

Overview of Transmodel, NeTEx and SIRI: key aspects, characterictics & differences

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## Data categories for mobility

Availability in Parking, Car Real-time PT data Usage data sharing and Bike sharing (O/D, traveling (passing times, traffic (dept-delivery, (available spaces and traffic reasons, offerincidents, occupancy, control vehicle position, vehicles when shared) demand...) facility status, etc.) etc.) Control measurements) PT PT Scheduled Scheduled freight Bike **Parking** Car Car Freight Taxi information Fare and toll sharing (services, road pooling sharing fares Fares fares fares fares costs (timetables, vehicles, etc.) offer access times, etc.) Freight Freight network PT Network Parking. Stops Car Bike places park-and-ride, (covered areas, freight lines, sharing sharing description (stops, stairs, lifts, (loading, Car stopping managed goods, limitations, station station shops, videos, etc.) measurement. (lines, routes, etc.) places ADR rules, etc.) etc.) Transport Car Taxi infrastructure Point of interest pooling Topography stand (roads, rails, etc.) areas





#### Standards and categories

# NeTEx

Real-time PT data Usage data sharing and Bike sharing (O/D, traveling (passing times, traffic (dept-delivery, traffic reasons, offerincidents, occupancy, vehicle position, demand...) facility status, etc.) etc.) Control measurements) PT PT Scheduled Scheduled freight Parking Car Car Freight information Fare (services, road and toll sharing sharing fares Fares fares access times, etc.) **Freight** Freight network **PT Network** Parking. Stops places Bike Car park-and-ride, (covered areas, freight lines, sharing sharing description (loading, (stops, stairs, lifts, Car stopping managed goods, limitations, station station measurement. shops, videos, etc.) (lines, routes, etc.) places ADR rules, etc.) etc.) Transport Car infrastructure Point of interest Topography pooling (roads, rails, etc.)

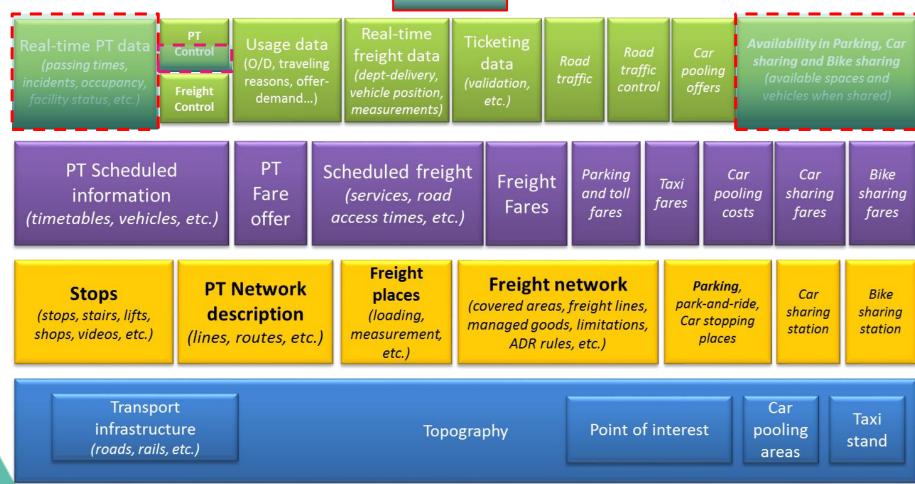


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## Standards and categories

#### SIRI







# Data categories in mobility

Real-time PT data Données de (passing times, origine/destinations, incidents, occupancy, sureté, cause de facility status, etc.) déplacement... Estimated & actual Occupancy Status of the rate in associated & their vehicles & in the stops & (boarding platform

