



ITXPT

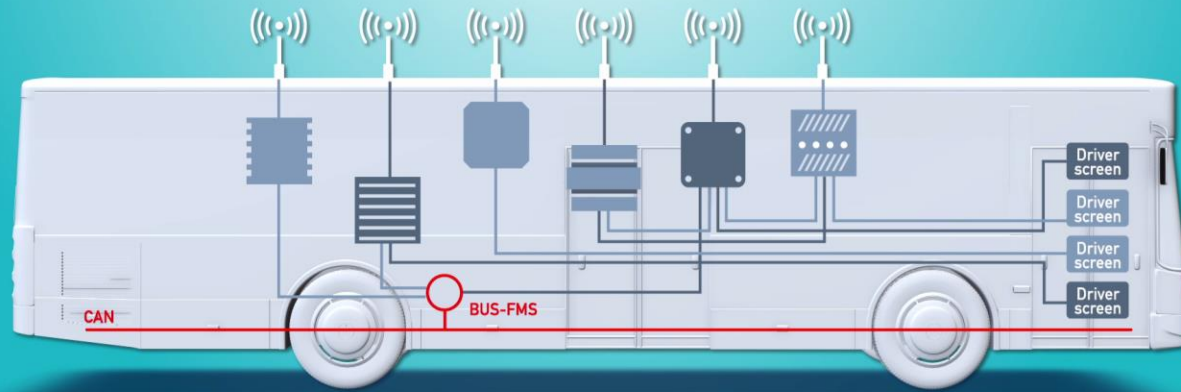
INFORMATION TECHNOLOGY
for PUBLIC TRANSPORT

The ITxPT Association: Mission

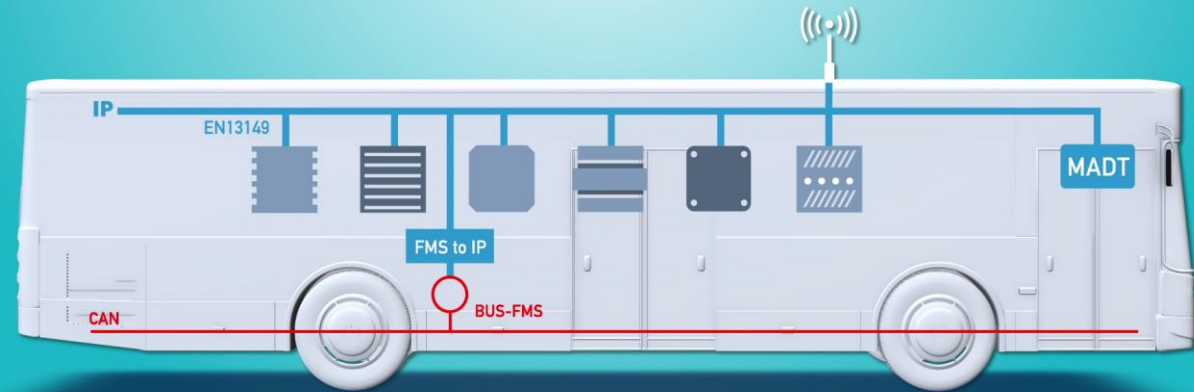
ITxPT develops and delivers
specifications for a standardized **IT architecture**
with **open interfaces** enabling **interoperability**
between on-board and back-office IT-systems
in public transport.

