in M4.1.603 and/or M4.1.406 |

| Work Item | 4.1.1.1 Identification of gaps and overlaps of existing standards |
|---|---|
| Lead: | PT: Armis |
| Contributing partners: | Active partners: NL, FR |
| Start: | ongoing |
| End: | 11/23 |
| Output Milestone: | M4.3.3 Report on gaps, overlaps of standards for multimodal data exchange |
| Description: | Inputs, actions, and outputs are detailed below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| WG 2: gaps and overlaps in standards | ➡ | Define WI's to be launched with regard to SWG 4.1 scope of gaps to cover. | ➡ | WI definitions for later sprints in 2023-2024 in T4.1.4- T4.1.5 and/or T4.1.6 that will take up |

| | | | the change proposals in M4.1.603 and/or M4.1.406 |
|---|---|---|---|

| Work Item | T.4.1.E1 Trust and data authenticity & Cyber security |
|---|---|
| Lead: | IT: Autostrade |
| Contributing partners: | Active: DE, IT, NL, <br> Observe: CZ, GR, GR-EG, RO, PT, FR NO, RO, SE, UK |
| Start: | Ongoing |
| End: | |
| Output Milestone: | - |
| Description: | Cybersecurity as such and the demand for Trust and data-authenticity in the value chain bring new requirements on all levels of the DATEX II data-exchange. This work item collects requirements from the field and derives requirements with regard to the information model, the encodings supported, as well as the exchange layer of DATEX II. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Member state use-cases providing requirements regarding trust and data-authenticity <br> Joint view on this from WG4 up to what level to align between standards. | ➡ | Collect and assess trust and data-authenticity approaches in related domains like C-ITS, TN-ITS, MMTIS and (mobility) dataspaces to be adopted by DATEX II | ➡ | WI definitions for later sprints in 2023-2024 in T4.1.4- T4.1.5 and/or T4.1.6 that will take up the change proposals in M4.1.603 and/or M4.1.406 and/or M4.1.605 |

| EPIC | T.4.1.E2 Filtering and querying of dataset |
|---|---|
| Lead: | DE-BASt |
| Contributing partners: | Active: CZ, UK, NL, DE |
| Start: | |
| End: | |
| Output Milestone: | - |
| Description: | The amount of road traffic data increases rapidly, both in terms of. In combination with new data publication technologies the need provide manageable access to the available data, standardised filtering and querying methods are required. This work item collects the requirements and assesses how this could be addressed by DATEX II. It formulates WI's for the tasks on methodology, the data model as well as exchange and encoding to develop the standardised coherent support of these features. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Member state use-cases providing requirements regarding filtering and querying of datasets<br><br>Joint view on this from WG4 up to what level to align between standards. | → | Collect requirements and options: identify some option for PSM to implement Filtering and Querying in specific technology / platform PSM | → | WI definitions for later sprints in 2023-2024 in T4.1.4- T4.1.5 and/or T4.1.6 that will take up the change proposals in M4.1.603 and/or M4.1.406 and/or M4.1.605 |

| Work Item | T.4.1.E3 New technologies' impact on content and exchange |
|---|---|
| Lead: | UK: National Highways |
| Contributing partners: | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK |
| Start: | ongoing |
| End: | |
| Output Milestone: | Contributes to M4.1.603 and/or M4.1.406 and/or M4.1.605 |
| Description: | |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| MS requirements and observations with regard to new technologies:<br> - Message brokers<br> - Open API | → | Assess impact of technology on methodology, content models and/or exchange. Further | → | WI definitions for later sprints in 2023-2024 in T4.1.4- T4.1.5 and/or T4.1.6 that will take up the change proposals in M4.1.603 and/or M4.1.406 and/or contribute to M4.1.605 |

| Work Item | T.4.1.E4 Linked Open Data |
|---|---|
| Lead: | DE: BASt |
| Contributing partners: | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR-EG, IT, NL, NO, PT, RO, SE, SL, UK |
| Start: | ongoing |
| End: | |
| Output Milestone: | - |
| Description: | Linked Open Data is seen as a powerful tool to publish and relate seemingly unassociated datasets with each other. The concept is promising in the road traffic data domain and requests to support the underpinning technical concepts bring several new requirements to DATEX II. As it is new, a use-case-by-use-case approach will be followed to see what is required where in the DATEX II set of standards and support tooling. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Requirements and observations with regard to Linked Open Data. | → | Further define work item based on use-case requirements. | → | WI definitions for later sprints in 2023-2024 in T4.1.4- T4.1.5 and/or T4.1.6 that will take up the change proposals in M4.1.603 and/or M4.1.406 and/or contribute to M4.1.605 |

| Task | T.4.1.3 User support |
|---|---|
| Lead: | NL: NDW |
| Contributing partners: | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK |
| Start: | 1-1-2023 |
| End: | 31-12-2023 |
| Output Milestone: | M4.1.302 DATEX II user forum<br>M4.1.312 Report on provided support, dissemination, education and training<br>M4.1.307 Masterclass DATEX II Programme<br>M4.1.402 Accompanying RRP's and RSP's for DATEX II v3.5 |
| Description: | In 2023 the annual DATEX II User forum will be in a format and planned after de evaluation of the 2022 User Forum. As such the forum will address best practises of deployment as well as a series of sessions addressing the usual target groups of developers, information architects and managers on the relevant data themes in NAPCORE, such as Cycling data community, EV Charging point operators, Traffic management etc.<br> The User Forum fits in a wider program of to be provided education and training, which will be enrolled and offered in various sessions throughout the year. Masterclasses aiming to enable thematic country-coaches in providing the interface between the local deployments and the DATEX II organisation is key focal point for this year.<br>In terms of user support in 2023 the website www.datex2.eu will be rebuild fitting the current status of DATEX II as core standard in the EU delegations, giving better access to support the data themes in a use case driven approach as front of the DATEX II academy.<br>In 2023 version 3.5 of DATEX II will be published containing updates of the finalised work on the parts that are under revision in 2023, (see T4.1.4). In this task the supporting documentation and related reference profiles are created and published. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Training and education plan DATEX II | → | Develop or update required training material | → | Given trainings reported in M.4.1.312 |