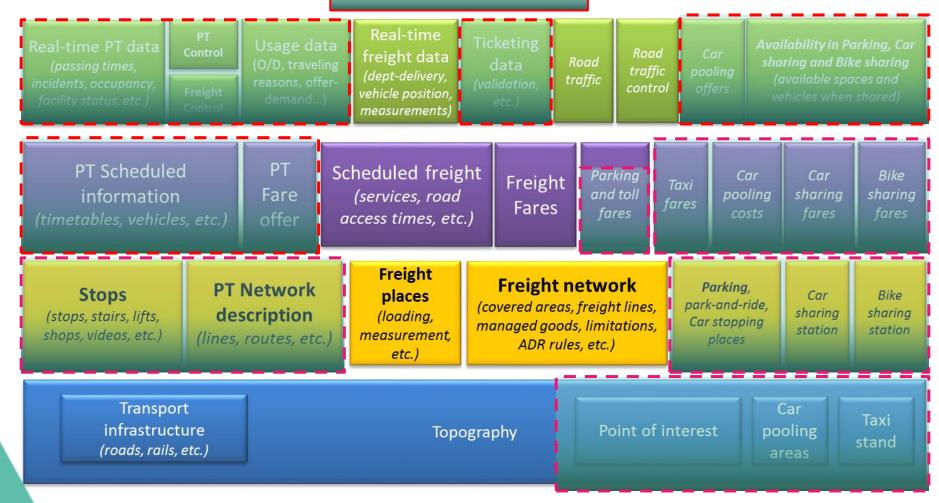


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## Standards and categories

#### **Transmodel**

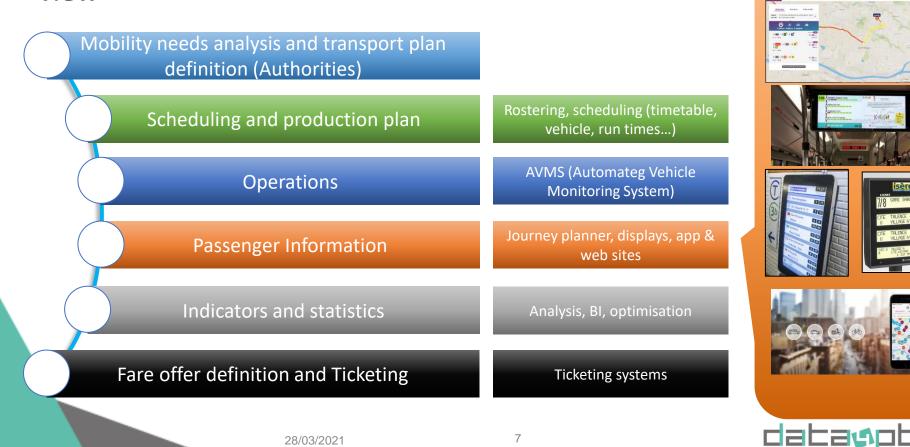






## Public Transport related business cases

- Multiple and often complex buisiness cases
- Each system or tool has a specific (and partial) point of view



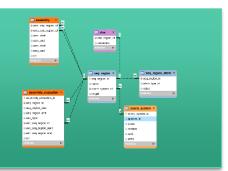


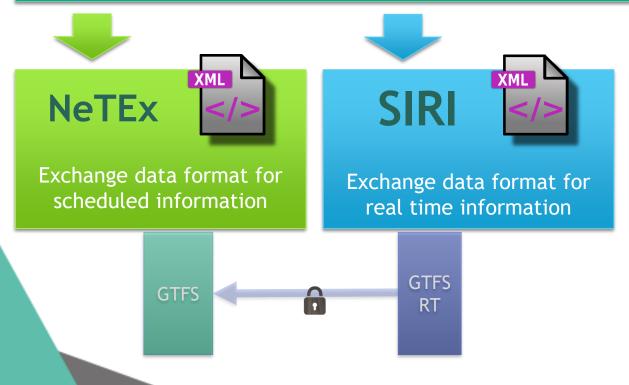


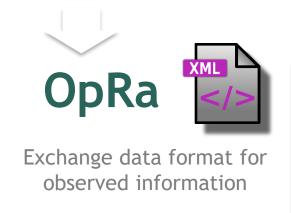
#### PT Standard dependencies

#### **TRANSMODEL**

Conceptual data model covering all the public transport data domaine









# Transmodel: use cases examples CEN EN 12896 1 to 10 Conceptual data model

Shared vocabulary

Definition of consistent exchange protocols

Definition od database model

Usefull for any Public Transport business case

Consistency accross systems: base of interoperability





# NeTEx: use cases examples CEN TS 16614-1 to 5 Scheduled data exchange

Part 1, 2, 3

Part 5

Vehic



To feed journey planner

Passenger information system feed 🔊

Vehicle sharing
Vehicle pooling
Vehicle rental
Transport Network companies
Taxi

Open data feed (often as an ehanced complement to GTFS)

**AVMS** feed

Exchange for co-operated network

Late schedule update (on a specific day) dissemination

Ticketing system feed





# SIRI: use cases examples CEN EN 15531-1 to 5 Real-time data exchange

Realtime data hub feed

Journey planner feed

Realtime display system feed

Control Center feed and dissemination

Multi-operator connection operation

Situation management and publication

Multi-operator, shared vehicle operation (i.e. EBSF)





#### **Profiles**

Standards are by their nature, **consensus documents**, taking into account a wide range of requirement coming from multiple national mirror groups

The scope of a standard is much further than the one of a single use case

Standards' documents are often quite **large and detailed** (also due to the expected detail level and stand writing editorial rules)

Standards contains a lot of **non mandatory features** (services, attributes, processes, etc.)

**Specific local rules** (reference data set, coding, local processes, etc.) are not described in standards

#### A profile

- facilitates the implementation of a standards
- improves interoperability

#### by

- focusing only on what is needed
- filling the small gaps voluntarily left by the standard
- taking into account the local context.





#### Thank you for your attention!

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