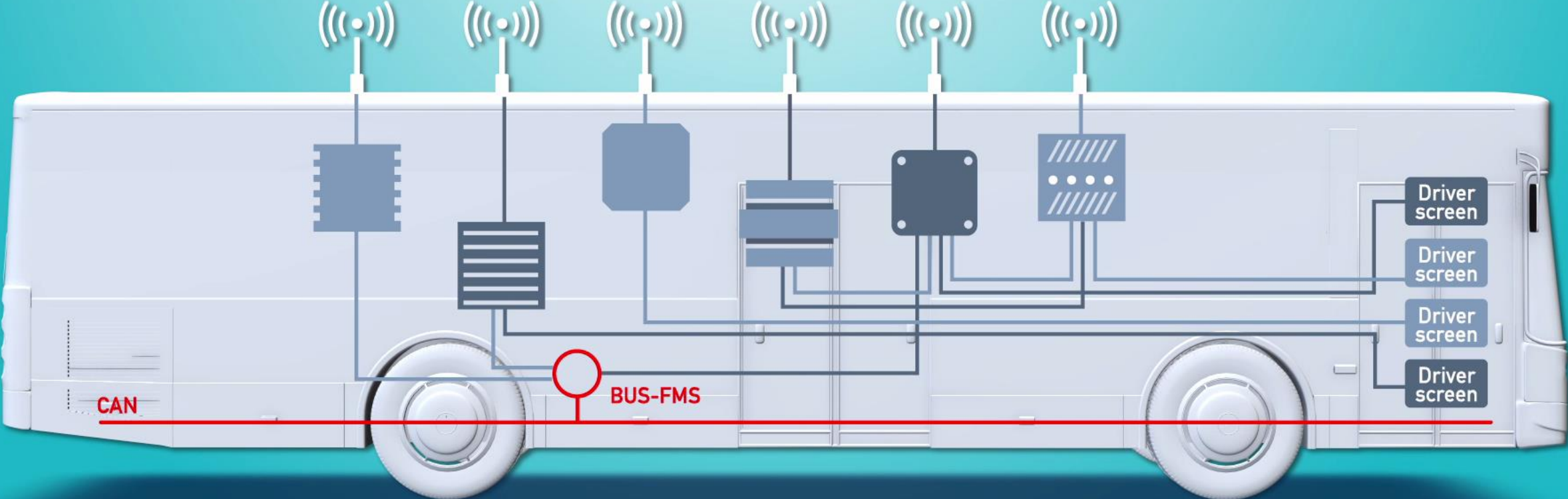


14<sup>th</sup> January 2016



Sharing our common vision and strategy of IT for PT

# Before

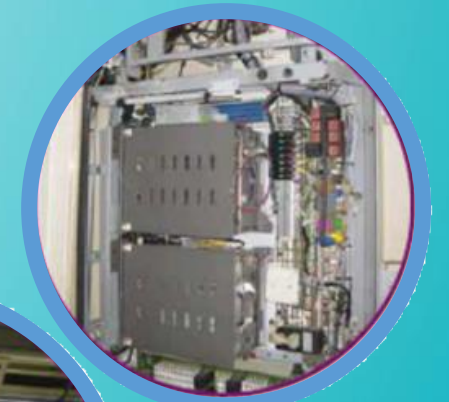


# ITS issues today in Public Transport

- Difficult installation
- Redundancies (antennas, screens...)
- Multi-connectors
- Wiring issues
- Maintenance access



