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

Standardizacija na področju ITS (JPP)

CEN TC278 (ITS)

WG3 (Public transport)

SG4 (Transmodel), SG9 (NeTEx), TAP TSI

20.5.2014

dr. Andrej TIBAUT

UM FG

Predstavitev

- **Andrej Tibaut (andrej.tibaut@um.si)**
  - **vodja Katedre za Gradbeno in Prometno informatiko na UM FG (http://fg.um.si/kgpi)**
  - **vodja raziskovalne skupine PR3MIK na podjetju Lineal (www.lineal.si/pr3mik)**
  - **Standardizacija (ITS, http://www.itsstandards.eu):**
    - član SIST/TC ITC Informacijska tehnologija (2011-)
    - član CEN TC278/WG3/SG9 (NeTEx), predstavnik iz SLO
    - član CEN TC278/WG3/SG4 (Transmodel), predstavnik iz SLO

Standardizacija za JPP v Sloveniji

- Slovenski inštitut za standardizacijo (SIST) predstavlja SLO v CEN
  - tehnični odbor SIST/TC ITC Informacijska tehnologija
  - delegira zainteresirane eksperte v delovne skupine CEN (iz SLO: 1 za JPP, 1 za ITS)
- kupujemo specifikacije standardov —> lahko bi jih so-ustvarjali
- pogrešam pretok informacij med deležniki JPP (“mirror groups”)
- javni razpisi za JPP —> zahtevati rešitve skladne s standardi
- sorodna področja: “nacionalna ITS arhitektura” se ukvarja predvsem z infrastrukturo in telekomunikacijami, sistemi za lociranje, nadzor prometa, itd.

Evropski odbori za ITS (telematiko) v JPP

CEN TC 278

Intelligent Transport System

prej: Road transport and traffic telematics

WG 3: Public Transport

WG 4: Traffic & Traveller Information

CEN TC 224

Machine-readable cards, related device interfaces and operations

WG11: Transport applications

CENELEC TC 9x

Electrical and electronic applications for railways

SC9XA: Communication, Signalling & Processing System

SC9XB: Rolling Stock

Standardizacija globalno
Mednarodni odbori za ITS v JPP

ISO TC 204

Intelligent Transport Systems

WG 8: Public Transport

IEC TC 9

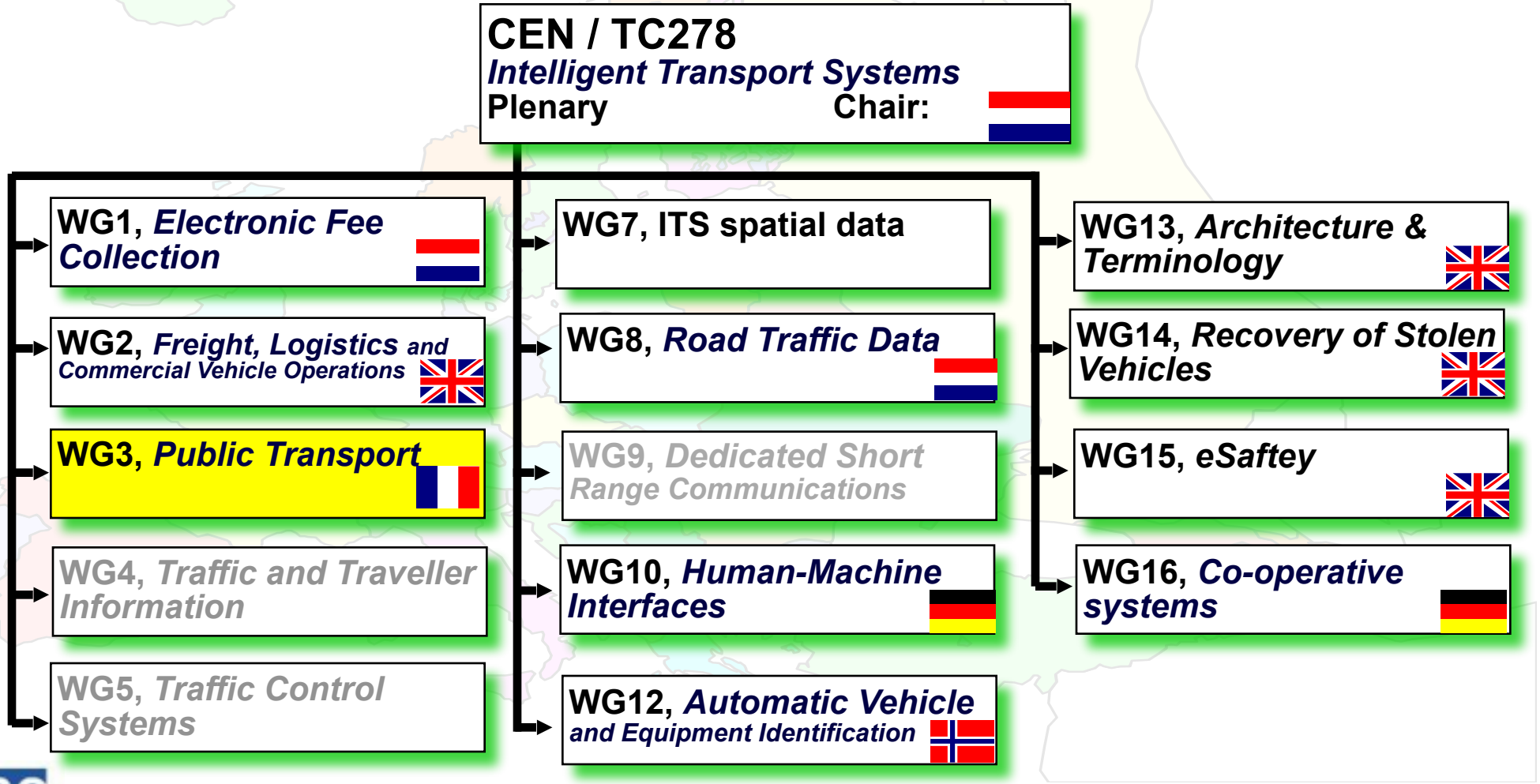
Electrical equipment and systems for railways

Več delovnih skupin

Standardizacija v Evropi

- V Evropi CEN in CENELEC sodelujeta z nacionalnimi člani (npr. SIST), z International Organization for Standardization (ISO) in International Electrotechnical Commission (IEC).
  - Vienna Agreement (ISO-CEN)
  - Dresden Agreement (IEC-CENELEC).
- CENELEC (standardizacija v elektrotehniki), ETSI (telekomunikacije) in CEN (ostala tehniška področja) oblikujejo evropski sistem za standardizacijo v tehniki.

Struktura CEN TC 278
Intelligent Transport Systems (ITS)



V 2013 preimenovano iz “Road transport and traffic telematics” (= Sistemi za vodenje in informatiko cestnega prometa) v “Intelligent transport systems” (= Inteligentni transportni sistemi) .

WG3, *Public Transport*

CEN TC 278 ITS WG 3
Public Transport (PT)

WG3 razvija standarde za vodenje, nadzor in informatiko v javnem transportu.

Oblike prevoza: pretežno avtobusi, tramvaji, delno vlak, vključno s prometno infrastrukturo.