From a legacy of silo systems – ITxPT enables integration

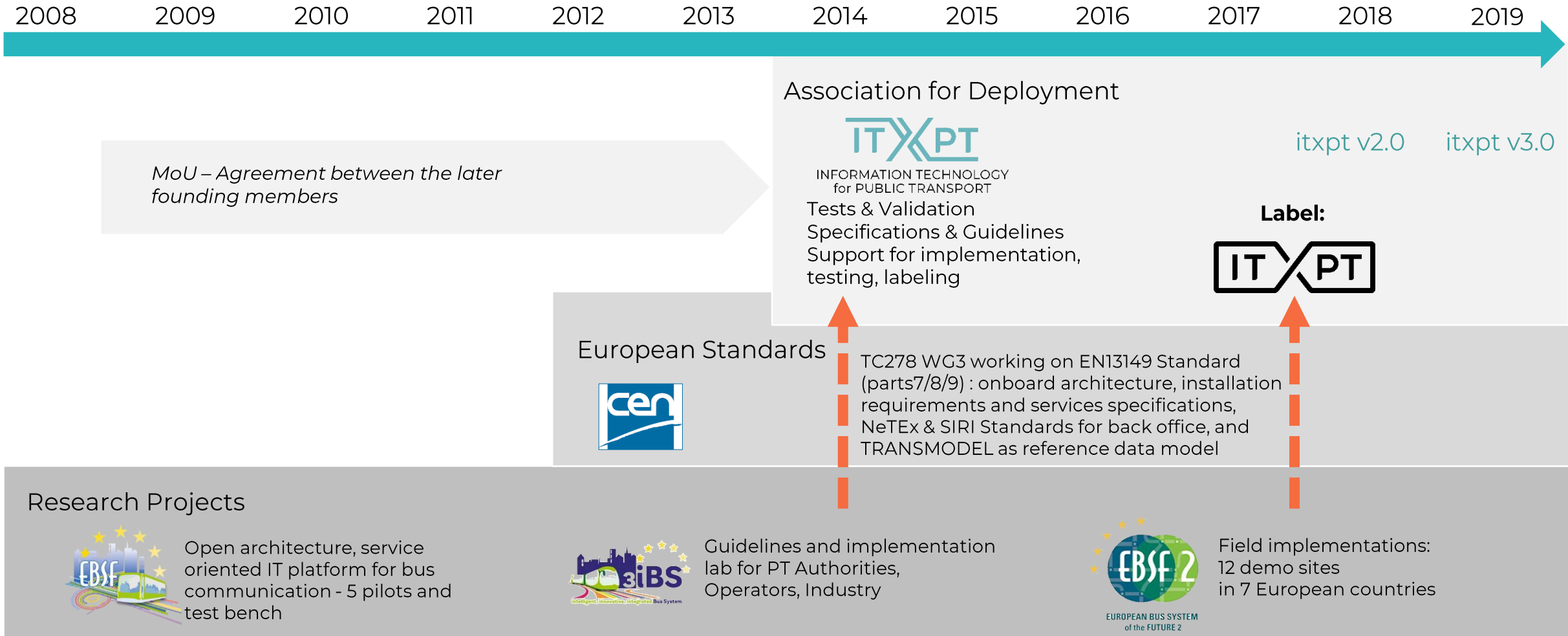
Legacy



ITxPT



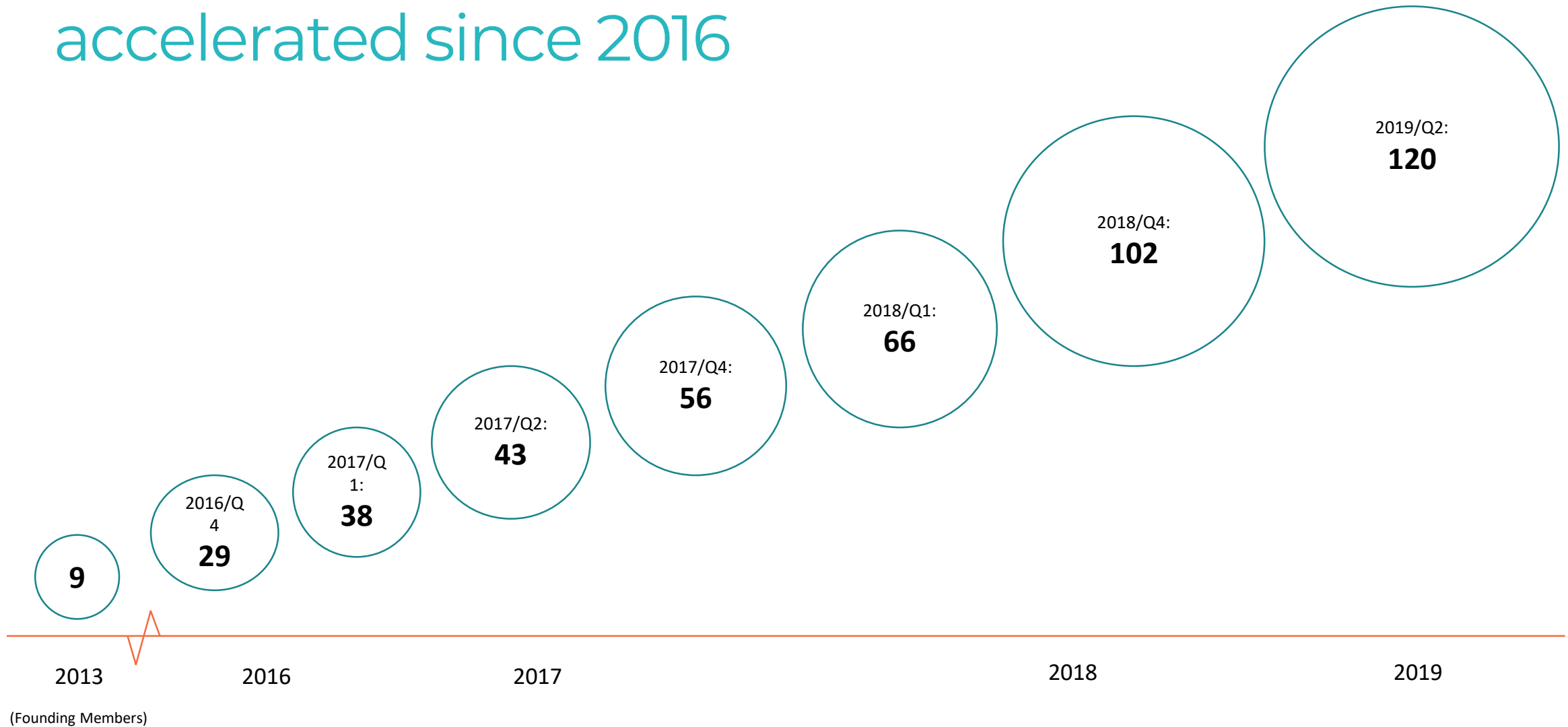
ITxPT was founded as a result of European research projects and standardization activities