| | | | | | |
|---|---|---|---|---|---|
| H3 Outreach and training plan | | | | | Masterclass DATEX II programme M4.1.307 |
| DATEX II academy experience from previous years | ➡ | Run the DATEX II academy | ➡ | User statistics in M4.1.312 | |
| Requirements D2 partners, and supported stakeholder communities | ➡ | Update of the D2 website | ➡ | New www.datex2.eu, reported in M4.1.312 | |
| DATEX II Version 3.5 | ➡ | Create Recommended Reference profiles for the updated parts of DATEX II v3.5 | ➡ | Profiles available in the DATEX II webtool | |
| DATEX II Version 3.5 | ➡ | Create documentation for the updated parts of DATEX II v3.5 and the RRP's | ➡ | Documentation will be available on docs.datex2.eu | |

| | |
|---|---|
| **Task** | **T.4.1.4.1 Functional domain developments** <br> **Support Delegated regulations and ITS Directive** |
| **Lead:** | PT: Armis |
| **Contributing partners:** | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK |
| **Start:** | Ongoing |
| **End:** | |
| **Output Milestone:** | |
| **Description:** | With the revision of the ITS Directive and the Delegated regulations, new requirements will emerge regarding our standards and RRPs in order to digitally support the aims of the new Directive. In collaboration with WG2 this impact will be assessed and this WI will define the requirements for modification to the DATEX II ecosystem of Standards, Reference Profiles and accompanying documentation and training materials. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • WG2 gaps and overlaps <br> • WG4 harmonisation roadmap | ➡ | Requirement engineering on Support new datasets RTTI DR2022 670 and specify the drafts for standardisation and/or documentation. With special attention to the extending scope of the geographical scope of the networks affected. | ➡ | • Change requests to support new datasets on cycling, charging etc. <br> • Standardise historical data provision of D2 datasets. <br> • WI definitions for later sprints in 2023-2024 that will take up the change proposals or are taken onboard in |

| | | | | M4.1.603 and/or M4.1.406 |
|---|---|---|---|---|
| | | | | |

| Task | T.4.1.4.2 Functional domain developments<br>Support Traffic Management Developments |
|---|---|
| Lead: | IT: Armis |
| Contributing partners: | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK |
| Start: | Ongoing |
| End: | |
| Output Milestone: | - |
| Description: | The WI addresses the extensions and improvements required to enhance the support of traffic management developments throughout Europe, including the collaboration between traffic management centres of different road-network-type operators as well as the dynamic cooperation with private sector actors according to the SOCTARES 2.0 and TM2.0 concepts. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| from all active partners: requirements with regard to:<br><br>• Digitalisation of the centre 2 centre collaboration<br>• Common operational data picture with multi-actor input (affecting each-others information position)<br>• Enhanced urban traffic management use cases<br>• C-ITS data requirements in DATEX II<br>• VMS control | • Requirement engineering and define change requests to the relevant DATEX II artefacts in terms of standards and documentation. | • Change requests to part 8 TMP and possibly part 3: situation publication.<br>• WI definitions for later sprints in 2023-2024 that will take up the change proposals or are taken onboard in M4.1.603 and/or M4.1.406 |

| Task | T.4.1.4.3 Functional domain developments<br><br>Support Traffic and travel Data provision developments |
|---|---|
| Lead: | PT: Armis |
| Contributing partners: | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK |
| Start: | Ongoing |
| End: | |
| Output Milestone: | DATEX II version 3.5 |

| Description: | Apart from the specific mentioned data categories in the delegated regulations or traffic management scope, there are specific themes that are supported by DATEX II, but don't fit not by nature in that scope. An example is the support of information provision to cyclists. |
|---|---|

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Requirements from the cycling community based on the work of the Cycling Ambassador | → | Requirement engineering and define change requests to the relevant DATEX II artefacts in terms of standards and documentation. | → | • Change requests to relevant parts.<br>• WI definitions for later sprints in 2023-2024 that will take up the change proposals or are taken onboard in M4.1.603 and/or M4.1.406 |

| Task | T.4.1.4.4 Maintenance of standards |
|---|---|
| Lead: | UK: NH |
| Contributing partners: | Active partners: AT, CY, CZ, DE, ES, FR, UK, GR, GR egnatia, IT, NL, NO, PT, RO, SE, SL, UK |
| Start: | Ongoing |
| End: | |
| Output Milestone: | DATEX II major and minor versions |
| Description: | The DATEX II standards have two scopes:<br>  1. The CEN 16157 series addressing the content of the data (now spread over 12 parts)<br>  2. In ISO are the standards for the way of exchanging the data laid down in ISO TS 19468 and TS 14827-4.<br>All standards and parts are maintained in the Task according to the CEN/ISO revision formalities. In 2023-2024 the last parts of CEN 16157 will be revised to the version 3.0 methodology. In parallel the work on the V4 specifications will start, as it is known that the V3 data will be compatible with the V4 specifications by nature. So, a client that implements V4 specs, can also process V3 encoded data. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Requirements for version 3 revisions on:<br>• Traffic management plans<br>• Traffic regulations (alignment with TN-ITS)<br>• Status and fault<br>Stemming from:<br>• systematic reviews<br>• reported errors and bugs | → | Requirement engineering and define change requests to the relevant DATEX II artefacts in terms of standards and documentation. | → | DATEX II v 3.5 drafts to CEN with regard to these parts |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Requirements for version 4 based on:<br><br>• Existing feature requests that break compatibility within the main version.<br>• reported errors and bugs of which fixing would cause compatibility issues within the main version<br>• requirements stemming from the change requests coming from all WI that have produced change proposals with regard to methodology, data structure and exchange concepts.<br>All this fitting in the standardisation roadmap defined in WG4 level. | → | Stakeholder community consultation via one or two workshops and online sessions to discuss the overall functional breakdown of the data publications of DATEX II in the reality of DATEX II as the reference standard for numerous data categories in the EU delegated regulations, responsible to provide a coherent and understandable data provision that fits in a wider ecosystem of standards. DATEX II Light, DATEX II service oriented detailing should be clearly encapsulated in the resulting functional decomposition of DATEX II | → | DATEX II v 4.0 functional decomposition |
| | | Then Part 1: methodology can be updated enabling the required features of DATEX II towards 2030 | → | DATEX II v 4.0 methodology 1st draft |
| | | Once part 1 is sufficiently stable and the structure of the publications is agreed, the revision of Parts 2 (location), 7 (common) and 3 situation publication will start. | | |