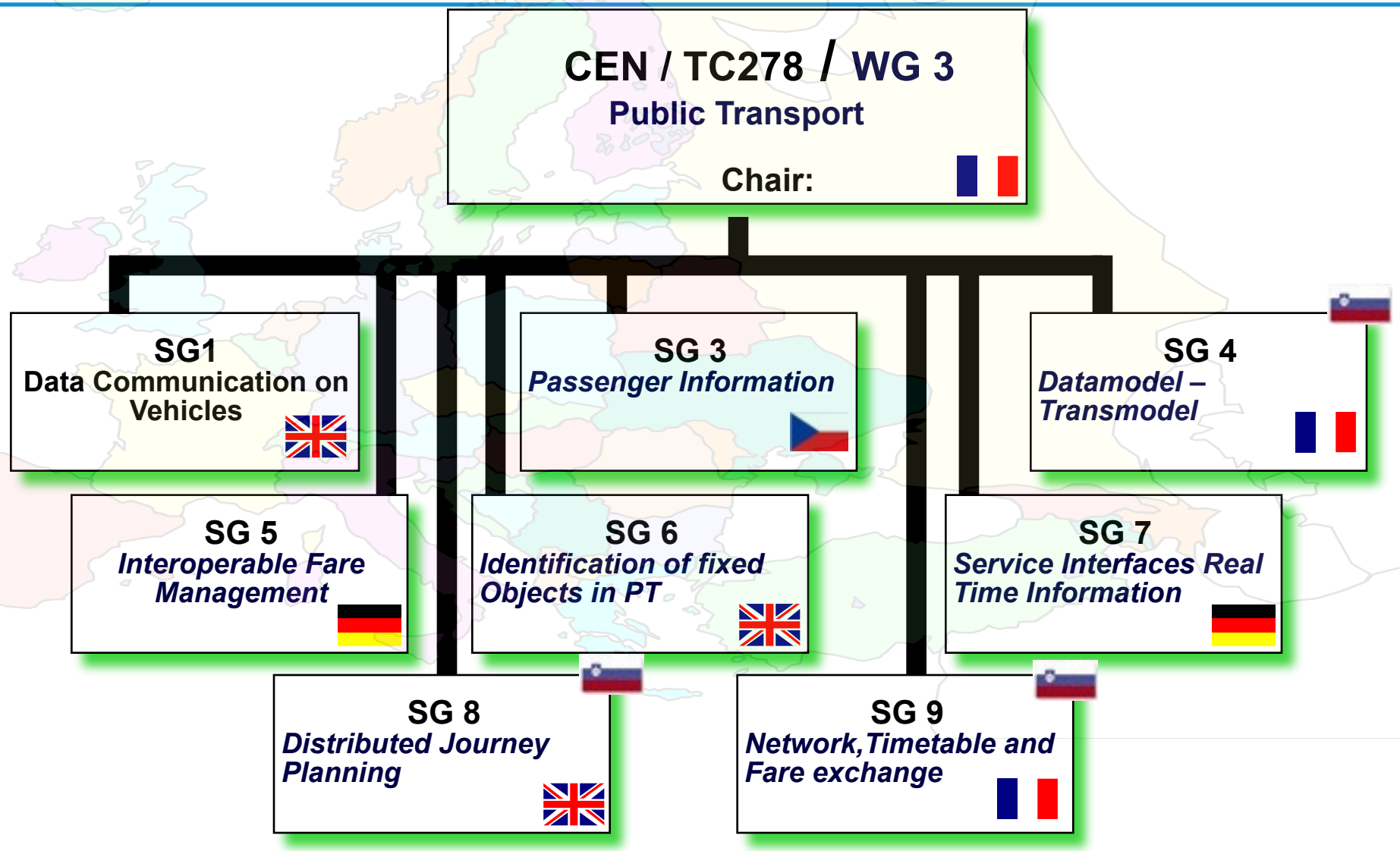
Vodja:

Dominique Descolas (Veolia Transport)
- automatic fare collection systems projects

Aktivni člani:

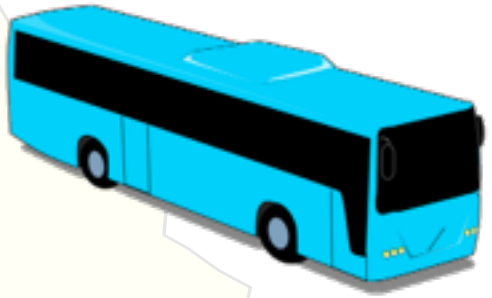
- **Belgium**
- **Denmark**
- **Germany**
- **Finland**
- **France**
- **UK**
- **Italy**
- **Netherlands**
- **Norway**
- **Austria**
- **Slovenia**
- **Sweden**
- **Swiss**
- **Czech republic**

Struktura CEN TC 278 ITS WG 3
Public Transport (PT)



WG3-SG1

- On Board Data Bus Transmission (CAN-OPEN / WORLDFIP)



  - Vodja : g. CARTWRIGHT-UK
  - Standardisation of the application rules concerning the WORLDFIP or CAN data bus transmission.
    Environmental and electrical conditions and limits inside the vehicle

WG3-SG3

- **MMI in Public Transport (VIP)**

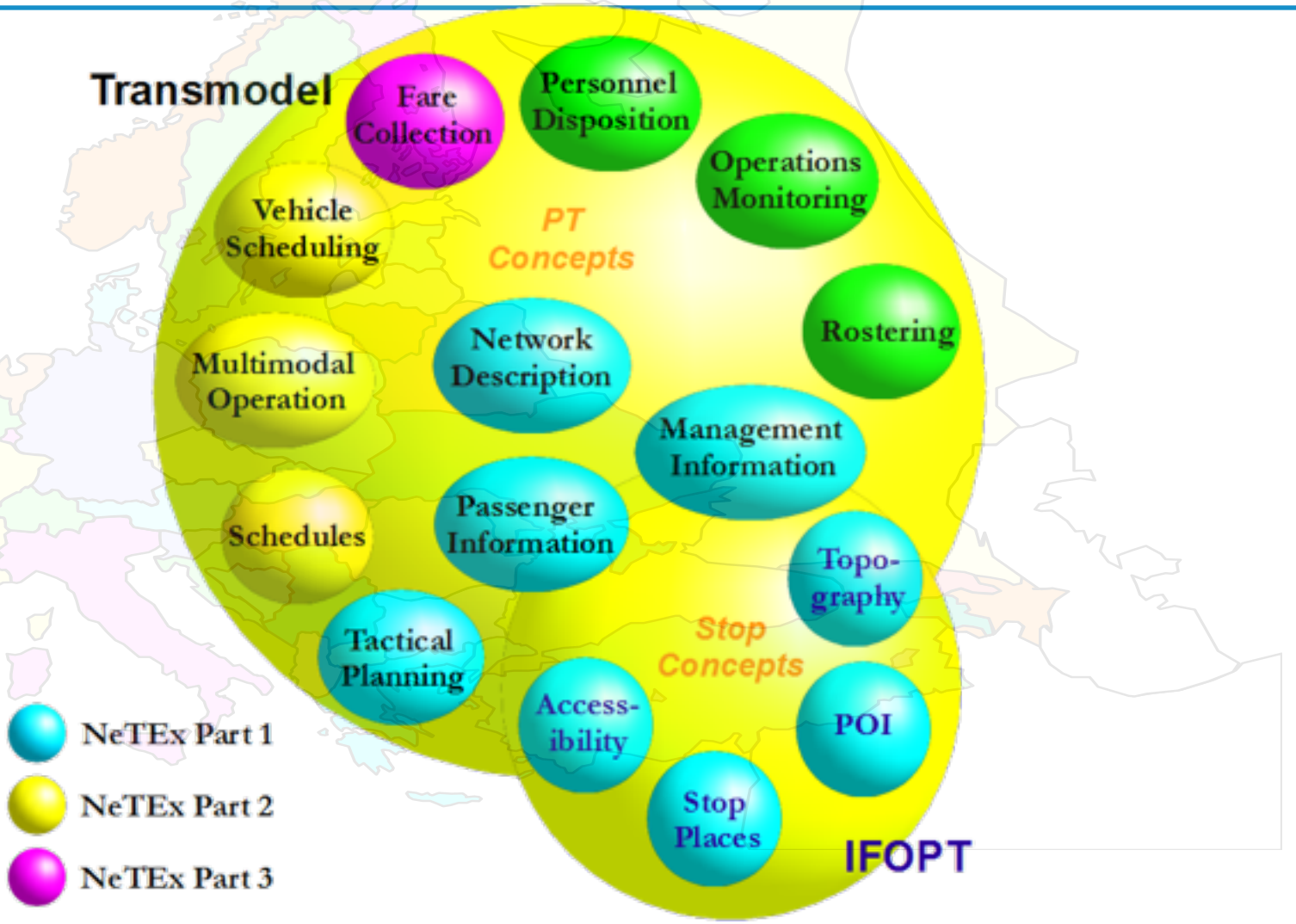
  - **Vodja : g. BARTAK – CZ**
  - **Standardisation and recommendations concerning functional and ergonomic aspects of public transport for traveller or drivers**