ITxPT federates PTA, PTO, IT suppliers and vehicle manufacturers - 120 members in 28 countries



Membership growth has accelerated since 2016



ITxPT is a collaborative community delivering specifications and services



AN ARCHITECTURE FOR INTEROPERATBILITY

The ITxPT open architecture brings not only cost advantages but also improves services to travelers and supports innovation.

[Learn more](#)

This is ITxPT



A COMMUNITY FOR INNOVATION

The ITxPT community gathers IT suppliers, vehicle manufacturers, operators and authorities from all over the world to define solutions for the next generation mobility.

[Join us](#)



A LABEL FOR COMPLIANCE

The ITxPT label is the quality seal that equipment, software or service is compliant with the technical specifications.

[Request a label](#)

ITxPT Technical Specifications 2.0 – Content

S 01

Installation Requirements

Power Supply Interface
FMS Interface
Other Interfaces (audio, antenna, wireless, etc)
IP network
Space
On-board IP
Harness

S 02

On-board

Protocols DNS and MQTT
1 Module Inventory
2 Time service
3 GNSS Location
4 FMStoIP
5 VEHICLEtoIP
6 AVMS
7 APC
8 MADT
9 MQTT Broker

S 03

Back-Office

Architecture
TRANSMODEL
NeTex (Network Timetable exchange)
SIRI (Service Interface for Real-time Information)
OJP (Open Journey Planning)
TiGR (Telediagnostic for Intelligent Garage in Real-time)

