CEN TC278 WG3
ITS for Public Transport

The role of 5T s.r.l.

Fabrizio Arneodo
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CEN TC278/WG3 SG9 Project leader

CEN/TC 278
ITS standardization

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European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

International Telematic Standardisation Committees for Public Transport (PT)

ISO TC 204

Intelligent Transport Systems

WG 8: Public Transport

IEC TC 9

Electrical equipment and systems for railways

Several working groups

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European Telematic Standardisation Committees for Public Transport (PT)

CEN TC 278

Road Transport Traffic Telematik

WG 3: Public Transport

WG 4: Traffic & Traveller Information

CEN TC 224

Machine-readable cards, related device interfaces and operations

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WG11: Transport applications

CENELEC TC 9x

Electrical and electronic applications for railways

SC9XA: Communication, Signalling & Processing System

SC9XB: Rolling Stock

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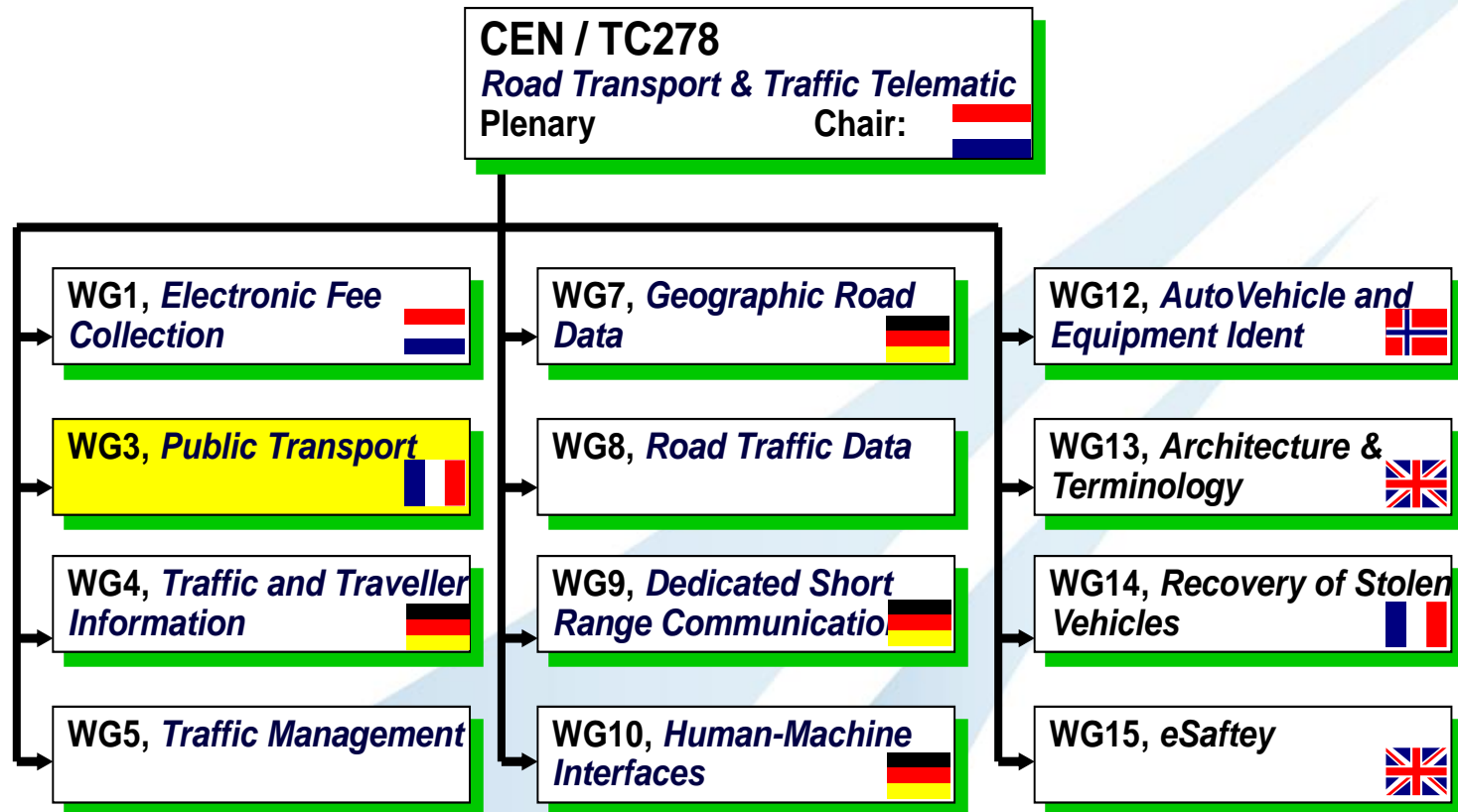**CEN/TC 278** ITS standardization

European Standardization

- **CEN** and **CENELEC** cooperate with International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).
  - Vienna Agreement (ISO-CEN)
  - Dresden Agreement (IEC-CENELEC).

