

italmatic®

ACCESSORIES TPMS & EQUIPMENT

 **italsensor**[®]
FLEET TPMS

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FLEET TPMS

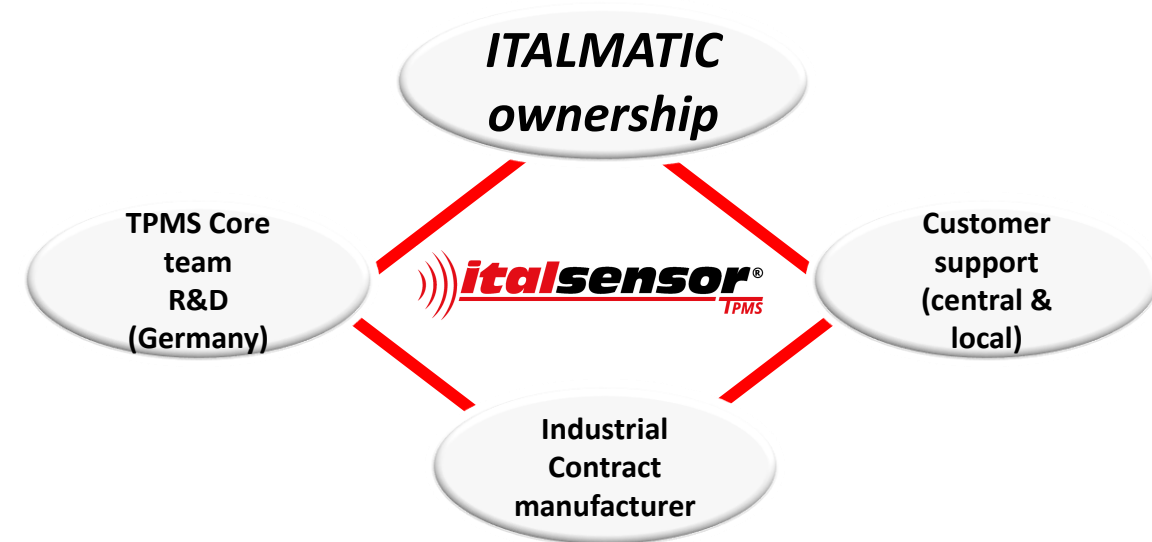
ITALSENSOR FLEET

(RETROFIT KIT TRUCK, HEAVY DUTY, BUS)

MAY 2023



Italsensor is our own product, engineered by our own team and assembled through industrial partner network under our specs and control.

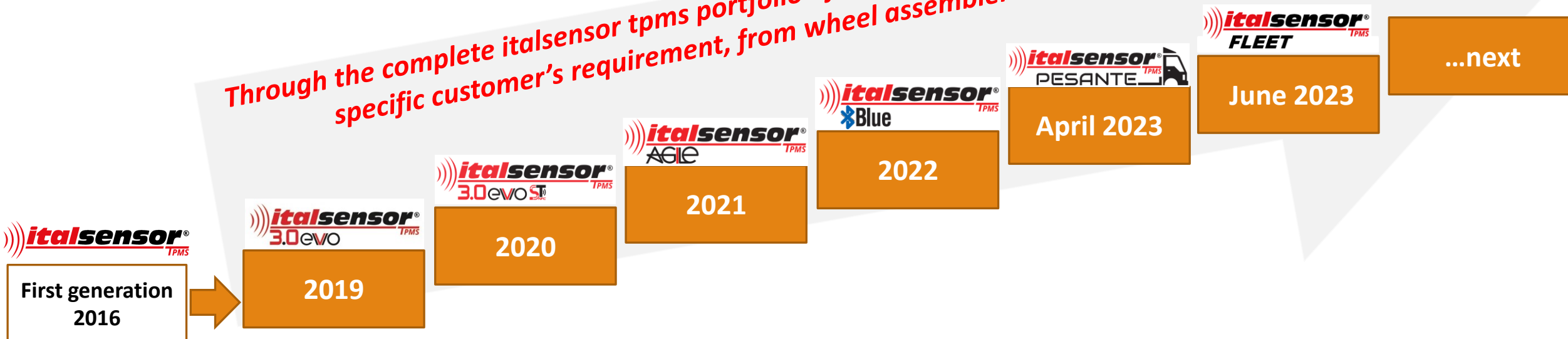


Key Success Factors

- *Italmatic experience in TPMS after market as reference partner for wholesalers, wheel assemblers, car importers, tyre shop chains.*
- *Our core TPMS team (located in Germany) is composed of highly trained engineering professional with specific experience in OE TPMS industry, sensing and wireless communications.*
- *Rapid connection to industry leaders and decision makers*
- *Access to independent best in class technologies*
- *Reliable and cost effective industrial partners selection*
- *Application list at the highest levels in market (>99,8%)*
- *Customer support (central and local) to provide best service to customers*

- Italmatic launched the Italsensor program and brand in Jan 2016 with first generation of programmable sensor
- During the last years the italsensor evolved in products and technologies, and the brand is widely recognized in the European tpms aftermarket as synonymous of quality, performance and reliability.
- Currently the Italsensor product portfolio includes 5 variants of products which have the purpose to satisfy in the best and most flexible way the needs from different market segments and customers, and 1 solution for fleets management.