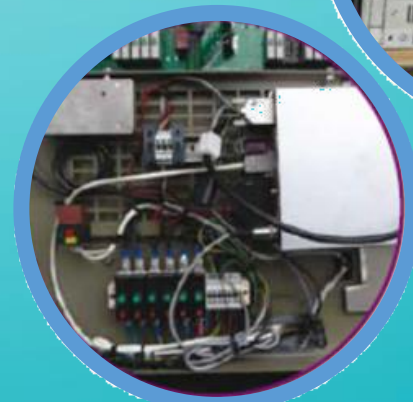
Lot of antennas



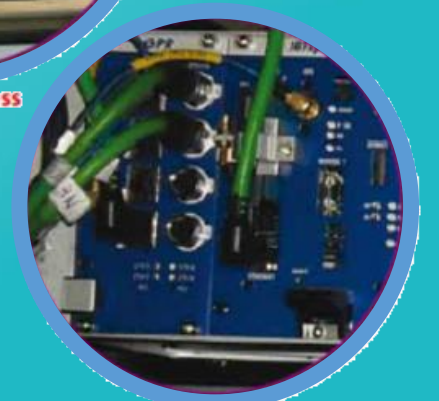
Various volumes



Difficult access



Multiple wires



Many connectors

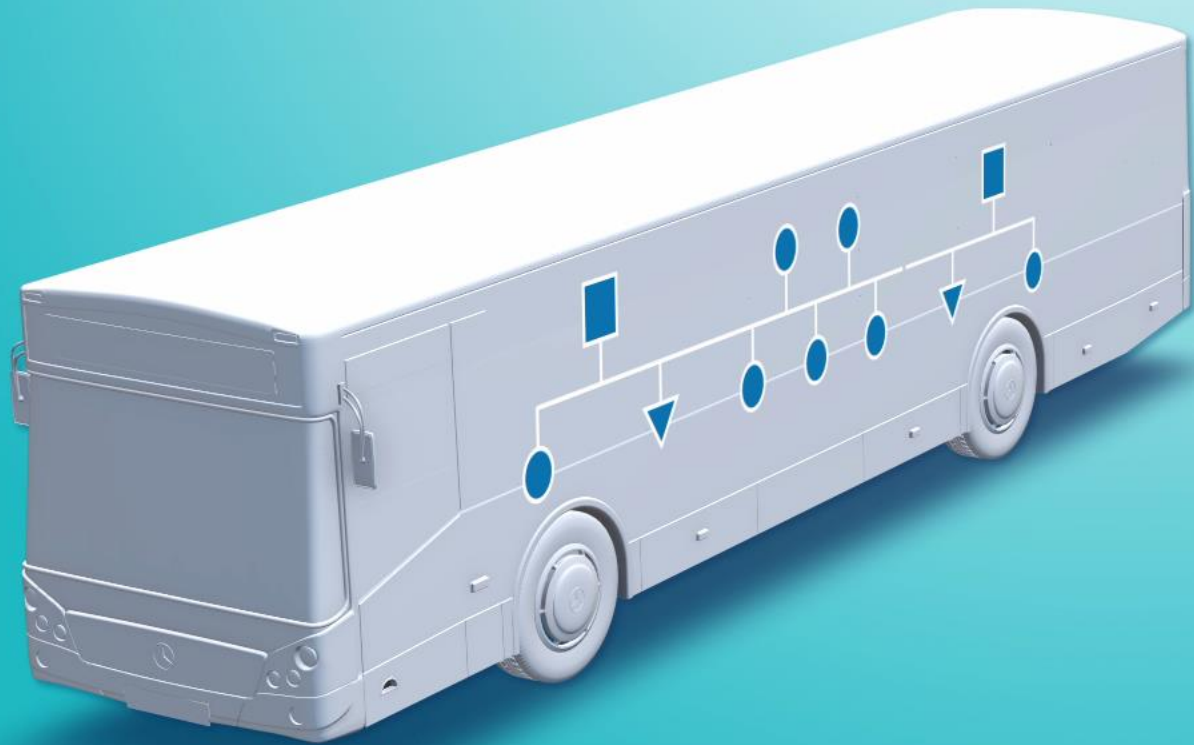
# Innovation Projects

Led by



Since 2008

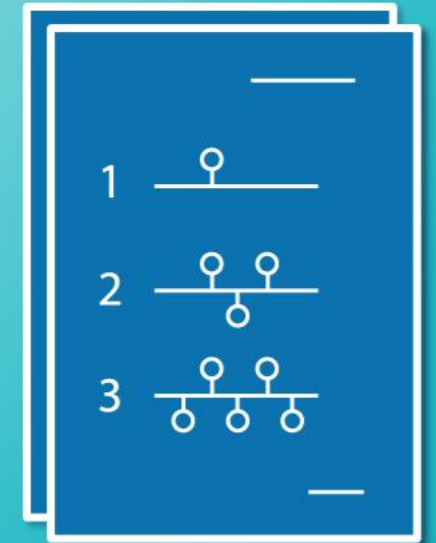
# Innovation Projects



SPECIFICATION



GUIDELINE



# H2020 support

New innovation project EBSF\_2 launched in 2015

« IT standards introduction in existing PT fleets »

Field tests in operation with IT standards implementation



EUROPEAN BUS SYSTEM  
of the FUTURE 2



- London demonstration with TfL on AVMS interoperability
- Support on 5 others demonstrations :  
Paris Area, Lyon, San Sebastian, Barcelona, Ravenna