- **CENELEC** (Electrotechnical standardization), **ETSI** (telecommunications) and **CEN** (other technical areas) form the European system for technical standardization.
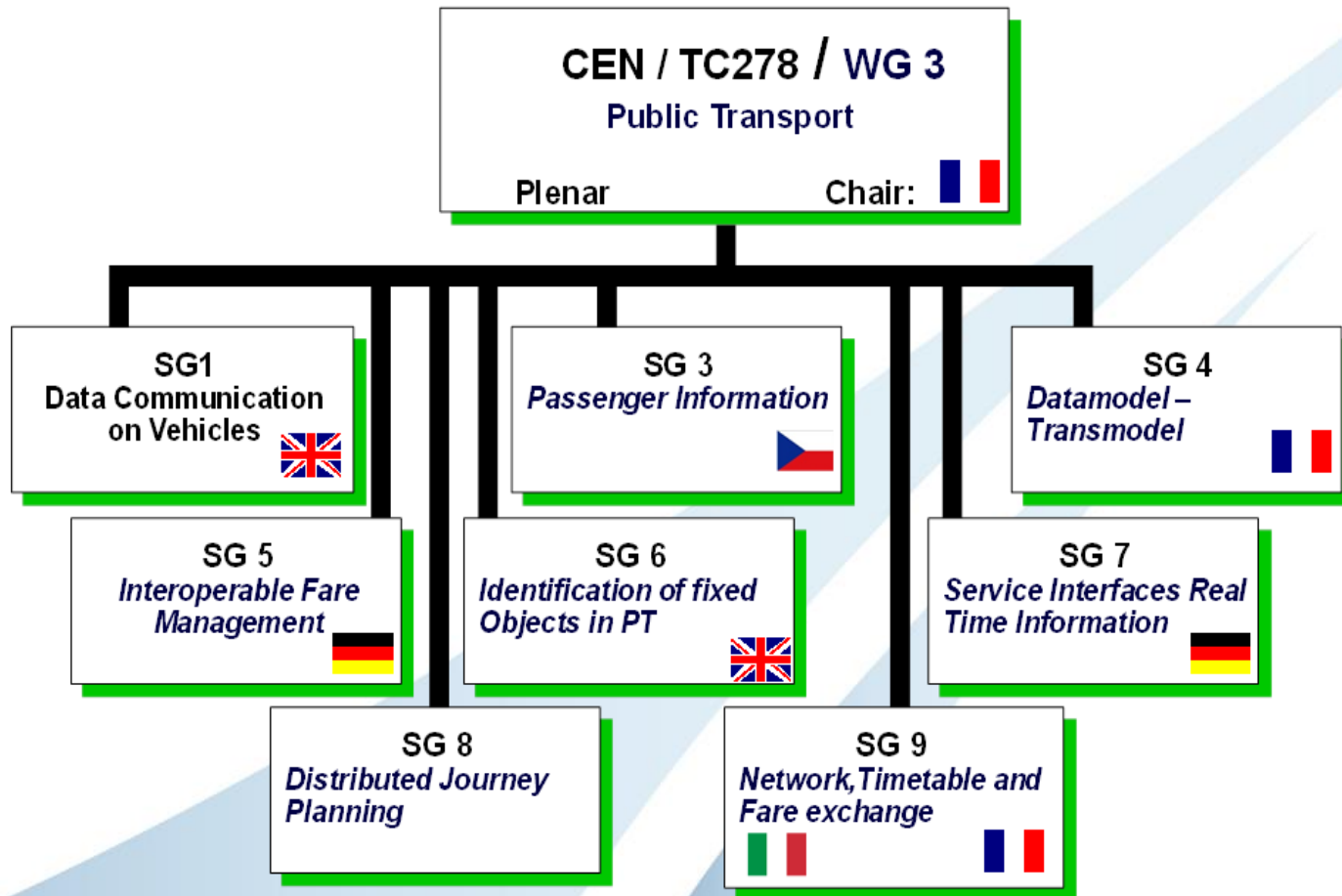
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Structure of CEN TC 278
Road Transport Traffic Telematics (RTTT)

CEN / TC278
Road Transport & Traffic Telematic
Plenary   Chair:

WG1, *Electronic Fee Collection*	**WG7,** *Geographic Road Data*	**WG12,** *AutoVehicle and Equipment Ident*
WG3, *Public Transport*	**WG8,** *Road Traffic Data*	**WG13,** *Architecture & Terminology*
WG4, *Traffic and Traveller Information*	**WG9,** *Dedicated Short Range Communication*	**WG14,** *Recovery of Stolen Vehicles*
WG5, *Traffic Management*	**WG10,** *Human-Machine Interfaces*	**WG15,** *eSaftey*

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Structure of CEN TC 278 WG 3
Public Transport (PT) – (1/4)

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Structure of CEN TC 278 WG 3
Public Transport (PT) – (2/4)

- **SG1** - On Board Data Bus Transmission (CAN-OPEN/WORLDFIP)
  - Standardisation of the application rules concerning the WORLDFIP or CAN data bus transmission.
- **SG3** - MMI in Public Transport (VIP)
  - Standardisation and recommendations concerning functional and ergonomic aspects of public transport for traveller
- **SG4** - Reference Data Base Model (TRANSMODEL)
  - Reference data base model allowing links between different transport application programs like scheduling, Passenger information, Fare collection, Personnel Management.