| Task | T.4.1.5 Methodology |
|---|---|
| Lead: | DE: BAST |
| Contributing partners: | Active partners: DE, IT, NL, PT, SE, UK |
| Start: | ongoing |
| End: | |
| Output Milestone: | - |
| Description: | The DATEX II methodology is the basis of the DATEX II data models, defining the modelling rules and concepts. It defines the UML building blocks that can be used and how these are to be used. Within a major version methodology is always stable. A constraint is that some problems or new requirements cannot be addressed as these ask for changes in the methodology causing compatibility issues. Therefore, methodology can be extended with features that do not break compatibility, but nothing can be modified in a major version. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Requirements demanding methodology changes on:<br><br>• open issues<br>• enhanced Open-API support<br>• linked (open) data<br>• trust and data-authenticity<br>• support message brokers/queuing | ⇒ | Requirement engineering and define change requests to Methodology | ⇒ | DATEX II v 4.0 methodology 1st draft and proposal for standardisation |

| Task | T.4.1.6 Data Encoding and transfer |
|---|---|
| Lead: | IT: Autostrade |
| Contributing partners: | All active partners |
| Start: | Ongoing |
| End: | |
| Output Milestone: | - |
| Description: | Data encoding and transfer addresses the way the data is transferred from data supplier to data consumer. It is known as DATEX II Exchange.<br>It addresses not only the technology of exchange (platform-specific specifications) but also the logical patterns that are to be respected in order to achieve reliable information exchange, fitting the requirements of the use case. These can vary from a simple "give me what you have now" to an advanced guaranteed delivery and traceability of the information provision with or without enhanced feedback patterns to enable negotiation about activating ITS services between partners. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| Requirements from active partners with regard to Traffic management developments | ⇒ | Assess impact of proposals. Draft standardisation proposals deriving from the requirements. | ⇒ | Change requests to relevant parts.<br><br>WI definitions for later sprints in 2023-2024<br><br>that will take up the change proposals<br><br>or are taken onboard in M4.1.603 and/or M4.1.406 |
| Requirements on message brokers and filtering and querying | | Draft specifications for data distribution, message brokers and message queuing | | Draft specifications. Standardisation level to be defined in a later stage. |

| | | | |
|---|---|---|---|
| Requirements on trust and data-authenticity in combination with cybersecurity (aligned at WG 4 level) | | | |

## 3.10        Work Items of SWG4.2

### Task 4.2.1 Alignment and harmonisation

| Work Item | SWG4.2.1.2 Alignment and harmonisation; the definition of a roadmap for harmonisation . |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 31/3/2023 |
| Output Milestone: | M4.2.3 (4.2.2 is not defined) |
| Description: | Task 4.2.1.2 is part of a common task across the four NAPCORE SWGs and aims to support to align and harmonise the different data standards. The coordination between the SWGs is the responsibility of the French Ministry of Transport and the detailed approach and expected results are described in a dedicated work plan. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| <ul><li>Workshops DATEX-TN-ITS</li><li>Pre-alignments meetings in 2022 with SWG4.3</li><li>Work session metadata 9-10-2022</li><li>Eco system deliverable M4.2.1</li></ul> | <ul><li>Constitution of task force</li><li>Methodology development</li><li>Collection of qualitative impact assessment</li><li>Consolidation of all recommendations</li><li>Review between working groups</li><li>Finalisation and submission of the deliverable</li></ul> | <ul><li>Resources</li><li>Defined Methodology</li><li>Document</li><li>Report/alignment</li><li>Deliverable document WG4 M4.0.2 and SWG4.2 T4.2.1.1 M4.2.3</li></ul> |

### Task 4.2.2. Management and coordination

| Work Item | SWG4.2.2.2 Management and coordination-Management of Working group |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 31/12/2024 |
| Output Milestone: | NA |
| Description: | Daily management, administration, monitoring and reporting |

|  | • Meeting set up: bi-weekly online meetings or at least one time per month with SWG group responsible people |
|--|--|

| Inputs: | Actions: | Outputs: |
|--|--|--|
| • Weekly follow-up list<br>• TN-ITS /NAPCORE internal ERTICO meeting<br>• TN-ITS management weekly meeting<br>• TN-ITS monthly board meeting<br>• NAPCORE monthly task leader meeting | • Management of working group<br>• Daily project management<br>• Organising and executing a TN-ITS focused Member States assembly<br>• TN-ITS association NAPCORE support<br>• Continuation and further Establishment of creating liaisons, support and promotion of the activity<br>• Account management of the membership | • Follow up lists of tasks<br>• Reporting to CAT, SC NAPCORE<br>• ASR every year<br>• General Assembly<br>• Updated admin<br>• Budget control<br>• Updated membership |

| Work Item | SWG4.2.2.3 Management and coordination-Organising and executing a TN-ITS focused Member States Assembly |
|--|--|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 31/12/2024 |
| Output Milestone: | - |
| Description: | Consists of representatives of the Member States involved in the SWG<br>• Participates in the definition of requirement, priorities and change requests of the Sub Working Groups<br>• Approves annual progress of the Sub Working Groups<br>Serves as a coordinated TN-ITS input preparation for attendance to WG1 (NAP& NB platform strategy and governance)<br>• Serves as a coordinated TN-ITS input and potential attendance to task S.1.3, Internal alignment and H.2.3 Advisory Board<br>• Meeting set up: 2 times a year physical or hybrid meeting (T4.2.2.3)<br>• Workflow: invitation, agenda, meeting, report |

| Inputs: | Actions: | Outputs: |
|--|--|--|
| • Terms of Reference TN-ITS<br>• Yearly NAPCORE results | • 2 times per year General Assembly<br>• quarterly partner meetings | • Minutes of these events |

| Work Item | SWG4.2.2.4 Management and coordination-TN-ITS association NAPCORE support |
|--|--|
| Lead: | ERTICO |

| Contributing partners: | Active partners: BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
|---|---|
| Start: | Ongoing |
| End: | 31/12/2024 |
| Output Milestone: | - |
| Description: | • Provide dissemination support and guidance to the NAPCORE project, from the TN-ITS community as a multi stakeholder membership, including the industry and service providers, especially focusing on cooperation and trust elements between public and private stakeholders.<br>• Approve the definition of requirements, priorities and change requests, in line with the TN-ITS association roadmaps<br>• Meeting set up: Dedicated action within TN-ITS forum (T4.2.2.4)<br>• Workflow: report at the TN-ITS GA at least 1 time a year. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • NAPCORE WGs, in particular SWG4.2 results<br>• Advisory Board and Steering Committee | ➡ | • Create CAT inputs<br>• Create SC inputs | ➡ | • CAT and SC agreements |

| Work Item | SWG4.2.2.5 Management and coordination-Continuation and further Establishment of creating liaisons, support and promotion of the activity |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 31/12/2024 |
| Output Milestone: | - |
| Description: | Identify emerging (road) data sharing initiatives within the EU NAPCORE partners and propose interaction/alignment with them to the TN-ITS focused member state assembly.<br>• Meeting set up: ad hoc (T4.2.2.5)<br>• Workflow: Maintain Active overview & calendar online in local SharePoint site |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • TN-ITS roadmap | ➡ | • Strategic communications guidance<br>• Accounts<br>• Continuation and enhancing relationships (OADF, SENSORIS, POLIS,…) | ➡ | • Minutes of the meetings |