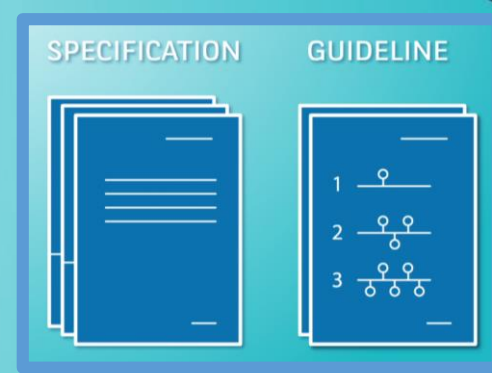
# Standardisation EN13149

On-board data IP communication

- HARDWARE INTERFACES
- THE COMMUNICATION PROTOCOLS
- THE SERVICES CATALOGUE



**CEN/TC 278/WG3**  
ITS standardization



STANDARD



# Support for deployment

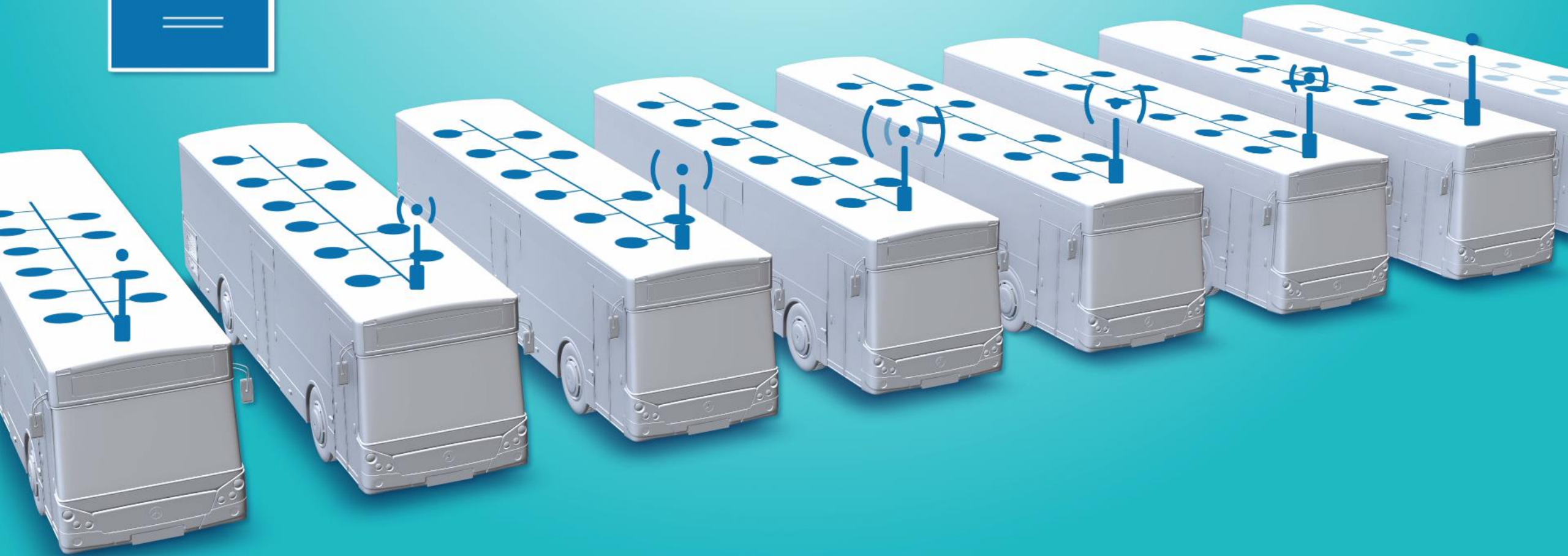
2013



Information Technology for Public Transport



# Support for deployment

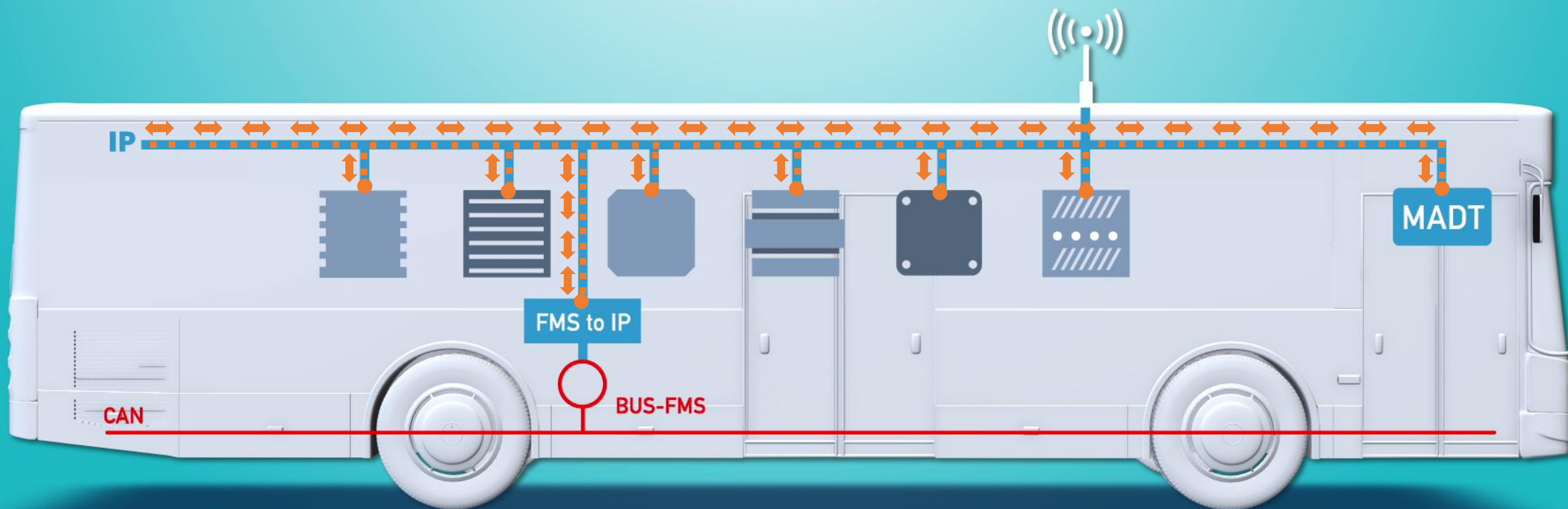


# Now with



## EN13149

### Part 7 + Part 8 + Part 9



# Benefits

***Cost effective, reusable, scalable, modularized and sustainable IT architecture***

- Support PTA/PTO in the provisioning of compliant plug'n play modules
- Support the dynamic of IT standards evolution
- Rely on a reference technical platform to qualify IT modules
- Share experience and best practices

# Support PTA/PTO in the provisioning of compliant plug'n play modules

***Cost effective allowing synergies, Ensure competition anytime  
Upgradeable, promote innovation***

- Technical specifications and guidelines for tenders
  - Vehicle pre-preparation
  - IT on-board architecture
  - Backoffice

# Support the dynamic of IT standards evolution

## *Ensure dynamic is a must for IT standards*

- Converging to shared technical specifications at European level
- Contribute to IT standards working group :

### CEN TC 278 WG3 – Standardisation for Public Transport ITS

- EN13149 – Onboard data communication
- NeTEx – Schedule and Timetable Exchange
- SIRI – Service Interface for Real time information
- TRANSMODEL – Reference Data Model

# Rely on a reference technical platform to qualify IT modules

## *Ensure consistency of IT architecture*

- Check the common implementation of IT standards
- Dedicated test procedures and testing tool
- ITxPT label delivered to compliant IT modules

# Share experience and best practices

## *Influence together ITS offering*

- Propose users group issuing recommendation
- Join forces in standardisation process
- Get best practices benefiting from other experiences
- PTA/PTO positively influence IT suppliers
- Suppliers more confident in industrialisation

# What is NOT ITxPT ?

- It's not a standard
- It's not a certification body
- It doesn't evaluate IT applications functional performance
- It's not a purchasing body
- It's not a research project

BUT ITxPT contributes to all of these !