Through the complete italsensor tpms portfolio of solutions, italmatic is able to meet any specific customer's requirement, from wheel assemblers to small shops.







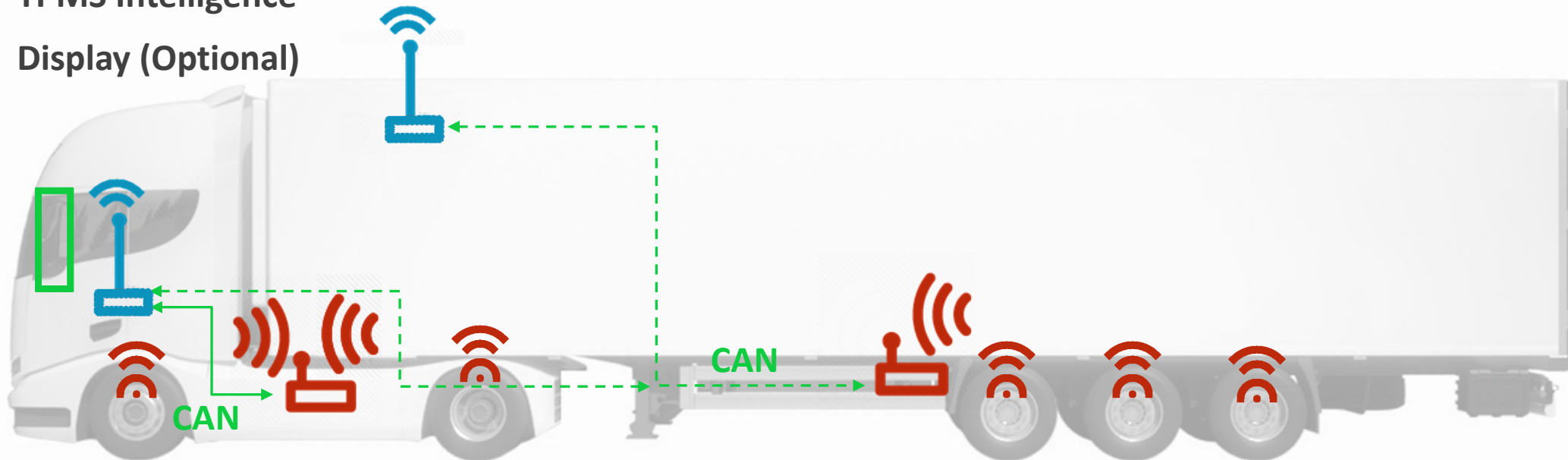
- Different companies desire different solutions for their fleet
 - ? Display
 - ? Telematics
 - ? Trailer



1. Third-party Telematics

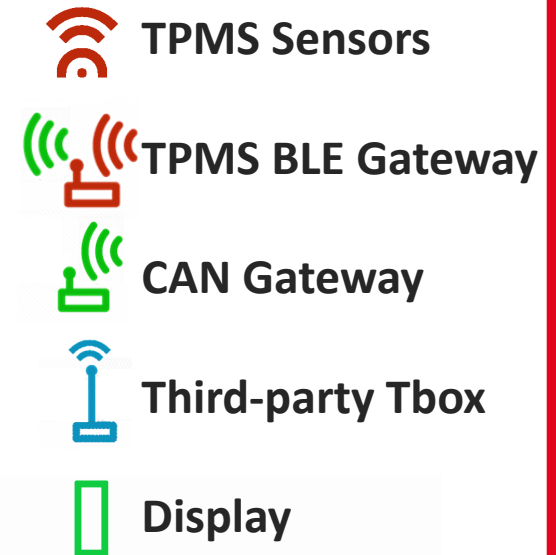
- For fleets that already have a Telematics Box collecting and transmitting data from Heavy-duty and Medium-duty vehicles
- The Tire Pressure Monitoring System (TPMS) would comprehend:
 - Sensors
 - Gateway CAN (+ Cable)
 - TPMS Intelligence
 - Display (Optional)

-  TPMS Sensors
-  TPMS Gateway
-  Telematics
-  Display



2. Third-party Telematics – less cabling

- Using existing Telematics Box collecting and transmitting data from vehicles
- The Tire Pressure Monitoring System (TPMS) would comprehend:
 - Sensors
 - Gateway RF (Wireless)
 - CAN Gateway
 - TPMS Intelligence
 - Display (Optional)



- Easier installation – less cabling – connecting the receivers to the Telematics units.