S 04

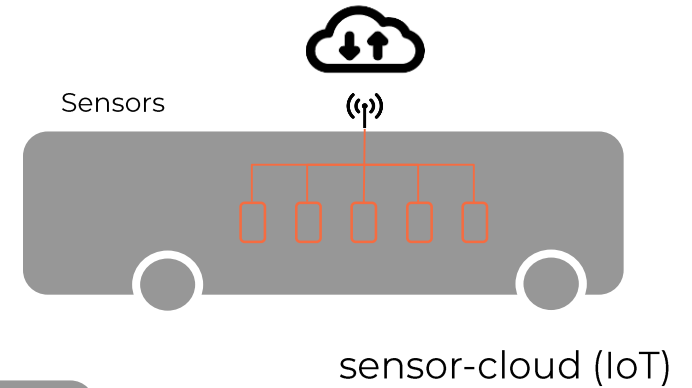
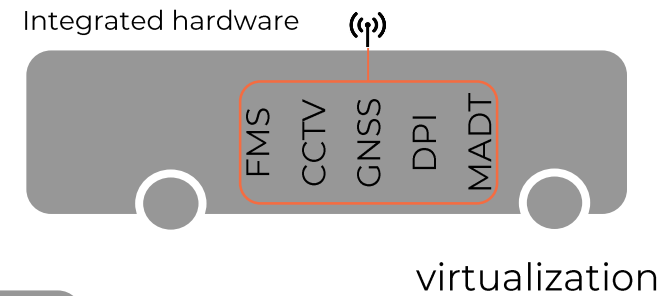
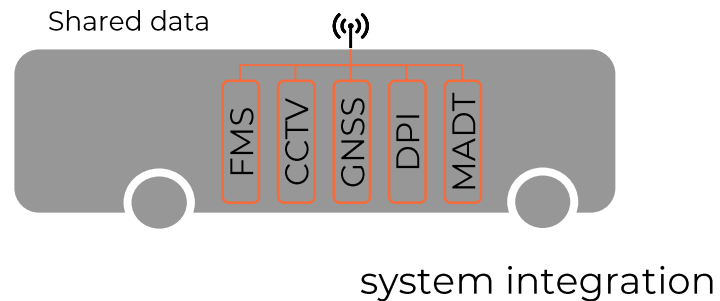
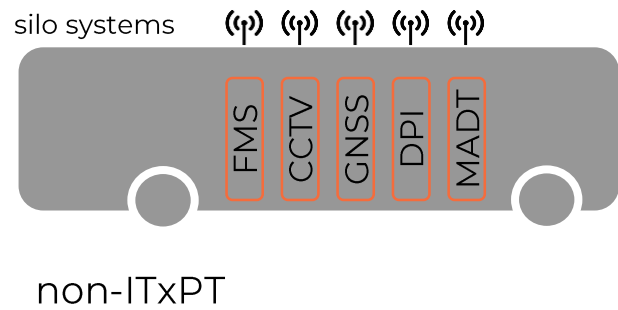
Over-the-air

MQTT bridge OTA
Protobuf
EBSF
RTIG

Next releases are driven from customer need – topics discussed:

- MQTT
- Data centric and service oriented
- FMS Data
- Dynamic Passenger Information
- EV data
- Heavy rail
- Other modes of transportation, Ferries
- Autonomous vehicle fleets
- SIRI/NeTEX
- ...

ITxPT supports various physical architectures and these may serve as evolutionary steps



ITxPT implementations – different architectural solutions supported

ITxPT drivers and benefits

Interoperability **Strategic value of data**

Flexibility to implement new services

Access to maintenance data Multi-vendor purchasing

Open architecture opens the market **Scalability**

Simplified tender process

Less hardware The ITxPT label as a quality seal

Standardized installation **Interchangeable vehicles over regions**

Innovative PTA are important for ITxPT implementation and pave the way for followers