## Task 4.2.3 Specifications

| Work Item | SWG4.2.3 Specifications : |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 6/2024 |
| Output Milestone: | M4.2.5 |
| Description: | This task addresses the further development of the TN-ITS technical specifications. It covers the envisaged harmonisation across SWGs, the exploration of new data sharing methods, the procedures & governance for the maintenance of the technical specifications, the support to service implementers of the technical specification, incl. tools & recommendations. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • M4.2.4<br>• Results from 4.2.1 (alignment)<br>• Guidance from SWG 4.0 alignment on CEN/ISO standardisation<br>• NAPCORE priority applications | • New methods explored, tried, assessed<br>• Updated maintenance approach in place<br>• NAPCORE harmonised data specifications<br>• Guidance to (new) service deployment | • Reports<br>• Update specifications<br>• Aligned specifications<br>• Report/support guide<br>• Contribution to SWG4.0 position on CEN/ISO standardisation |

## Task 4.2.4 TN-ITS enhancements in relation to the data sharing supply chain

| Work Item | SWG4.2.4.1 TN-ITS enhancements in relation to the data sharing supply chain: Build up the Trust basis and ensure quality, integrity and security |
|---|---|
| Lead: | ERTICO (Frank Daems) (Ad interim) |
| Contributing partners: | Active partners: BE-FL, HR, CZ, FI, HU, IT, SL, NPRA, ERTICO |
| Start: | Ongoing |
| End: | 6/2023 |
| Output Milestone: | M4.2.6 |
| Description: | Establish a technical expert team with the NAPCORE Member States to research, make an inventory and perform an assessment of data trust related items and mechanisms, suitable to serve the bidirectional TN-ITS data exchange purposes within the complete data exchange chains:<br>• Producer – publisher (NAP) – processor – consumers of data<br>• Consumers of data – processor – producer (feedback loop) |

| | |
|---|---|
| | • Research the most optimal quality system that can be applied to TN-ITS services, based on the inputs performed by the EU-EIP D4.1.<br>• Define the quality levels for an identified quality system<br>• Assess new applications in view of the data attributes and services provided by TN-ITS (e.g. ISA, automation)<br>• Defining the Trust Assessment method (see next workplan) |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • D5.5 TN-ITS Go<br>• ISA-FIT Helmond project | • Trust identification (Inventory). Oct 2022<br>• Quality system identification (EU-EIP Quality framework study , others,…) Nov 2022<br>• Assessment new applications (See Action plans) Q1 2023<br>• Specify, and define a deployment approach for bidirectional TN-ITS data exchange Q1 2023<br>• Assess the complete end to end chain of TN-ITS data for vulnerabilities Q2 2023<br>• Identify the potential for certifications - Workshops, (2 /year) to develop the results Q2 2023 | • Input to Yearly Report<br>• Input to M4.2.7<br>• Questionnaire/Excel outputs<br>• Proposed quality system<br>• Proposed quality levels<br>• A list of relevant applications/services & A list of potential additional TN-ITS attributes to support these applications<br>• Proposed implementation plan to deploy the suggested quality/trust system (based on above)<br>• Suggestion for a certificate or not |

| Work Item | SWG4.2.4.2 TN-ITS enhancements in relation to the data sharing supply chain: Develop and deploy a data quality assessment methodology |
|---|---|
| Lead: | ERTICO (ad interim) |
| Contributing partners: | Active partners: BE-FL, HR, CZ, FI, HU, IT, SL, NPRA, ERTICO |
| Start: | Ongoing |
| End: | 31/12/2024 |
| Output Milestone: | M4.2.7 |
| Description: | This task will develop a generic data quality assessment methodology, taking into account all aspects of the TN-ITS data space, some of those based upon the document of the EU-EIP forum, in its activity 4.1. This activity has described a detailed analysis to address data quality, related to Real Time Traffic Information (RTTI). It also describes methods to maintain the data quality<br>• Meeting set up: online or hybrid workshops<br>• Workflow: This task is a further progression on the evolution methodology TN-ITS GO Deliverable D4.1 The task will take this background into account in its specific deployment to TN-ITS data |

space. Specifically, a clear co-operation with WG3 of NAPCORE will be established to ensure the alignment and coherence within the total NAPCORE.

| Inputs: | | Actions | | Outputs: |
|---|---|---|---|---|
| • M4.2.6 | ➡ | • EUEIP model liaison with WG3.2, CY is active in WG3 and follows T3.2<br>• Define the quality assessment methodology based on WG3.2<br>• Define a deployment approach for quality assessment<br>• Workshop: critical evaluation of quality frameworks with respect to TN-ITS data chain<br>• Identify relevant data assessment models<br>• Define minimum level of quality for TN-ITS data, in terms of accuracy, completeness, reliability, relevance and timeliness<br>• Evaluate data quality assessment tools (performance, features, reliability, conformance, serviceability)... might need to collaborate with WG5<br>• Workshop: critical evaluation and design of tool for TN-ITS | ➡ | • Documentation of related actions |