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Structure of CEN TC 278 WG 3 Public Transport (PT) – (3/4)

- **SG5** - Interoperable Fare Management System Architecture (IFM)
  - Definitions and Requirements of a reference functional architecture for Automatic Fare Management systems (electronic tickets).
- **SG6** - Identification of Fixed Objects in Public Transport (IFOPT)
  - Model and identification principles for the main fixed objects related to public access to Public Transport
- **SG7** - Standard Interface for Real-Time Information (SIRI)
  - A communication layer, which defines common procedures for requesting and exchanging of PT data.

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Structure of CEN TC 278 WG 3
Public Transport (PT) – (4/4)

- **SG8** - Distributed Journey Planning System (DGPS)
    - Supporting action for the European Railway Agency and coordination of rail standard with urban and suburban standards like IFMSA, IFOPT and SIRI based on TRANSMODEL.

- **SG9** - Network and Timetable Exchange (NeTEx)
    - Exchange of most of the PT related scheduled information: network description, timing information and fares. Supporting action to complete SIRI services on Network, Timetable and Fare exchanges.

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The role of 5T in ITS standardization

- Since 2010 5T has an active role in CEN TC278/WG3 (ITS for Public Transport)

- It works on SG1, SG4, SG7 and SG9

- In April 2014 5T has been selected as part of experts team for the execution of the work called ***Electronic Passenger Transport Information Systems (EPTIS – SG9).***

- 5T covers the role of SG9 Project Leadership (F. Arneodo), under GA 2025-25

- At italian level 5T participates at UNI/CT 525 "UNINFO", in charge to vote the International standards adoption.

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EPTIS – Scope and objectives (1/2)
(as defined in the GA 2012-25)

- The overall Scope is the preparation of the deliverable(s) associated with the following task(s) as defined in the Grant Agreement:

  - **Task 1:** to develop **Technical Specification** for NeTEx Part3 on Fare Structure data, (including UML model and XML schema)
    - Main output: an approved CEN Technical Specification

  - **Task 2:** to develop **Technical Report** with appropriate expository material (e.g. white papers, working examples) and materials that will explain the standard and assist with its dissemination and rapid uptake.
    - Main output: an approved CEN Technical Report

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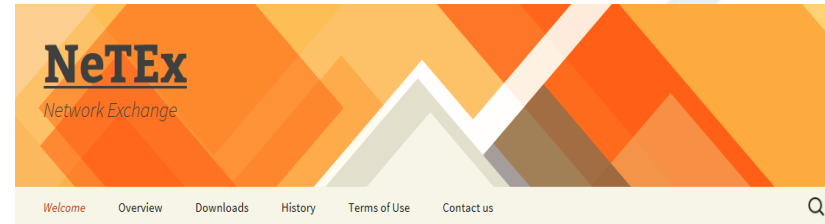# EPTIS – Scope and objectives (2/2)
(as defined in the GA 2012-25)

- Standard will cover both rail data as specified by **TAP TSI** requirements and bus and other mode data as identified by **Transmodel** and national standards.

- Standard will rely on the best practice of established national standards such as **VDV**, **TransXChange**, **BISON** and **NEPTUNE.**

- Finally, the work will also set out to harmonize wording between NeTEx Part 3 and **IFM** (EN ISO 24014 Interoperable fare management system) which is one of the major users of the data exchanged by NeTEx.

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EPTIS – Dissemination activities
NeTEx WEB Site

- It has been purchased the internet domain for the creation of NeTEx official WEB Site

- A preliminary draft version available on internet at the address http://netex-cen.eu/

- It is based on WordPress CMS, and accounts for each PT meemer have been created

NeTEx
Network Exchange

Welcome   Overview   Downloads   History   Terms of Use   Contact us

Welcome

NeTEx is a prCEN/ Technical Standard currently in development.
The goal of NeTEX is to provide a efficient European wide standard for exchanging Public Transport schedules and related data.

NeTEX is intended to be a general purpose format capable of exchanging timetables for Rail, Bus, Coach, Ferry, Air or any other mode of public transport. It includes full support for rail services and can be used to exchange UIC (International Union Of Railways) data .

NeTEx is based on the CEN Transmodel standard which specifies a Conceptual model for Public Transport data, extended with additional concepts for stops and stations from the CEN Technical standard IFOPT (Identification of Fixed Objects in Public Transport).

NeTEX uses a fully articulated model that represents PT concepts as well characterised, layered abstractions; the format is designed for the efficient, updateable exchange of complex transport data between distributed systems. This allows the data to be used in modern web services architectures and to support a wide range of passenger information and operational applications.

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Thanks for your attention !

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