WG3-SG4

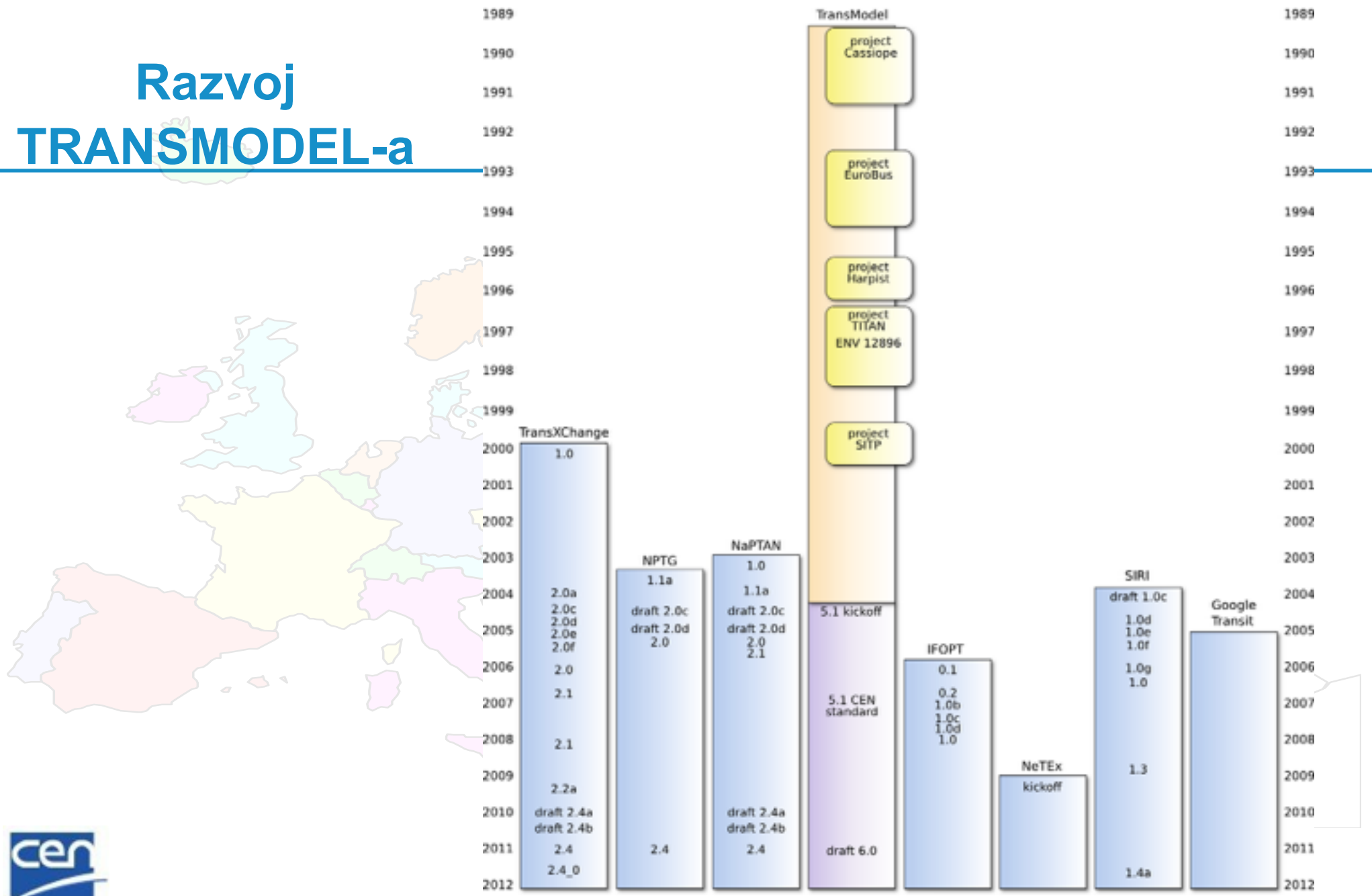
- **Reference Data Base Model (TRANSMODEL)**

  - **Vodja : ga. Kasia BOUREE**
  - **Reference data base model allowing links between different transport application programs like scheduling, Passenger information, Fare collection, Personnel Management…,**

WG3-SG4


Transmodel
Fare Collection
Personnel Disposition
Operations Monitoring
Vehicle Scheduling
PT Concepts
Rostering
Network Description
Multimodal Operation
Management Information
Passenger Information
Schedules
Topo-graphy
Tactical Planning
Stop Concepts
Access-ibility
POI
Stop Places
IFOPT
NeTEx Part 1
NeTEx Part 2
NeTEx Part 3