# Wiki documentation centre



- Overview
- Standards
- Implementations
- Terminology
- Book an ITxPT platform access
- Communication Kit
- FAQ

- Specifications & Guidelines
  - Onboard Architecture
  - Backoffice Architecture
  - Installation Requirements
  - Deployment Guidelines

- Members only
  - How to access?
  - Private Documents
  - Technical Platforms
  - Utility Software
  - Technical Topics
  - Submit Projects and Internships

- Admin

Emmanuel.de-verdalle Talk Preferences Watchlist Contributions Log out

Page Discussion

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View source

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## ITxPT Wiki



## 1 ITxPT - Information Technology for Public Transport



This standard IT architecture for Public Transport specifies communication protocols and hardware interfaces to offer a full interoperability of IT systems (on-board and backoffice) for PT applications. The aim is to provide a set of standards for plug-and-play IT-systems.

Based on **open technologies**, it gives the possibility to implement and interface IT systems with **common mechanisms, standard rules and protocols**. As from now, parts of these IT architecture specifications are included in EN13149 standard for on-board part and SIRI & NeTeX standards for backoffice part, in the scope of CEN TC278WG3 standardization group. This IT architecture is suitable for buses and

is under extension to other types of PT like tramways.



# Technical Platforms



# Time and money can now be invested in new and innovative applications!

- no more time and money wasted on developing specific interfaces
- tenders can be open to more competitors
- no more money wasted on redundant equipment: bus equipment (driver terminal, gateway, GPS ...) and infrastructures (stop signs, fleet management control ...) share the same architecture
- no more need to change the whole system when specific equipment needs to be changed
- plug and play integration of the new applications and IT devices facilitate installation and onboard maintenance
- operation costs are reduced through the integration of multimodal information systems that allows to better plan urban and regional transports and to optimise connections between all modes and operators as well as to take efficient actions in case of incidents