## Task 4.2.5 Engage the European NAPCORE Member States community

| Work Item | SWG4.2.5.1 Create a methodology to assess the actual status and future expectations of the Member States interested to TN-ITS |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 6/2023 |
| Output Milestone: | M4.2.8 |
| Description: | Analyse the results of the survey and address customised proposal for going forward to a number of priority Member States |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Survey results | ➡ | • Analyse the survey /conclude on major topics/actions (Cont 2022)<br>• Define customised proposals for priority MS<br>• Develop a workshop script for analysing and nudging authorities to consider TN-ITS services and /or improvements | ➡ | • Documented output<br>• Workshop script |

| Work Item | SWG4.2.5.2 Engage the European NAPCORE Member States community ; Deploy the assessment to each new MS |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL ,HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 8/2024 |
| Output Milestone: | M4.2.9 |
| Description: | • Define a customised offer how TN-ITS can help MS to adapt TN-ITS<br>• Deploy these offers via a MS roadshow |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Documented output from M4.2.8 | ➡ | • Develop customised offers to MS<br>• Organise local workshops with the authorities (involving major cities)<br>• Use the consolidated output as consultancy to EU commission on how to continue /improve services across Europe (Can be 2024) | ➡ | • Dedicated MS action plans<br>• Results of workshops (Documents)<br>• Consolidated consultancy on further EU progress on TN-ITS (Input to related CEF calls? (2024) |

## Task 4.2.6 TN-ITS focused dissemination and communication

**Editorial calendar, regular newsletter, website update**

| Work Item | SWG4.2.6.1 TN-ITS focused dissemination and communication; Ensure a good communication of the project and the dissemination of the acquired knowledge |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners: BE-FL,HR,CY,CZ,FI,HU,IT, SL,NPRA |
| Start: | Ongoing |
| End: | 12/2023 |
| Output Milestone: | M4.2.11 |
| Description: | • Act as single point of contact for maintaining a repository of support materials.<br>• Make proposals to the TN-ITS focused member state assembly concerning promotion of TN-ITS technical specifications & raising awareness via relevant media.<br>• Meeting set up: Monthly follow up with task contributors<br>• Workflow:<br>    • maintain an active editorial calendar in the online local SharePoint<br>    • Meeting set up: online or hybrid workshops |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Previous report | ➡ | • TN-ITS network meetings<br>• Maintain website<br>• TN-ITS bi-monthly newsletter<br>• Congresses (e.g. ITS EU congress Lisbon)<br>• Papers, articles<br>• Social media (LinkedIn) | ➡ | • Updated report |

| Work Item | SWG4.2.6.1 TN-ITS focused dissemination and communication - Maintaining an active TN-ITS expert community |
|---|---|
| Lead: | ERTICO |
| Contributing partners: | Active partners:  BE-FL, HR, CY, CZ, FI, HU, IT, SL, NPRA |
| Start: | Ongoing |
| End: | 31/12/2024 |
| Output Milestone: | M4.2.12 |
| Description: | • Act as single point of contact for maintaining a repository of support materials.<br>• Make proposals to the TN-ITS focused member state assembly concerning promotion of TN-ITS technical specifications & raising awareness via relevant media.<br>• Meeting set up: Monthly follow up with task contributors<br>• Workflow:<br> • Meeting set up: online or hybrid workshops<br> • Analyse results of TN-ITS GO on how MS implemented the service and what type of problems they encountered -> Formulate a survey to get info from MS, Publish, get results and analyse the survey response. Make a synthesis and verify the outcome with the MS |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Strategic communication workshop 15-9-2022<br>• Existing dissemination materials | ➡ | • Maintain an active editorial calendar in the online local SharePoint site<br>• Organise regular meetings (bi-yearly) with the TN-ITS experts and interested Member States to exchange lessons learned<br>• Membership yearly GA<br>• Quarterly partner workshops | ➡ | • Maintained and executed editorial calendar<br>• Report on all activities, publications, meetings etc. |

### 3.11    Work Items of SWG4.3

| Work Item | SWG4.3. Workplan 2024 |
|---|---|
| Lead: | ITxPT |
| Contributing partners: | Active partners: CZ, FI, FR, DE-BASt, GR, IT, NL, RO,SI, NPRA, Followers: AT, BE, HR, CY, DK, LU, MT, PL, PT, SK, GR-EG, HU, IE, LV, LT |
| Start: | 8/23 |
| End: | 10/23 |
| Output Milestone: | Contribution to MS.1.3 "Working Programme 2024" |
| Description: | Inputs, actions, and outputs described below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Previous SWG4.3. workplan (2023) | ➡ | • Get feedback from SWG4.3 partners<br>• Coordination with other WGs workplan<br>• Update of workplan | ➡ | • Workplan SGW4.3 2024 to feed MS.1.3 |

| Work Item | T.4.3.1: Contribution to alignment and harmonisation Task (WG4) |
|---|---|
| Lead: | ITxPT |
| Contributing partners: | Active partners: CZ, FI, FR, DE-BASt, GR, IT, NL, RO, SI, NPRA Followers: AT, BE, HR, CY, DK, LU, MT, PL, PT, SK, GR-EG, HU, IE,LV,LT |
| Start: | 4/23 |
| End: | 6/23 |
| Output Milestone: | Contribution to M.4.0.3 "Update of Roadmap for harmonisation tasks including qualitative impact assessment" |
| Description: | Inputs, actions, and outputs described below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • The initial roadmap defined in M.4.0.2<br>• DG Move | ➡ | • Review of the previous roadmap M.4.0.2<br>• Desktop research and partners input for new standardisation activities to be considered.<br>• Updates on the priorities for multimodal data - Prioritisation of the activities that should take place for the alignment and coordination<br>• Proposal for liaisons to be built and/or to be maintained | ➡ | • Identification of priorities related to subWG4.3.<br>• Consistent input – report for M.4.0.3 (WG4-Task 4.2. Roadmap for harmonisation) |

| Work Item | 4.3.2.1 Identification of gaps and overlaps of existing standards |
|---|---|
| Lead: | ITxPT |

| Contributing partners: | Active partners: CZ, FI, FR, DE-BASt, GR, IT, NL, RO, SI, NPRA |
|---|---|
| Start: | ongoing |
| End: | 11/23 |
| Output Milestone: | M4.3.3 Report on gaps, overlaps of standards for multimodal data exchange |
| Description: | Inputs, actions, and outputs described below. |

Inputs:
- Each active member will design its own strategy considering the type of the liaison.
- Involvement of national experts from active contributors is expected.
- For 2023:
  1. Liaison is built with TOMP API
  2. French (national) initiatives on MaaS APIs & NAP implementation
  3. Cycling Industries

Actions:
- Building liaisons based on the decided WG4 roadmap.
- Analysis and comparison of existing standards: functional scope, data elements, data producers, data consumers
- Participation in meetings, exchanging information, collect documentation, organise bilateral meetings with the relevant stakeholders.
- Focus of 2023: The analysis between TOMP API VS Transmodel and French NeTEx profile