Razvoj TRANSMODEL-a



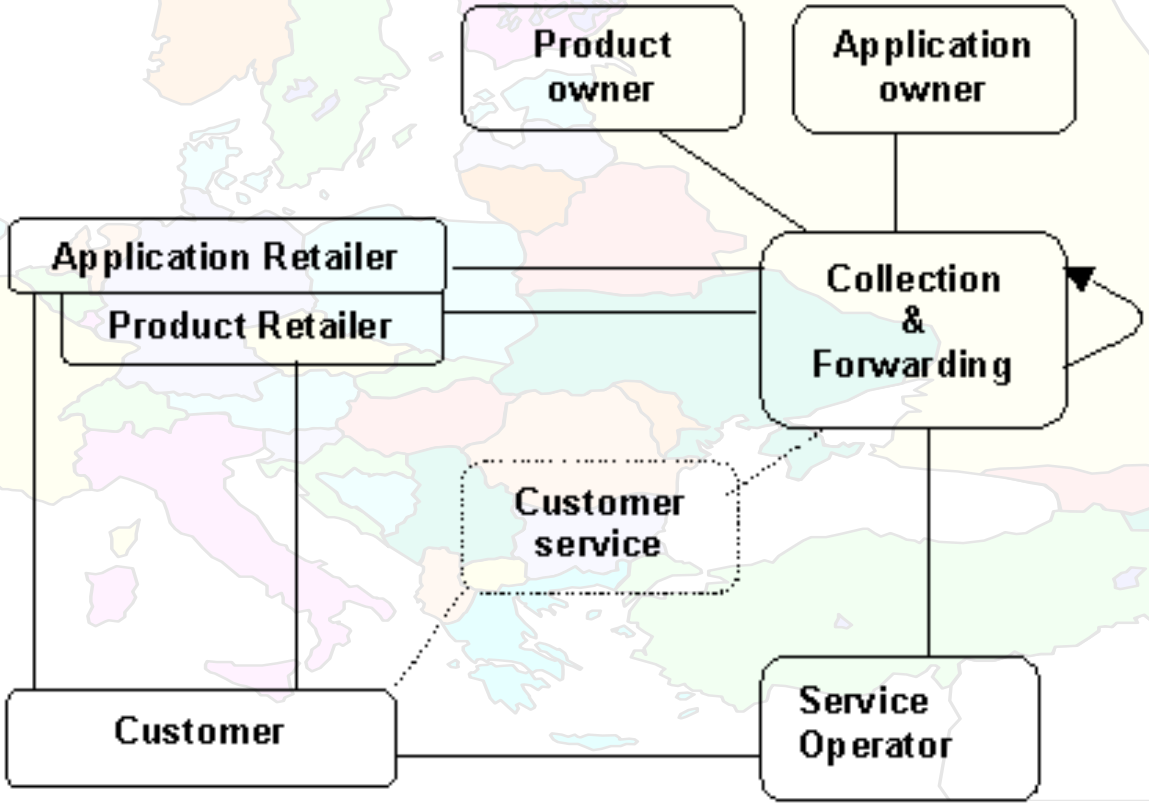
WG3-SG5

- **Interoperable Fare Management System Architecture (IFM)**

  - **Chairman : Mr RADERMACHER – Ger**
  - **Definitions and Requirements of a reference functional architecture for Automatic Fare Management systems to ensure interoperability between several actors in the context of the use of electronic tickets.**

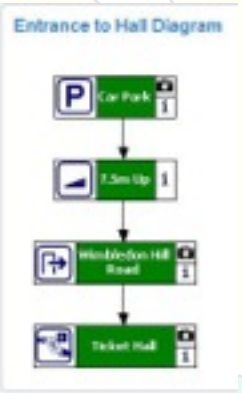
WG3-SG5

IFM


Product owner
Application owner
Application Retailer
Product Retailer
Collection & Forwarding
Customer service
Customer
Service Operator

WG3-SG6

- **Identification of Fixed Objects in Public Transport (IFOPT)**



  - **Vodja : Roger SLEVIN – UK**
  - **Model and identification principles for the fixed objects related to public access to Public Transport (e.g. stop points, stop areas, stations, entrances, etc..)**

WG3-SG7

- **Standard Interface for Real-Time Information (SIRI)**

  - **Vodja : Winfried BRUNS - Ger**
  - **A communication layer, which defines common procedures for requesting and exchanging of PT real-time data. An Interface between control centers (AVMS) or AVMS and passenger information system.**

WG3-SG8

- **Distributed Journey Planning System (DGPS)**

  - **Chairman : Mr Roger SLEVIN – UK**
  - **Calculation of a journey through the use of several journey planer. Supporting action for the European Railway Agency and coordination of rail standard with urban and suburban standards.**

WG3-SG9

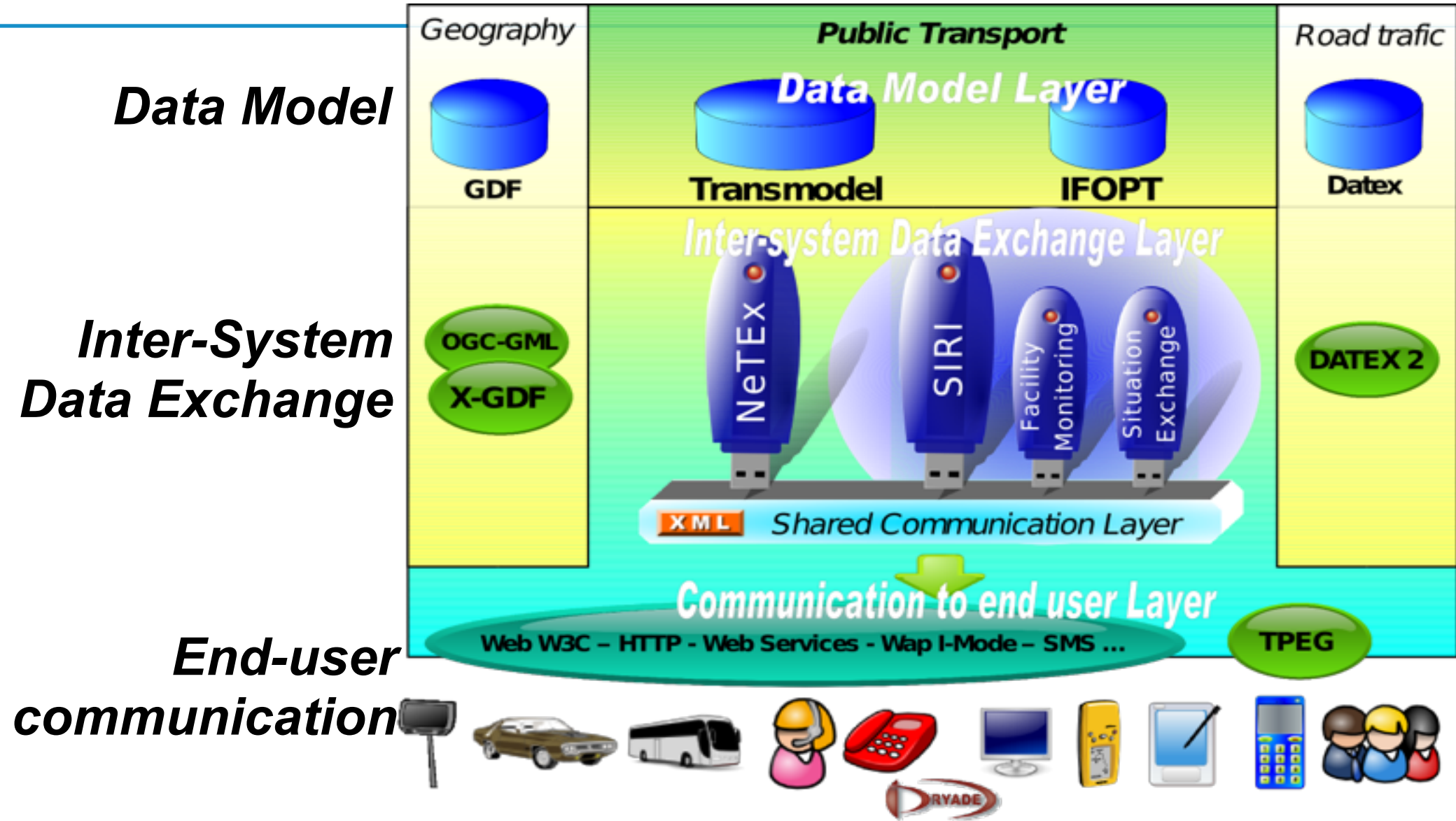
- **Network and Timetable Exchange (NeTEx)**

  - **Vodja : Christophe DUQUESNE – Fr**
  - **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 .**