3. *Integrated Telematics*

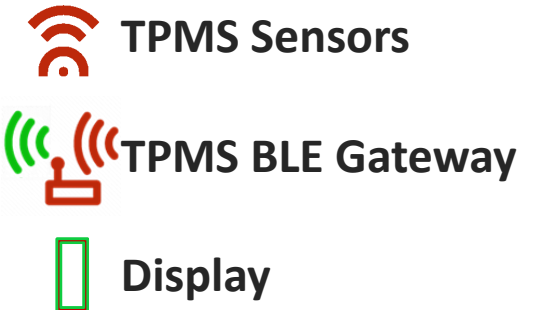
- The gateway integrates a full Telematics, with GPS and LTE connection
- The Tire Pressure Monitoring System (TPMS) would comprehend:
 - Sensors
 - Telematics Gateway (incl. GPS)
 - TPMS Intelligence
 - Display (Optional)



- The gateway transmits the information directly to the cloud

4. Standalone (Offline)

- For fleets that want the information available only to the driver
- The Tire Pressure Monitoring System (TPMS) would comprehend:
 - Sensors
 - Gateway RF (Wireless)
 - TPMS Intelligence
 - Display

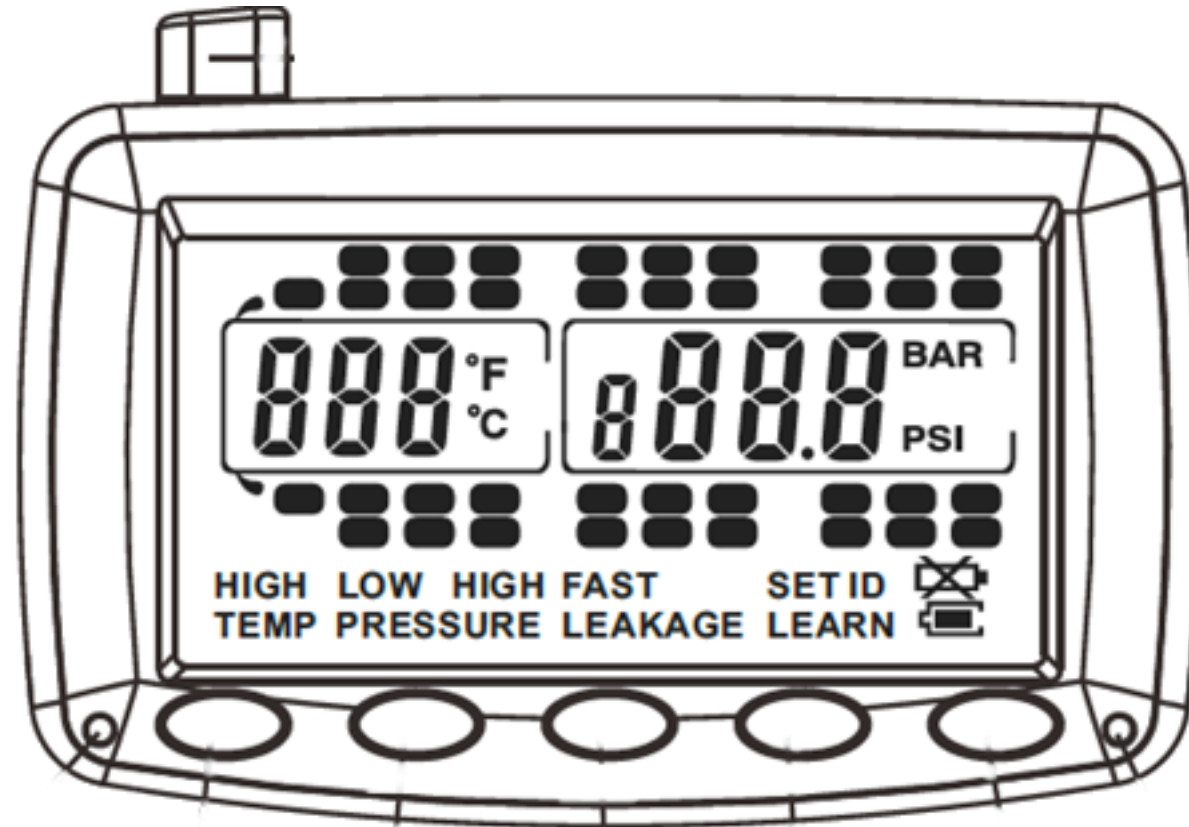


- All presented solutions may include a **display**
- Real-time interaction with the driver
- Preemptive maintenance by checking all pressures before a trip



- Visual and audible warnings
- Backlight for night drives
- Rechargeable battery included

- Display information of tractor and trailers



- A gateway will be installed on each vehicle (Truck or Trailer).
- This unit can integrate a Telematics Box or communicate with a third-party Telematics unit through CAN.