Outputs:
- Report on the results of the liaisons (what is the status of the standardisation work that you are assigned to follow? What challenges are raised? What documentation is available.
- Report on standards analysis based on relevant liaisons, including data categories and data flows.
- Identification of gaps and overlaps

| Work Item | 4.3.2.2 Guidance to Member States on the use of multimodal data standards |
|---|---|
| Lead: | ITxPT |
| Contributing partners: | Active partners: CZ, FI,FR, DE-BASt, GR, IT, NL, RO,SI, NPRA<br>Followers: AT, BE, HR, CY, DK, LU, MT, PL, PT,SK, GR-EG, HU,IE,LV,LT |
| Start: | 1/23 |
| End: | 11/23 |
| Output Milestone: | - |
| Description: | It includes the collection of input and the preparation and delivery of training events & material. |

Inputs:
- All active partners and followers
- WG3 relevant deliverables (M3.2 report on NAP data availability and M3.1)
- WG4 relevant deliverables

Actions:
- Collection of use cases per existing/under development standard
- Analysis of results of WG3 reports on data availability and NAPs progress
- Analysis of WG4 outputs
- Collection of needs on guidance and training material

Outputs:
- Definition of functional use cases including data elements, data producers, data consumers
- Definition of type of material, channels, and methods of providing guidance
- Deliver training programme - material

| | | | | and events - link with H.3 |
|---|---|---|---|---|

| Work Item | 4.3.3 Mapping of multimodal data standards and recommendations |
|---|---|
| Lead: | ITxPT |
| Contributing partners: | Active partners: CZ, FI,FR, DE-BASt, GR, IT, NL, RO,SI, NPRA |
| Start: | 6/23 |
| End: | 9/24 |
| Output Milestone: | M4.3.5 Mapping of multimodal data standards and recommendations |
| Description: | Inputs, actions, and outputs described below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • T.4.3.2 results | | • Identification of relevant standards to be mapped<br>• Analysis of data elements and mapping<br>• Recommendation for peer-to-peer standards mapping<br>• Recommendation for standards update | | • Select the standards relevant for a mapping based on gaps & overlaps deliverable M4.3.3<br>• Crosscheck each data elements and related term & definition<br>• Guideline to map peer to peer standards<br>• Guideline to update standards according to mapping outcomes |

### 3.12 Work Items of SWG4.4

| Work Item | 4.4.2.4 Draft Specification |
|---|---|
| Lead: | SE/DE |
| Contributing partners: | CZ |
| Start: | 06/22 |
| End: | 06/23 |
| Output Milestone: | 4.4.1 |
| Description: | Inputs, actions, and outputs described below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Input from previous Work Items | | • Make a semantic mapping between existing DCAT-AP elements and NAP entities, including the essential metadata elements from the Conceptual Model<br>• For identified gaps and mismatches: make a | | • "napDCAT-AP v1.0" specification, including all artefacts<br>• Public (online) presentation or workshop about "napDCAT-AP v1.0" (= milestone 4.4.1) |

| | proposal for new/ revised RDF classes/ properties | | |
|---|---|---|---|
| | • Check how to convert metadata with predefined options into RDF-compatible "controlled vocabularies" | | |
| | • Compile the above into napDCAT-AP v1.0 , including a logical model (UML); listings of RDF classes, properties, and controlled vocabularies; and maybe accompanying docs (e.g., a usage guideline) | | |

| Work Item | 4.4.3.1 Governance & maintenance structures |
|---|---|
| Lead: | NL |
| Contributing partners: | DE, CZ |
| Start: | 09/22 |
| End: | 04/23 |
| Output Milestone: | 4.4.2 |
| Description: | Inputs, actions, and outputs described below. |

| Inputs: | Actions: | Outputs: |
|---|---|---|
| • Best practices on governance & maintenance of (meta)data standards (e.g., based on DATEX II, DCAT-AP…) | Conceptualisation on governance & maintenance for napDCAT-AP, including: <br> • *What organisational & technical structure? (e.g., responsibility of a subteam in SWG 4.4?; special website on NAPCORE website?)* <br> • *How to receive, store & process incoming issues and comments about napDCAT-AP)? (e.g., a ticket system?)* <br> • *How to discuss and approve resolutions? (e.g., which workflows?)* | • Concept paper about the "napDCAT-AP back office" (ca. 5 pages) <br> • Inauguration of a "napDCAT-AP back office", including a news announcement (= milestone 4.4.2) |

| Work Item | 4.4.3.2 Hosting of "controlled vocabularies" |
|---|---|
| Lead: | RO |
| Contributing partners: | CZ |
| Start: | 01/23 |
| End: | 08/23 |
| Output Milestone: | n/a |

| Description: | Inputs, actions, and outputs described below. |
|---|---|

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Best practices on hosting of "controlled vocabularies" (e.g., based on vocabularies hosted by "EU Publication Office" and by countries for their DCAT-AP extensions) | | Conceptualisation on hosting of "napDCAT-AP controlled vocabularies", including: <br> • *rules for controlled vocabularies (how to establish? how to maintain &update?)* <br> • *technical implementation (where and how to host? e.g. at NAPCORE website?)* | | • Concept paper about "napDCAT-AP controlled vocabularies" (ca. 5 pages) <br> • Solution for technical implementation |

| Work Item | 4.4.3.3 Support & dissemination to NAP operators |
|---|---|
| Lead: | GR |
| Contributing partners: | DE, IT |
| Start: | 02/23 |
| End: | 12/23 |
| Output Milestone: | - |
| Description: | Inputs, actions, and outputs described below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Best practices on support & dissemination of (meta)data standards (e.g., based on DATEX II, DCAT-AP…) | | Conceptualisation on support & dissemination including: <br> • Which way? (e.g., hands-on support via "hot line" etc? implementation hotlines? FAQ?) | | • Concept paper about support & dissemination for napDCAT-AP (ca. 5 pages) <br> • First concrete support & dissemination action (e.g., a first online guideline) |

| Work Item | 4.4.3.4 Revision of napDCAT-AP |
|---|---|
| Lead: | SE/DE |
| Contributing partners: | CZ |
| Start: | 09/23 |
| End: | 09/24 |
| Output Milestone: | M4.4.3 |
| Description: | Inputs, actions, and outputs described below. |

| Inputs: | | Actions: | | Outputs: |
|---|---|---|---|---|
| • Review of napDCAT-AP v1.0 | | • Update of logical model (UML); listings of RDF classes, properties, and controlled vocabularies; and | | • "napDCAT-AP v2.0" specification, including all artifacts |

| | | maybe accompanying docs (e.g., a usage guideline) | • Public (online) presentation or workshop about "napDCAT-AP v2.0" (= milestone 4.4.3) |
|---|---|---|---|