Q NEWS



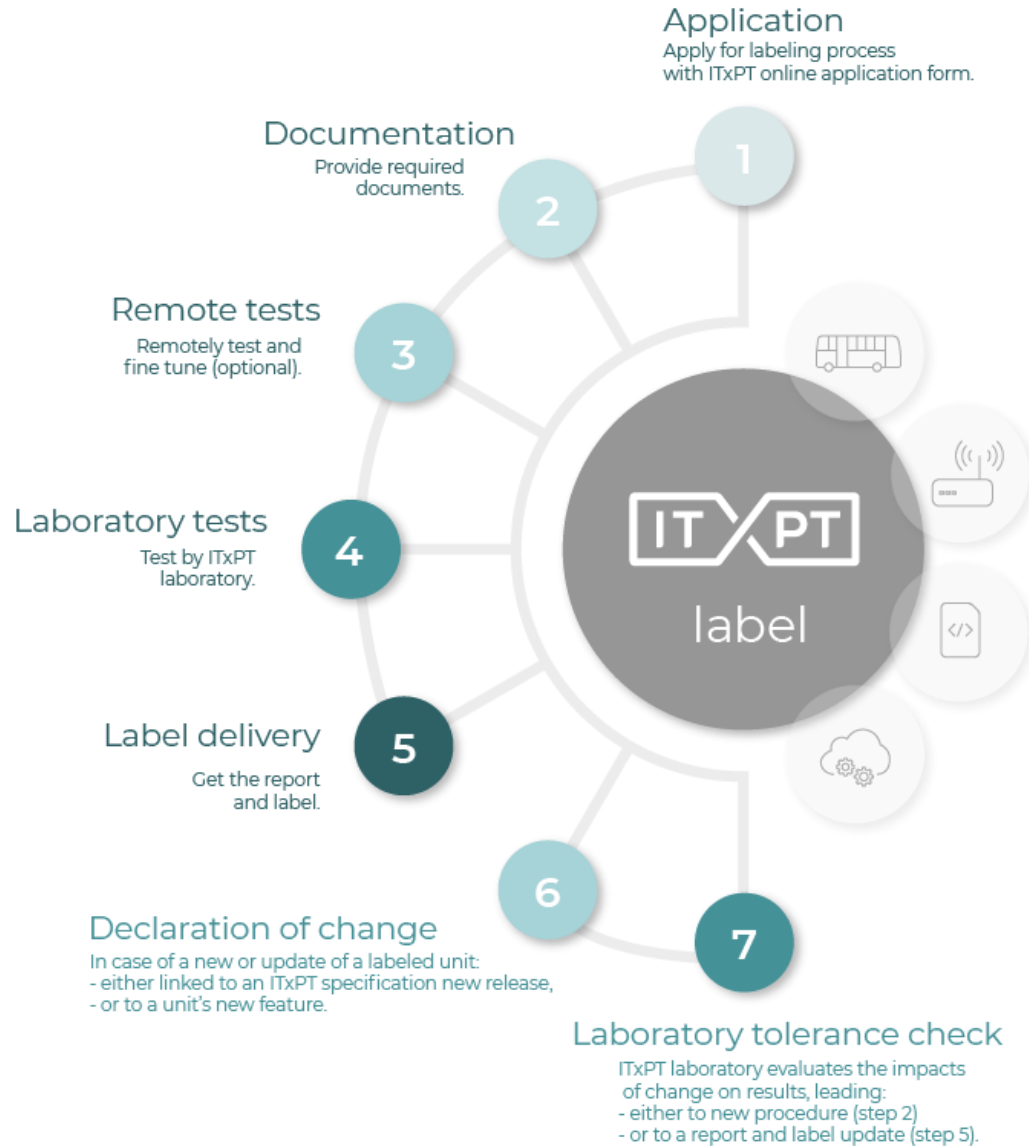
RUTER WILL REQUEST ALL IT VENDORS TO COMPLY WITH ITXPT
Published on 24 March 2017

Ruter, the Oslo and Akershus PT authority, is actively preparing its 2020 future of zero fossil-powered public transport and the renewal of the legacy on-board systems. Consequently, not only vehicles and related equipment but also the definition...

- Norway (partner association)
- Dubai
- France
- UK
- Singapore
- Finland (partner association)
- Poland
- Sweden
- Spain (partner association)
- Switzerland (partner association)
- Italy (partner association)
- ...

ITxPT has 24 PTA/PTO as members and additional 63 PTA/PTO its network as to date. Further PTA/PTO have requested ITxPT compliance without the knowledge of the association.

Labeling Activities Procedure & Laboratory



ITxPT Laboratory in Paris, in progress/
planning in Gothenburg, Geneva and
Oslo

ITxPT Members Meetings and Events



2018
March<

Karlsruhe, IT Trans
Exhibitor (w. UITP)
ITxPT Open Seminar
Members Meeting

June

Paris, Transport Public
Exhibitor
Members Meeting

September

Berlin, Innotrans
Exhibitor (w. UITP)

October

Stockholm, Persontrafik
Exhibitor (w. UITP)
Members Meeting

2019
April

Geneva
Members Meeting
Technical Workshop

June

Stockholm, UITP summit
Exhibitor (w. UITP)
Members Meeting

October

Brussels, Busworld
Exhibitor
Members Meeting

November

Rome, jointly with ASSTRA
Members Meeting

A long-exposure photograph of a city street at night. The image shows horizontal light trails from moving vehicles, with bright orange and yellow streaks in the foreground and blue/white streaks above. In the background, a multi-story building with many windows is visible. The overall scene is dark, with the light trails providing the primary illumination.

ITXPT

www.itxpt.org