TECHNICAL DESCRIPTION (PART B)

COVER PAGE

Part B of the Application Form must be downloaded from the Portal Submission System, completed and then assembled and re-uploaded as PDF in the system. Page 1 with the grey IMPORTANT NOTICE box should be deleted before uploading.

***Note:** Please read carefully the conditions set out in the Call document (for open calls: published on the Portal). Pay particular attention to the award criteria; they explain how the application will be evaluated.*

PROJECT	
Project name:	European Fare Information Profile
Project acronym:	EFIP
Project Duration	24 months
Project Start Date	Signature of the agreement
Retroactive start date Justification:	N/A
Coordinator contact:	Kursley ALAIRY, CEN

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#@APP-FORM-SMPSTAND@#
#@PRJ-SUM-PS@# [This document is tagged. Do not delete the tags; they are needed for the processing.]

PROJECT SUMMARY

Project summary
The European Fare Information Profile project aims to develop a new European Technical Specification (CEN/TS) for fare information, supporting multimodal and multi-operator ticketing across the EU. Building on the Transmodel conceptual model and NeTEx exchange formats, the project will specify a harmonized profile covering fare structures, products, interoperability rules, and data exchange protocols. The proposal will ensure compatibility with existing ITS standards and rail-specific requirements, supporting EU policy goals such as the Sustainable and Smart Mobility Strategy, Delegated Regulation (EU) 2024/490 on MMTIS, and TAP TSI for rail. Coordinated by CEN/AFNOR, the project would involve a dedicated team of experts under CEN/TC 278/WG 3, with strong experience and involvement in initiatives like DATA4PT and NAPCORE-X. The standard will facilitate the publication and use of consistent, interoperable, machine-readable fare data across all modes and borders, fostering integrated mobility services, enhanced passenger information, and a more efficient ticket distribution ecosystem in Europe.

#§PRJ-SUM-PS§# #@REL-EVA-RE@# #@PRJ-OBJ-PO@#

1. RELEVANCE

1.1 Background and general objectives

Background and general objectives
Describe the background and rationale of the project. *How is the project relevant to the scope of the call? How does the project address the general objectives of the call? What is the project's contribution to the priorities of the call?*
Fares and the related costs of travel are important elements of passenger information for passengers planning trips. Information on where and how to buy tickets and the different conditions attached to different fares are also important for helping user choose and use public transport. Unlike for timetables, for which there are long established national standards and well understood conceptual models, there are relatively few exchange formats for fares, and they tend to be very specific to a mode and a few specific products. Outside of the rail sector there has been little effective standardisation and even within the rail industry not all aspects of a fare are modelled in a machine-readable form. Transmodel has developed a powerful component-based model of fares which allows any type of fare for all modes of transport, including the access rights, conditions, sales offers, distribution and prices to be described. NeTEx has implemented most of the Transmodel model. This model allows almost any type

of fare to be described and offers great flexibility to address the many different ways of constructing and marketing fares commercially that are found in the real world.

In order to create efficient implementations in NeTEx, as in the case of timetables and the EPIP, it is desirable to limit both the scope of fares covered and the approaches used. An European Fare Information Profile (EFIP) aims to establish such a set of core fare types and features and set out various rules for their use.

The EFIP project results from coordination and exchanges activities led by CEN and CENELEC since the end of 2020. These coordination activities bring together all the relevant European stakeholders in the public transport standardization (the European Commission, ERA, UIC, UITP, S2R, Allrail,…). The activities are reaching the pre-normative stage which is why funding is requested at this stage.

The goal of the coordination activities was to ensure interoperability between the solutions developed by the different organisations and support interoperability of the rail specific data models with Transmodel (EN 12896). The purpose of this initiative was therefore to evaluate potential needs for cross-organizational alignment/coordination and to offer a platform where the appropriate actions could be discussed. The EFIP project aims to facilitate data interoperability across all modes and for first- and last-mile legs of journeys. Consequently, the EFIP project's objectives directly support seamless multimodal and multi-operator ticketing services across Europe.

The EFIP project aims to cover fare structures for all modes of transport : urban, regional and long-distance public transport (bus, rail, metro, ferry, on-demand services, etc.) as defined by Transmodel.

The EFIP project is also related to EU policy and regulatory framework: the Sustainable and Smart Mobility Strategy, adopted last December 2020, has a milestone of integrated electronic ticketing facilitating seamless multimodal passenger transport by 2030. The Strategy announced a number of measures to realise this objective. The EFIP project will help fulfil the requirements of Directive (EU) 2016/797 (rail interoperability) and revised Commission Regulation 454/2011 (TAP TSI) for rail fare data, as well as the obligations under the Delegated Regulation (EU) 2017/1926 (MMTIS) and its recent amendment 2024/490 for fare information provision.