### 3.13 Work Items of WG5

The objective of this Working Group is to harmonise the compliance assessment of National Bodies/National Authorities for the Delegated Regulations (EU) No 885/2013, No 886/2013, No 2015/962, and No 2017/1926. In 2022, WG5 elaborated harmonised forms for the Self-Declarations as well as for Compliance Assessment and recommendations for the content of accompanying documents. Harmonised process drafts for Compliance Assessment and Random Inspections were discussed and agreed on. Additionally, a maturity level classification for National Bodies/Competent Authorities was developed with templates and recommendations for the reporting procedures. The results were documented in M5.2 and M5.3. The Work Programme for the upcoming years builds up on these results and is differentiated into continuous activities and specific activities, to reflect the difference between specific tasks. The specific activities are those, where new outputs are developed and specific tasks are newly created.

The specific activities are divided into three packages:

Specific Activities I will pick up the results of the year 2022 and start with pilot trials of the forms and processes that have been developed. The objective is to test the forms and improve them in practical application. Additionally, the work will be continued on the specifications, which have already started, I.e., the definition of common quality and evaluation criteria, which can be integrated into the Compliance Assessment Forms as well as on the analysis of options to implement a framework of reasonable and proportionate terms and conditions of re-use in Compliance Assessment. In parallel, a reference architecture for the National Body/Competent authorities' tasks and functionalities shall be developed.

## NAPCORE WG5 Working Programme 2023
### Specific Activities I

| Task | Activities | Lead | MS | 2023 Q1 | 2023 Q2 | 2023 Q3 | 2023 Q4 | 2024 |
|---|---|---|---|---|---|---|---|---|
| Pilot trial of Random Inspections and Compliance Assessment | Set up criteria/process for pilot trial | FR | | ▨ | | | | |
| | Identify countries taking part in the pilot trial | FR | | ▨ | | | | |
| | Carrying out the pilot trial | FR | | ▨ | ▨ | | | |
| | Reporting on the results of the pilot trial to Task 5.5 for Evaluation | FR | | | | ▨ | | |
| Define (common) quality and evaluation criteria for Compliance Assessment | Identify suitable quality & evaluation criteria (Workshop) | CZ / HR | | ▨ | | | | |
| | Discuss and agree upon (common) quality & evaluation criteria for Compliance Assessment amongst the Member States | CZ / HR | | | ▨ | | | |
| | Implement agreed quality & evaluation criteria in CA processes and forms and document results in M5.4 | CZ / HR | M5.4 | | | ▨ | | |
| Analyse framework for reasonable and proportionate terms and conditions for data re-use to be implemented in Compliance Assessment | Analyse Delegated Regulations according to Articles stating requirement related to data re-use | GR / RO | | ▨ | | | | |
| | Analyse framework for proper terms and conditions for data re-use (WG3) (workshop with WG3) | GR / RO | | | ▨ | | | |
| | Identify implementable pieces of the framework for Compliance Assessment (Degree of CA) | GR / RO | | | ▨ | | | |
| | Implement outcome in the Compliance Assessment processes and materials, if suitable | GR / RO | | | | ▨ | | |
| Develop first draft National Body/National Authority Reference Architecture | Collect structured results from Task 5.1 and 5.2 | AT / FI | | ▨ | | | | |
| | Set up the architecture structure and define elements in an functional Architecture (FRAME) | AT / FI | | ▨ | | | | |
| | Design first draft architecture | AT / FI | | | ▨ | | | |
| | Discuss first draft achitecture with Member States | AT / FI | | | ▨ | ▨ | | |
| | Develop final architecture and document in M5.9 | AT / FI | M5.9 | | | ▨ | ▨ | |

Specific Activities II addresses issues related to the creation of semi-automated tools to digitally support, simplify and optimise the compliance assessment process as well as the electronic support of Compliance Assessment. To increase the consciousness for data to comply with the DRs as well as the availability of data, the relevant contact persons and stakeholders must be motivated to participate. For internationally operating companies that also undergo the compliance assessment process, strategies for multinational compliance assessment methods should be assessed. The core task of Specific Activities II is to increase the awareness of as many organisations as possible for the necessity and usefulness of collecting data in the course of compliance assessment and to promote its completeness and precision.

## NAPCORE WG5 Working Programme 2023
### Specific Activities II

| Task | Activities | Lead | MS | Q1 | Q2 | Q3 | Q4 | 2024 |
|---|---|---|---|---|---|---|---|---|
| Semi-automated tools & electronical implementation of Compliance Assessment | Define requirements from the perspective of National Bodies for semi-automated support tools or the electronic implementation of CA processes and forms (e.g. test centres) - workshop / analysis for CA forms | BE / DE | | | X | | | |
| | Work out recommendations for possible electronically supported processes and forms | BE / DE | | | X | X | | |
| | Provide recommendations to the respective (Sub-) Working Groups (e.g. WG4 – DATEXII, MMTIS standards …). | BE / DE | | | | X | | |
| | Write implementations guidelines for electronic CA procresses and forms | BE / DE | | | | X | X | |
| Identification of the relevant organisations and implementation of strategies and actions to motivate these organisations (private, international) to provide data on the NAPs | Gather types and sectors of organisations/players affected by the Delegated Regulations (in cooperation with T1.2 and H1.3) | PT / EE | | X | | | | |
| | Identify data holders and service providers in cooperation with WG2/WG3 | PT / EE | | X | | | | |
| | Developing strategies and processes to reduce CA challenges for international organisations | PT / EE | | | X | | | |
| | Creation of an incentive system or selection of sanctioning options in case of non-compliance | PT / EE | | | X | | | |
| | Legal review of whether processes and strategies are suitable for CA procedure | PT / EE | | | | X | | |
| | Method definition or brainstorming for strategies to accelerate data availability | PT / EE | | | X | | | |
| | Develop structure for the milestone report | PT / EE | | | X | | | |
| | Write Milestone report | PT / EE | M5.6 | | X | | | |
| Prototypical multi-national compliance assessment demonstrated | Identify strategies and processes to reduce efforts for international organisations concerning CA | NL / DE | | | | X | | |
| | Analyse possibility of multi-national CA from a legal perspective (e.g. issuing of multi-national self-declarations, re-using assessment results of other National Bodies, establishing a European assessment centre …) | NL / DE | | | | X | | |
| | Set up prototypical process for multi-national CA demonstrator | NL / DE | | | | X | X | |
| | Evaluate the results of the demonstrator, work out recommendations and document results in milestone report | NL / DE | M5.10 | | | | X | |