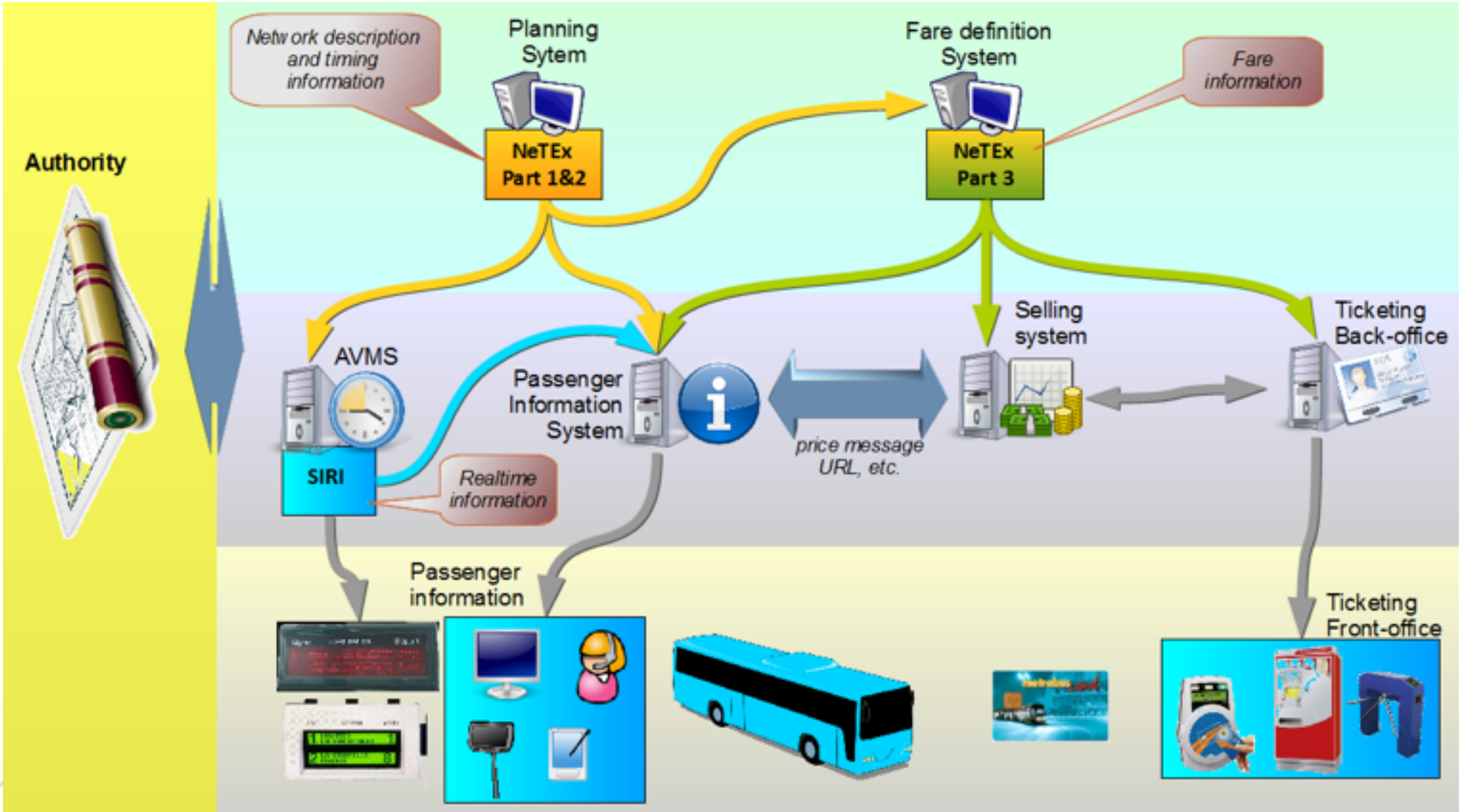
EPTIS

- March 2014: EPTIS project team:
  - Fabrizio Arneodo (I, koordinator)
  - Kasia Bouree (F)
  - Nick Knowles (GB)
  - Andrej Tibaut (SLO)
  - ➢ to develop an approved Technical Specification for NeTEx Part3 on Fare Structure data, including XML schema
  - ➢ to develop a Technical Report with appropriate expository material in the form of white papers, working examples using different national data, presentations and other supporting materials that will explain the standard and assist with its dissemination and rapid uptake