The EFIP project will also complement the European Commission's planned Multimodal Digital Mobility Services (MDMS) and Single Digital Ticketing regulations by providing the necessary data standards backbone.

The EC has joined the coordination group since March 2021 and has presented a position paper. In this paper, DG MOVE describes feedback they would like to receive from the group to support their Sustainable and Smart Mobility Strategy.

The EFIP project will build on the work of the CEF-funded Data4PT project, and NAPCORE-X project, offering a way to identify the remaining gaps and to develop a means of ensuring the expected level of interoperability. The new CEN/TS will be based on and extend the draft fare profile work done in DATA4PT and supported by ERA. Considering the time frame and existing material (full CEN/TS 16614 NeTEx series) and to secure consistency, it's strongly recommended to start by developing a CEN/TS paving the way to a EN standard when the NeTEx series will be transformed into EN.

1.2 Needs analysis and specific objectives

Needs analysis and specific objectives

Describe how the objectives of the project are based on a sound needs analysis in line with the specific objectives of the call. What issue/challenge/gap does the project aim to address?

The objectives should be clear, measureable, realistic and achievable within the duration of the project. For each objective, define appropriate indicators for measuring achievement (including a unit of measurement, baseline value and target value).

Public transport services rely increasingly on information systems to ensure reliable, efficient operation and widely accessible, accurate passenger information. These systems are used for a range of specific purposes: setting schedules and timetables; managing vehicle fleets; issuing tickets and receipts; providing real-time information on service running, and so on.

Currently, no common EU profile for fare information exists – transport operators and journey planners face a patchwork of mode-specific or national formats, hindering seamless ticketing.

Furthermore, the Delegated MMTIS Regulation mandated making fare information available including “common fare products” and “special fare products” which request a uniform format to avoid inconsistent implementations. Adnd the new amendment 2024/490 now explicitly requires common standards for fare data.

Consequently, the EFIP project aims to specify a NeTEx Profile, applicable in particular to all modes of transport (including rail). NeTEx is intended to be used to exchange information between Public Transport organisations systems containing scheduled public transport data. It can also be seen as a complement to the SIRI (Service Interface for Real-time Information) standard (EN 15531 series), as SIRI needs reference data exchange in the scope of NeTEx before any possible real-time exchange.

Well-defined, open interfaces have a crucial role in improving the economic and technical viability of public transport Information Systems of all kinds. Using standardized interfaces, systems can be implemented as discrete pluggable modules that can be chosen from a wide variety of suppliers in a competitive market, rather than as monolithic proprietary systems from a single supplier. Interfaces also allow the systematic automated testing of each functional module, vital for managing the complexity of increasing large and dynamic systems. Furthermore, individual functional modules can be replaced or evolved, without unexpected breakages of obscurely dependent function.

NeTEx improves a number of features of public transport information and service management:

- Interoperability – the standard will facilitate interoperability between information processing systems of the transport operators by:
    - introducing common architectures for message exchange;
    - introducing a modular set of compatible information services for real-time vehicle information;
    - using common data models and schemas for the messages exchanged for each service;
    - introducing a consistent approach to data management.
- Technical advantages include the following: reusing a common communication layer shared with SIRI for all the various technical services enables cost-effective implementations and makes the standard readily extensible in future.

Profiles are an additional document to the standard which specifies additional rules for implementation in a given context. The profile contains information such as:

- Details of the objects used in an exchange
- Details on the options proposed by the standard
- Details on optional elements
- Precision on the codifications to be used
- …

The reason behind the detail of the profile specifications is that it facilitates subsequent implementations. A developer intending to implement a certain service or type of service in a given environment would just need to access the corresponding standard profiles, and implement the options and parameters already specified in the document.

The activities and intermediate results of DATA4PT project showed that the harmonisation and coordination of standardisation activities is key for advancing in the implementation of delegated regulations and increasing the adoption of EU standards by the MS. The harmonisation and coordination of standardisation activities will contribute to the establishment of an interoperable environment across Europe and consequently it will enable multimodal travel information services. DATA4PT and NAPCORE-X projects (ongoing CEF PSA) are paving the way towards this direction. However, technical work for specific domains such as railway is required to go further in the development of standards according to such outcomes and identified area from these EU projects. Therefore, EFIP project complements NAPCORE-X activities regarding data standards harmonisation on the domain of Railway in particular, under the multimodal standards.

The objectives of EFIP project are:

1. *Define common data models for various fare structures (flat, distance-based, zonal, time-based, and yield-managed fares)*
2. *Define standard representations for fare products (discounts, passes, special tariffs).*

3. *Develop rules for interoperability between operators and modes, including cross-border scenarios.*
4. *Specify data exchange protocols ensuring compatibility with other ITS standards.*

These objectives have been defined based on the gaps identified by the coordination group and DATA4PT results.