Specific Activities III focuses on the process of evaluating the previously completed targets previously achieved in 2022 and 2023. For this purpose, criteria must be found to evaluate the results of the random inspections and the compliance assessment process as well as the self-declaration forms. Furthermore, actions and strategies have to be identified to be able to impose sanctions on non-compliant behaviour of the stakeholders. In this respect, a distinction must be made as to whether non-compliant behaviour was carried out once, several times, knowingly, or unknowingly. Additionally, the strategies and actions to accelerate the provision of data on the NAPs will be put in place. These specific activities are so far advanced that they are not expected to be implemented until 2024.

## NAPCORE WG5 Working Programme 2024
### Specific Activities III

| Task | Activities | Lead | MS | 2023 Q1 | Q2 | Q3 | Q4 | 2024 |
|---|---|---|---|---|---|---|---|---|
| Evaluation | Define an evaluation process and evaluation criteria concerning the outcome of the random inspections and compliance assessment | FR | | | | | | |
| | Define an evaluation process and evaluation criteria concerning the outcome of the implementation of common self-declaration forms | FR | | | | | | |
| | Define an evaluation process and evaluation criteria concerning the usability of the defined quality and evaluation criteria for CA | FR | | | | | | |
| | Carry out the evaluation process | FR | | | | | | |
| | Report on the evaluation results, identify gaps and define improvement measures | FR | | | | | | |
| Strategies and actions for non-compliance defined | Analyse NB/NA and national legislation related to options in regard to non-compliance (Questionnaire) | LT / IT | | | | | | |
| | Work out opportunities of action in case of non-compliance | LT / IT | | | | | | |
| | Draft a process for handling non-compliance cases | LT / IT | | | | | | |
| | Define mitigation measures/sanctions/other consequences to avoid non-compliance (once/repeatedly/repeatedly illegitimate) | LT / IT | | | | | | |
| | Evaluation of the measures and their effectiveness in achieving the set objectives | LT / IT | M5.8 | | | | | |
| Accelerate the provision of data on the NAPs | Develop consulting material for organisations (E.g. FAQ, …) concerning the requirements of the Delegated Regulations | IT / NL | | | | | | |
| | Develop suitable measures to implement the defined strategies and actions | IT / NL | | | | | | |
| | Carry out defined measures for implementing the strategies and actions | IT / NL | | | | | | |
| | Set-up an information campaign in cooperation with Act H.3 | IT / NL | | | | | | |
| | Carry out the information campaign (targeted to international organisations) | IT / NL | | | | | | |

The Continuous Activities differ from the Specific Activities in the design of the work programme. Specific activities have a clear definition of objectives to be achieved, whereas continuous activities are not intended to produce new knowledge, but to extend, expand and update existing results. Important topics here include updating the contact lists of the national bodies/competent authorities. The refinement of compliance assessment and self-declaration documents to the knowledge gained from pilot trials. There is a need for continuous updating of methods and strategies based on the results collected during the progress monitoring process. From the feedback, the quality and evaluation criteria as well as the communication with the relevant stakeholders, insights can ultimately be gained and the need for improvement identified.

## NAPCORE WG5 Working Programme 2023
### Continous Activities

| Task | Activities | Lead | 2023 Q1 | Q2 | Q3 | Q4 | 2024 |
|---|---|---|---|---|---|---|---|
| Status of National Bodies / Competent Authorities | Regular update of NB/CA contact list on the website | AT | | | X | | X |
| | Collecting evaluation according to maturity levels of NB/CA | AT | | | X | | X |
| Continuous adaptation according to the results of Pilot Trials and Evaluation | Adapt CA/SD forms related to the outcome of the pilot trials | AT | | | X | X | |
| | Adapt CA/SD forms related to the outcome of final evaluation | AT | | | | | X |
| | Adapt CA/RI processes related to the outcome of the pilot trials | FI | | | X | X | |
| | Adapt CA/RI related to the outcome of final evaluation | FI | | | | | X |
| | Adapt quality & evaluation criteria related to the outcome of the pilot trials | CZ | | | X | | |
| | Adapt quality & evaluation criteria to the outcome of final evaluation | CZ | | | | | X |
| Progress monitoring | Set up modus and a time schedule for the monitoring of the implementation of the harmonised self-declarations forms, Compliance Assessment processes and random inspection methods | FR | X | | | | |
| | Carry out the progress monitoring | FR | X | X | | | |
| | Report on the progress, identify gaps and define improvement measures | FR | | X | | | |
| Improvement | Collect suggested improvements | FR | | | | X | X |
| | Communicate the requested improvements to the related tasks: | FR | | | | X | X |
| | Self-declaration Forms | FR | | | | X | X |
| | Compliance Assessment Form & Process/Random Inspection Process | FR | | | | X | X |
| | Quality & Evaluation criteria | FR | | | | X | X |

CA = Compliance Assessment
SD = Self-Declarations
RI = Random Inspection

**WG5 Milestones 2023:**

The following WG5 Milestones will be worked out in 2023:

| MS # | Resp. | Milestone Description | Indicative date of completion (GA) | Indicative date of completion (current) | Means of verification | Ext. MS |
|---|---|---|---|---|---|---|
| M5.4 | 5.3 | Common quality & evaluation criteria for compliance assessment defined | 5/2022 | 06/2023 | Report submitted to Steering Committee | X |
| M5.6 | 5.4 | Strategies and actions to address (private, international) organisations defined | 12/2022 | 06/2023 | Report submitted to Steering Committee | X |
| M5.7 | WG5 | WG5 Working Programme | | 10/2023 | Handed over to coordinator | |
| M5.8 | 5.5 | Strategies and actions for non-compliance defined | 12/2023 | 06/2024 | Report submitted to Steering Committee | X |
| M5.9 | 5.1 | National Body Reference Architecture defined and agreed | 12/2023 | | Architecture accepted by Steering Committee | |
| M5.10 | 5.5 | Prototypical multi-national compliance assessment demonstrated | 6/2024 | 12/2023 | Report submitted to Steering Committee | X |