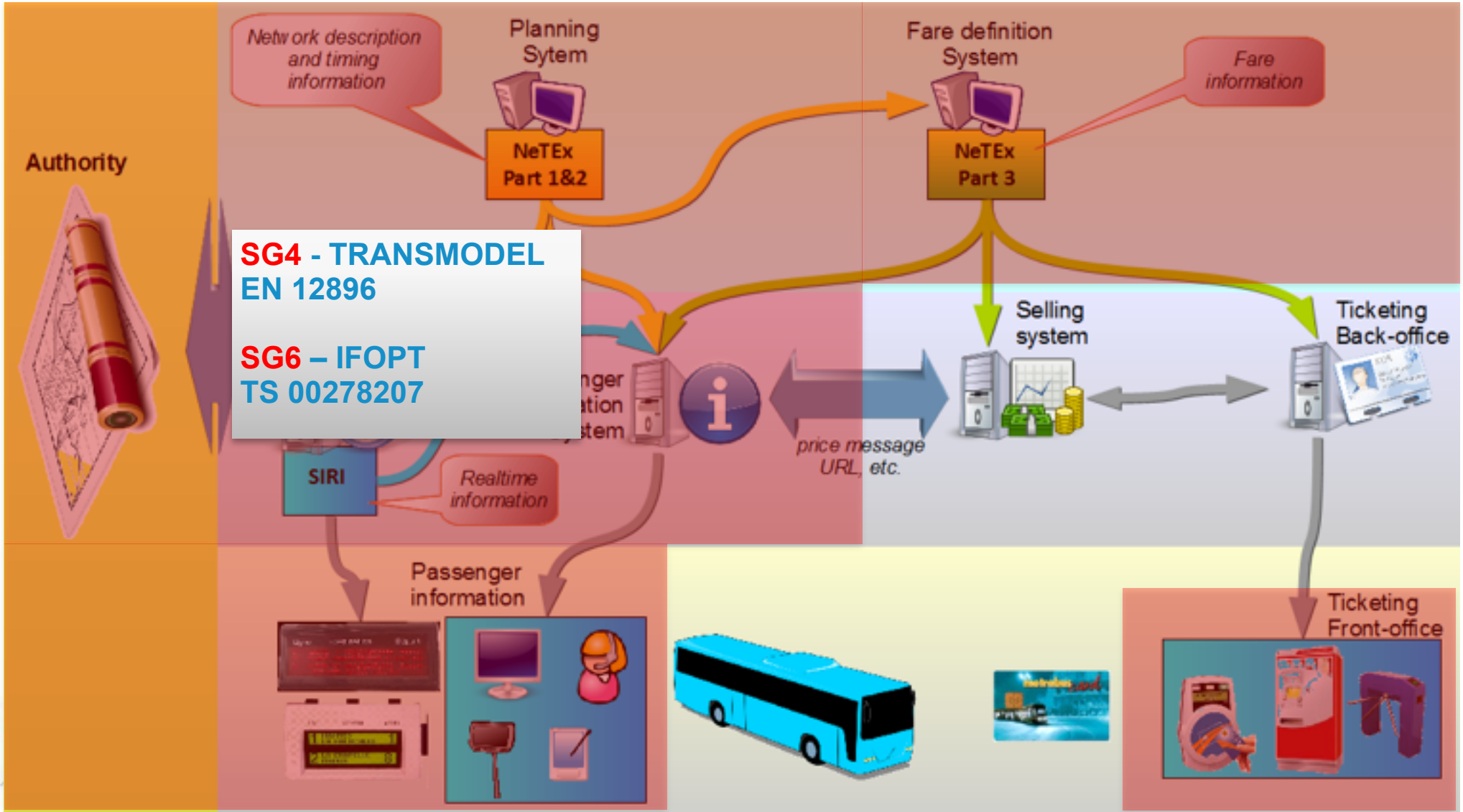
Transmodel, IFOPT, SIRI & NeTEX



CEN TC 278 ITS WG 3 aktivnosti
Področja standardizacije



CEN TC 278 ITS WG 3 aktivnosti
Področja standardizacije



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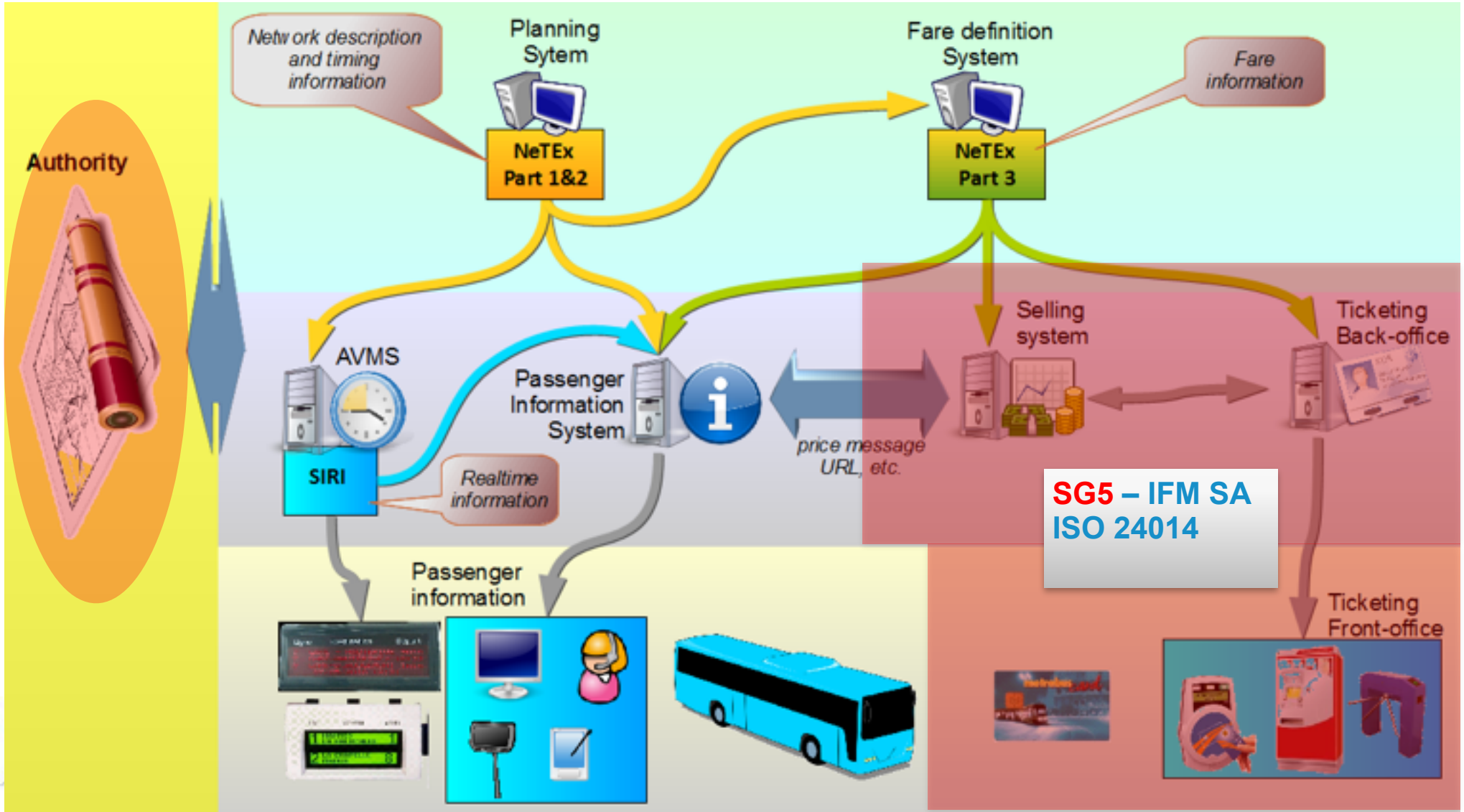

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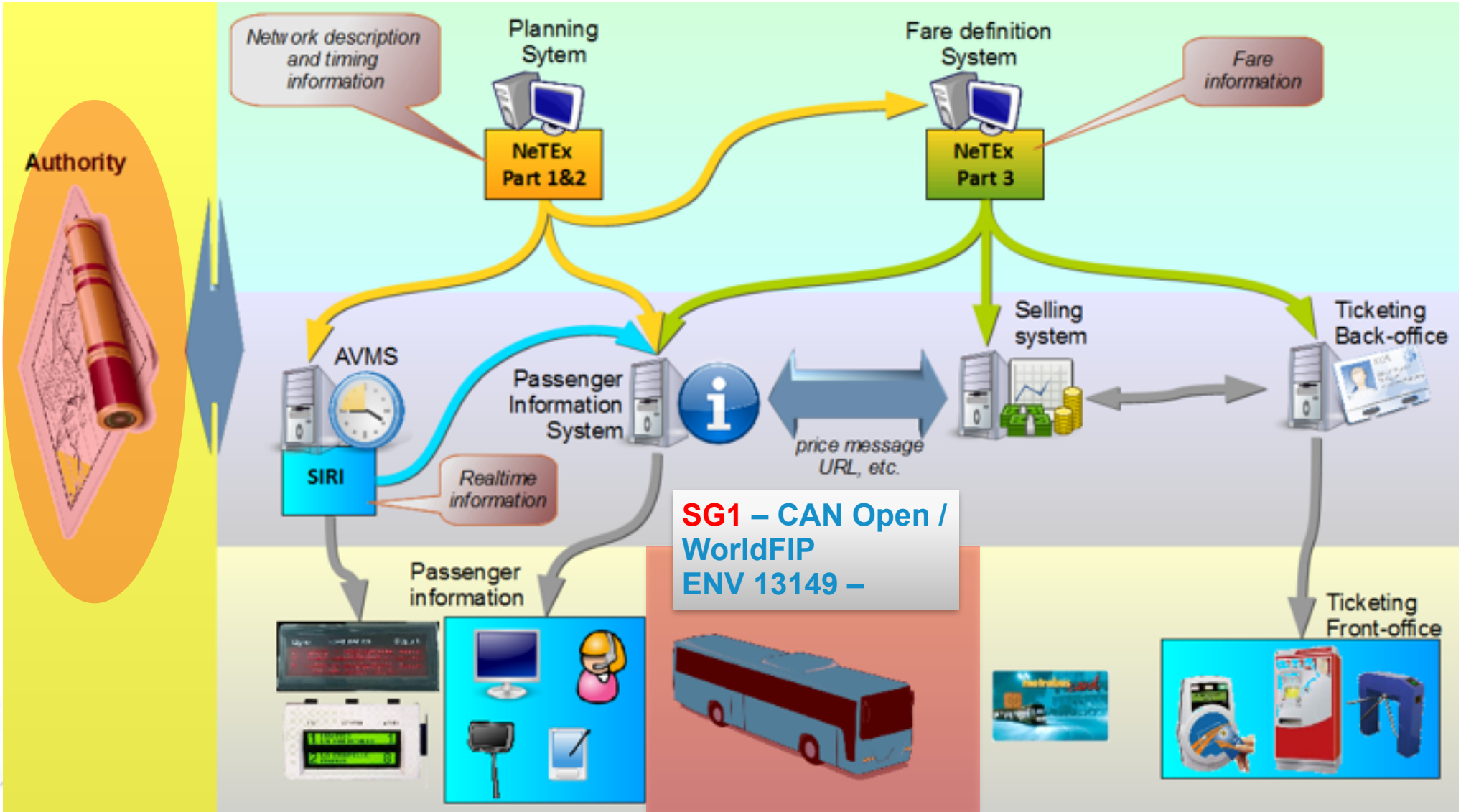