The expected outcomes of EFIP project are:

- *Drafting and publishing a comprehensive CEN/TS specification for EU fare data by 2026 covering at least common and special fare products as listed in MMTIS data categories annex;*
- *Achieving consensus and formal approval of the standard by CEN members (target: approval by ≥ 2/3 of national bodies);*
- *Ensuring the standard supports all modes and is illustrated with real-world fare cases from at least 3 countries.*

#§PRJ-OBJ-PO§# #@COM-PLE-CP@#

1.3 Complementarity with other actions and innovation

Complementarity with other actions and innovation

Explain how the project builds on the results of past activities carried out in the field and describe its innovative aspects. Explain how the activities are complementary to other activities carried out by other organisations.

EFIP project is of significant strategic importance for CEN to strengthen leadership and influence of CEN in multiple mobility subsectors.

EFIP objectives are part of the Rolling plan for ICT standardisation: “To take full advantage of the benefits that ICT-based systems and applications can bring to the mobility sector it is necessary to ensure interoperability and continuity of the services among the different systems throughout Europe [and] to increase the number of multimodality options and improve travel and traffic management. contributing to the EU’s single market, competitiveness and the Green Deal objectives” In particular action 12b on ITS – Multimodal Services: “continue developing NeTEx and SIRI European minimum profiles in order to support the requirements of the priority action A alongside an EU fare information profile.”

Also, EFIP project is an answer to EC request based on preliminary workshop initiated in 2021 by CEN-CENELEC in the frame of harmonization of rail and mobility standardisation and in the frame of the DATA4PT project (2020/2024)

EFIP project will support the Sustainable and Smart Mobility Strategy, adopted last December 2020 and in particular the revisions of both TAP TSI and MMTIS regulations (Commission Delegated Regulation (EU) 2024/490 amending (EU) 2017/1926 supplementing Directive 2010/40/EU of the European Parliament and of the Council regarding the provision of EU-wide Multimodal Travel Information Services).

Involvement of CEN experts from TC278 WG3 is necessary to secure the development of EU fare information profile. In its absence, the Technical Specification will be developed outside the framework of CEN or with insufficient input from CEN experts, hence leading to the provision of an unbalance and faulty recommendation to EC.

EFIP project is related to normative work as the main objective is the development of a new Technical Specification (CEN/TS).

#§COM-PLE-CP§# #§REL-EVA-RE§# #@QUA-LIT-QL@# #@CON-MET-CM@#

2. QUALITY

2.1 Concept and methodology

Concept and methodology

Outline the approach and methodology behind the project. Explain why they are the most suitable for achieving the project’s objectives.

Scope can be defined in terms of use cases, model elements (and their organisation) supported and the target fare types and features to be supported. The most practical way of limiting the scope of the Fare profile is to specify a list of the product types, types of tariff structures and features to be supported. A **catalog of representative use cases** (e.g. a cross-border rail journey, an urban multimodal trip with park-and-ride, a monthly pass with discount, etc.) will be developed to ensure the profile handles all of them. This use-case driven methodology will guarantee that the standard covers real-world scenarios across modes.

The technical work of the EFIP project will be executed in the WP2 as described in §4.2 around key phases:

- Requirement gathering and use-case analysis
- Drafting of the profile specification
- Validation and review
- Formal CEN consultation and approval

The European Commission charged the European Committee for Standardization (CEN) to develop European standardization deliverables to build on the long-term experience with regard to European Standardization. The development of standardization deliverables is subject of the CEN-CENELEC Internal Regulations and further guidance documents that are, if necessary, adapted to meet new needs. The approach involves the management of the Technical Committee to inform and involve the stakeholders and member countries as well as the elaboration of the deliverables by seeking consensus within a fixed time schedule and with appropriate quality checks. In order to involve stakeholders and member countries, national delegates and experts can be appointed for participation in the CEN committees. For projects that require external expertise, tenders are launched to select appropriate subcontractors that will make their contribution to the projects in support of the solid and experiences structure within the CEN committees.

National experts and key industry players will participate via CEN/TC 278/WG3 and liaisons. CEN/TC 278/WG 3 is the main CEN working group involved in this project as it deals with standardisation of data model and data exchange standard in Public Transport:

- Transmodel / EN12896 is the European reference data model for public transport information. provides an abstract model of common public transport concepts and data structures that can be used to build many different kinds of public transport information system, including timetabling, fares, operational management, real time data, journey planning etc
- NeTEx / TS16614 is a CEN Technical Standard for exchanging Public Transport schedules and related data including Public Transport network topology, scheduled timetables, fare information and alternative modes.
- Using Transmodel (EN 12896) as the reference ontology, The EFIP project will extend and refine NeTEx (CEN/TS 16614-3 for fares) to create the EFIP profile (new CEN/TS). Equivalence to other specifications may also be relevant.

