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Contents

Page

European foreword ... 3
Introduction ... 4
1 Scope ... 5
2 Normative references ... 5
3 Terms and definitions ... 5
4 Symbols and abbreviations ... 9
5 Functional description of the alternative modes ... 9
5.1 Introduction ... 9
5.2 Categorization of modes of transport ... 9
5.3 Links to Mobility as a service ... 13
5.4 Functions and aspects related to the alternative modes ... 14
5.5 Cycling ... 19
5.6 Car sharing ... 20
5.7 Carpooling ... 23
6 Data requirements ... 30
6.1 General ... 30
6.2 Data model ... 30
Annex A (normative) **Data dictionary** ... 80
Annex B (informative) **Use cases** ... 96
Annex C (normative) **Additional Common Concepts — Extension to EN 12896-1:2016, Public Transport Reference Data Model — Part 1: Common Concepts — Methodologies and Conventions** ... 101
Annex D (informative) **Additional Information on Carpooling** ... 121
Bibliography ... 123

European foreword

This document (CEN/TS 17413:2020) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

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Introduction

Services already present in the urban environment such as multimodal information and traffic management and control are already well understood. Standard reference data models and data exchange formats for the use of these services, in particular data sets describing the public transport offer, are already standardized and available. However, a previous study has identified that there is a need for reference data models to accommodate emerging modes of transport to allow seamless transitions for the traveller between all available modes. Examples of these new modes are car and cycle sharing, car-pooling, and intelligent parking (Park & Ride).

The Commission Delegated Regulation (EU) 2017/1926 requires that Member States facilitate the easy exchange and reuse of data for the provision of comprehensive travel information services. Transport authorities, transport operators, infrastructure managers or transport on demand service providers as appropriate should make the static data, corresponding metadata and information on the quality of the data accessible to users through a national or common access point.

This document defines a reference data model, in order to allow integration of these modes into urban multimodal services (e.g. trip planning systems).

This document considers in first place static data, but some aspects of real-time (dynamic) information are taken into account in order to enable efficient traveller information and includes: cycle sharing; car sharing; carpooling and cars with a driver (taxi).

To form this document, information has been gathered from outreach to stakeholders, Transmodel (EN 12896 series), and documents in the Bibliography.

CEN/TS 17413 is a project under the European Standardization body CEN/TC 278 - Intelligent Transport Systems Working Group 17 (Urban ITS). Its title is Models and definitions for new modes. The project team members have worked within Intelligent Transport Systems for many years as developers, implementers and standardizers.

1 Scope

This document defines new modes in a reference data model, in order to allow integration of these modes into urban multimodal travel services (e.g. trip planning systems).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12896-1:2016, *Public transport – Reference data model – Part 1: Common concepts*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1 General terms and definitions:

3.1.1
attribute
property of an entity

3.1.2
conceptual data model
description of a real-world domain in terms of entities, relationships and attributes in an implementation independent manner in order to provide a structure on which the rest of the development of an application system can be based

3.1.3
conceptual level
conceptual data model, in the context of data modelling

3.1.4
database
collection of data

Note 1 to entry: Often used in the sense of the physical implementation of a data model.

3.1.5
data domain
data structure made up of data related to each other, through the fact that there is a functional area or group of functions using this data set as a whole

3.1.6
data model
description of a real-world domain in terms of data and relationships