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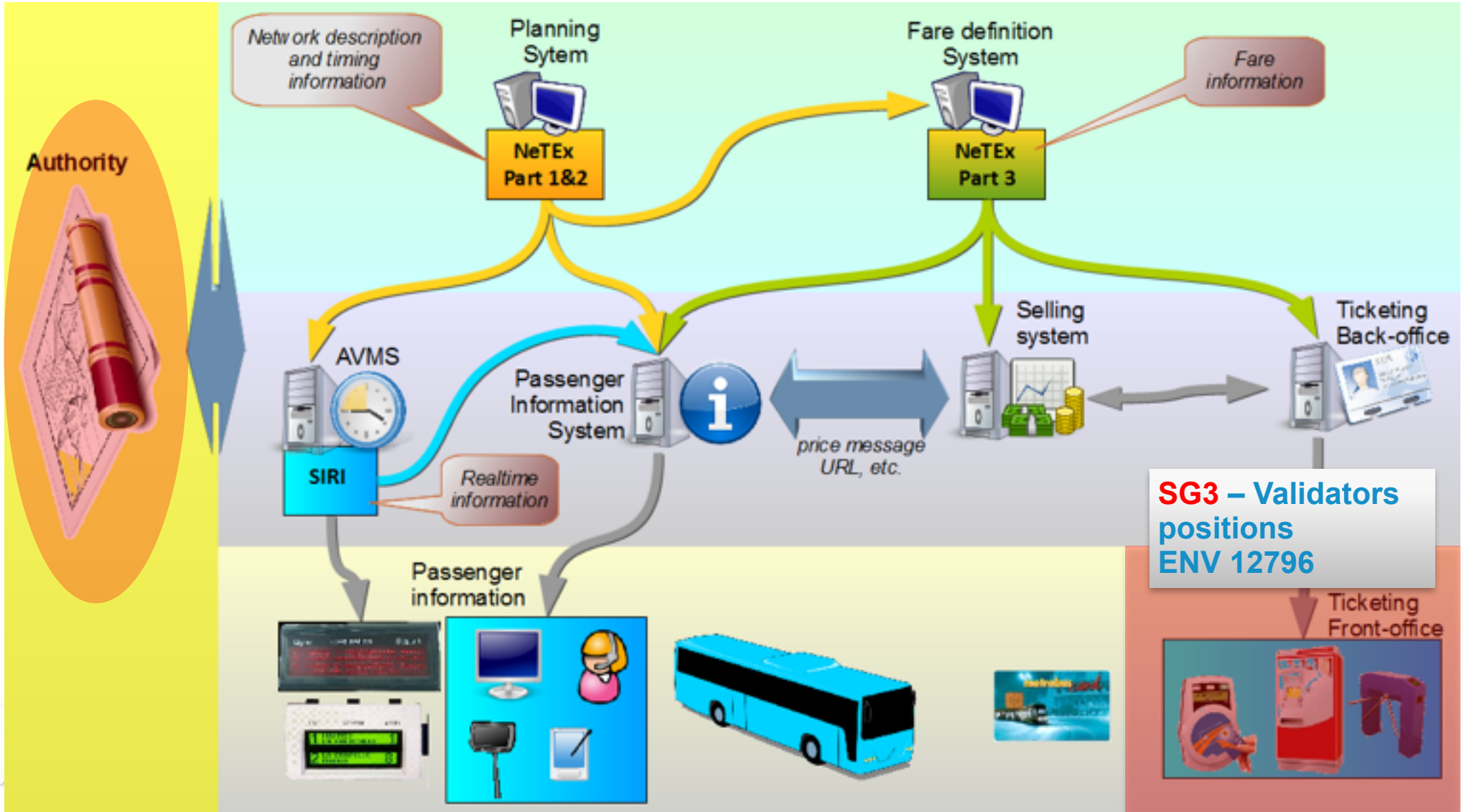
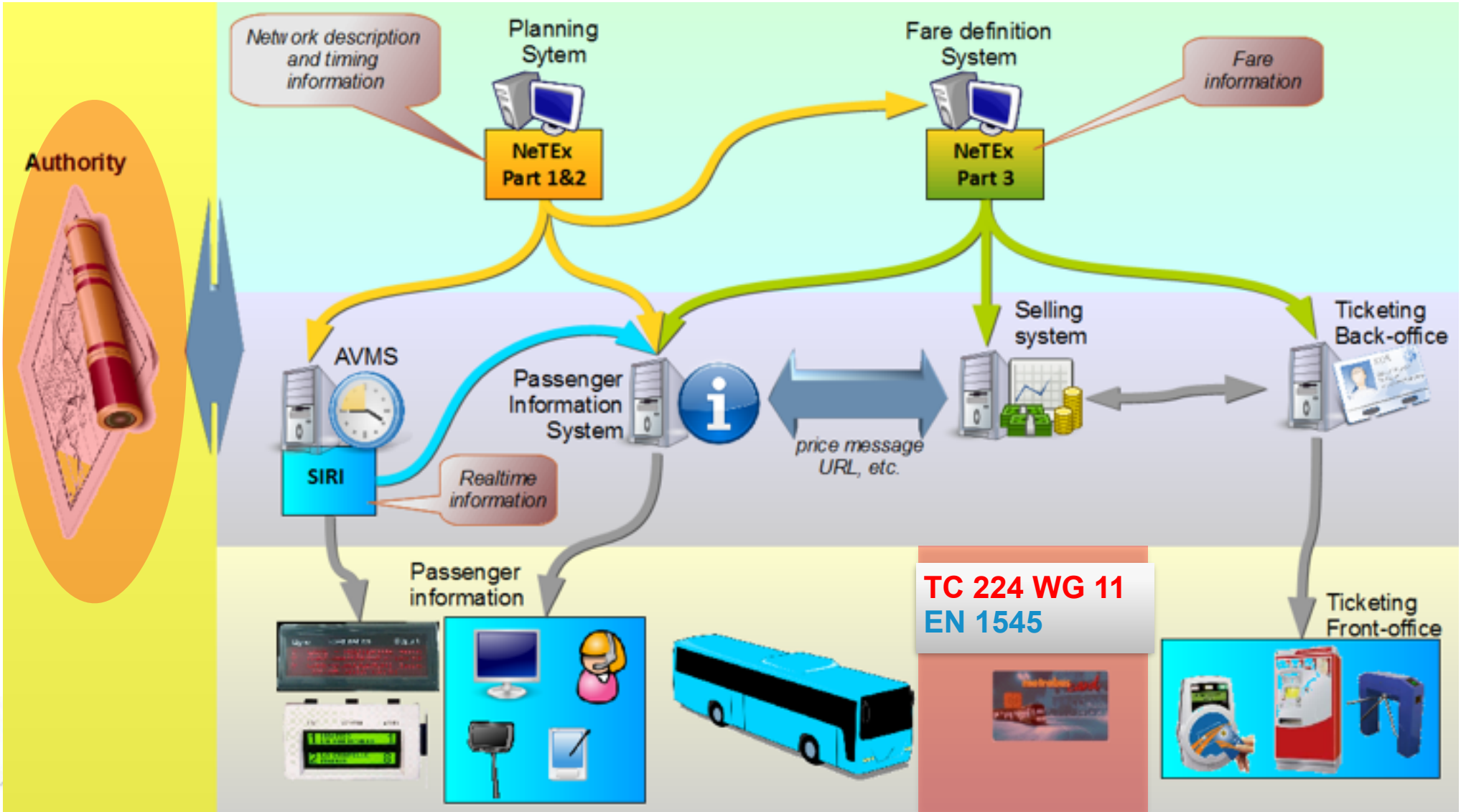
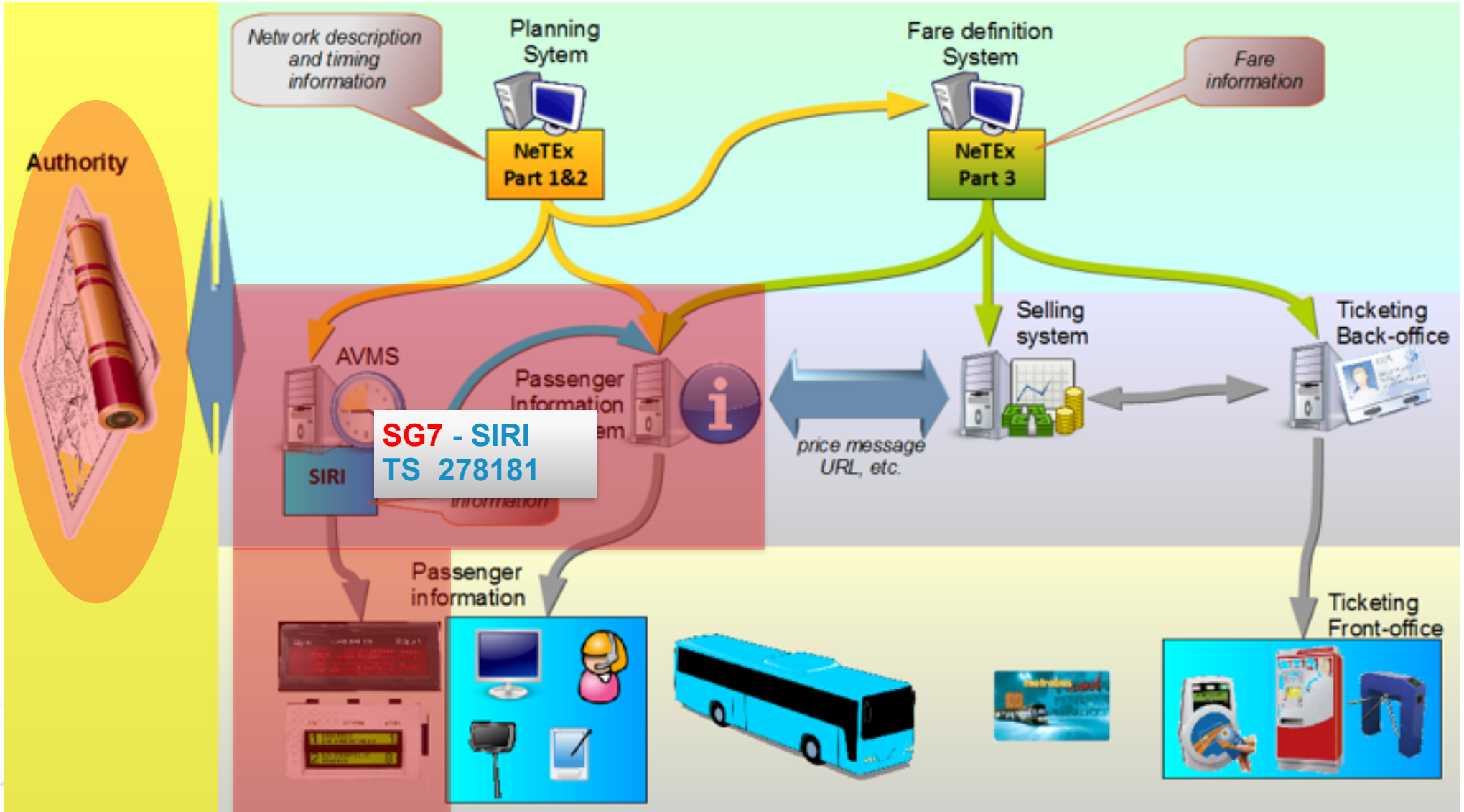