A dedicated Project Team of 5 technical experts, as described in §2.3, will be contracted to draft the standard, working under CEN/TC278/WG3 supervision. The PT will hold bi-weekly meetings and produce intermediate drafts for review by the national delegates.

In addition, periodic stakeholder workshops or consultations (beyond the formal CEN enquiries) may be set up to gather input from public transport operators, technology suppliers, MaaS providers, passenger organizations, etc.

#§CON-MET-CM§# #@CON-SOR-CS@#

2.2 Consortium set-up

Consortium cooperation and division of roles (if applicable)

Describe the participants (Beneficiaries, Affiliated Entities and Associated Partners, if any) and explain how they will work together to implement the project. How will they bring together the necessary expertise? How will they complement each other?

In what way does each of the participants contribute to the project? Show that each has a valid role and adequate resources to fulfil that role.

***Note:** When building your consortium you should think of organisations that can help you reach objectives and solve problems.*

The proposed project will be implemented through a well-structured and complementary consortium consisting of CEN (Beneficiary) and AFNOR (Affiliated Entity).

CEN, as the European Committee for Standardization, provides the overarching platform for standardization and coordination of technical committees, including CEN/TC 278 on Intelligent Transport Systems (ITS). Its role is essential in ensuring that the project outcomes align with existing European standardization frameworks.

AFNOR, a CEN member and national standardization body, will lead the project management, coordination, and administrative follow-up. AFNOR ensures the secretariat function for the relevant CEN/TC 278 working groups and will act as the operational lead throughout the project.

CEN and AFNOR will establish a Project Team (PT), with members selected through an open call for experts (see Clause 2.3 for details). Candidates are expected to have strong experience in intelligent transport systems for public transport, including open IT architecture and interoperability, with familiarity in standards such as Transmodel, SIRI, and NeTEx. In addition, solid knowledge of or participation in relevant EU projects—such as DATA4PT and NAPCORE-X—or involvement in associations like ITxPT is highly desirable to ensure harmonised global coordination. Experience in standards mapping and rail-related standardisation is also welcome.

The work of the PT will be closely aligned with the formal CEN standardization process, particularly with the activities of CEN/TC 278/WG 3 (Public Transport).

The work plan of the PT will be synchronized with the meeting schedules and deliverable timelines of WG 3, ensuring that all draft texts and proposed updates are submitted in time for review and consensus-building.

Key stakeholders will be directly represented in the work of CEN/TC 278 through National Standard Body Delegations. Liaisons will be established with independent European or international European- based organizations that, through its recognized expertise, can provide relevant inputs to the work of CEN/TC 278.

Key stakeholders will be directly involved through National Standardization Body (NSB) delegations in CEN/TC 278, ensuring national and sectoral perspectives are integrated. In addition, liaisons will be established with independent European or international organizations, whose recognized expertise will provide valuable input to the deliverables.

This PT will collaborate closely with CEN/TC 278/WG 3 and the secretary of CEN/TC 278 to ensure that the main milestones outlined in the NWIP are adhered to. At each relevant consultation and voting milestone, WG3 will provide the draft for review and approval by the CEN/TC.

Regular status reports will be provided to WG 3 for information and seeking assistance on issues where required. The PT will consider and take due account of inputs from the WG 3 and its members.

#@WRK-PLA-WP@#

3. WORKPLAN, WORK PACKAGES, ACTIVITIES, RESOURCES AND TIMING

3.1 Work plan

Work plan

Provide a brief description of the overall structure of the work plan (list of work packages or graphical presentation (Pert chart or similar)).

The project includes 2 Work Packages, to be conducted in parallel:

1. Project management, coordination and communication,
2. Technical developments of CEN/TS - EFIP

The relevant activities are listed as follows:

#	Activity	Due date
WP1	Signature of contract between CEN and AFNOR	Start (S)
WP1	Call for experts	S-2
WP1	Selection of the experts for the Project Team (PT)	S-1
WP1	Contracts with subcontractor and Kick-off meeting & Work plan for the Project Team	S+1
WP2	Definition of the deliverable scope (preparation and adoption by CEN members	S+4
WP2	Working draft EFIP (new CEN/TS)	S+11
WP2	Consensus and consolidation – Review of comments from CEN/TC 278 review and EC consultation	S+16
WP2	Preparation of the final draft for formal vote	S+19
WP2	Interim report to EC	S+12
WP2	Finalization of CEN/TS	S+21
WP2	Publication of CEN/TS by CEN (stage code 60.60)	S+23
WP2	Final report to the EC	S+24
WP2	Dissemination and visibility	S+24