CEN TC 278 RTTT WG 3 activities
Fields of standardisation



CEN TC 278 ITS WG 3 aktivnosti
Področja standardizacije



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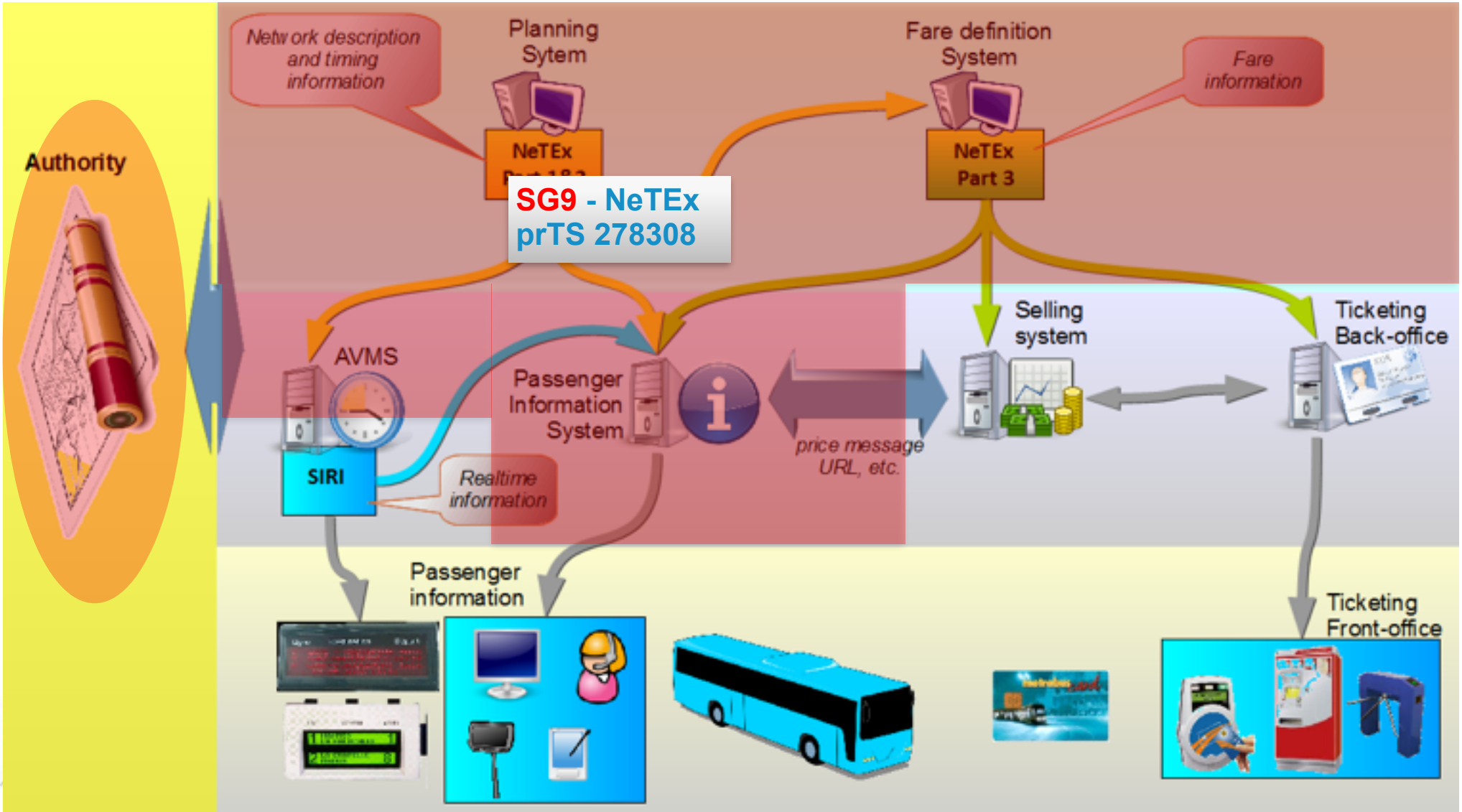

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Hvala za pozornost!

Andrej Tlbaut : andrej.tibaut@um.si