- Automotive-qualified device
 - To survive the harsh heavy-duty environment.
- Waterproof
 - Enables installation closer to the sensors.
- Integrated Antenna.
 - Avoids multiple antenna cables.

- For Fleet Management, there is only one solution you want:



Flow-through

- Transmitting at 433MHz
- Battery lifetime 4+ years

INSTALLATION

MAINTENANCE

QUALITY

- For Fleet Management, there is only one solution you want:



Flow-through

- Transmitting at 433MHz
- Battery lifetime 4+ years

INSTALLATION

- Screw-on installation does not require special tools or training
 - Fleets and technicians are used to valve extensions
- Quick fleet adoption is key for the success of the system
 - Avoid blanks in the data and in the fleet
- External installation allow for easier positioning of the sensor
 - QR-Code or Manual Learn

- For Fleet Management, there is only one solution you want:

MAINTENANCE



Flow-through

- Pressure adjustment without interfering with Sensor
 - Inflation and Deflation through the valve extension
- Prevent issues of removing and losing the sensor
 - By the technicians, drivers or third-parties.
- Sensor can be easily transferred between wheels or vehicles
 - External sensor allow for easier re-positioning

- Transmitting at 433MHz
- Battery lifetime 4+ years

- For Fleet Management, there is only one solution you want:



Flow-through

- Transmitting at 433MHz
- Battery lifetime 4+ years

QUALITY

- Proved designed at several fleets in Europe and North America
 - Millions of sensors and miles driven
- Valve extension and 2nd Valve-core prevents leakages
 - The sensors provides an additional protection
- Automotive qualified and OE qualified
 - Bench and field testing by market leaders in the automotive industry

- For Fleet Management, there is only one solution you want:

ALTERNATIVE



Flexi

- Transmitting at 433MHz
- Battery lifetime 4+ years

- Same characteristics as the Flow-through Version
- Allow for an easier installation on internal wheels.
 - Provides also an easy access to inflate the tires
- Automotive proved installation
 - Clamps are well-known and well-used in the industry

- For Fleet Management, there is only one solution you want:



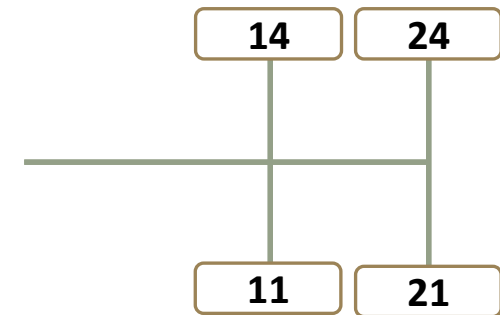
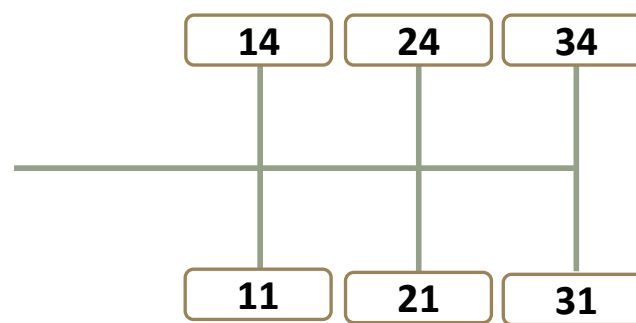
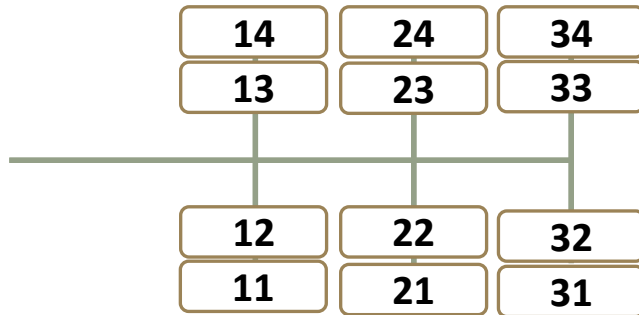
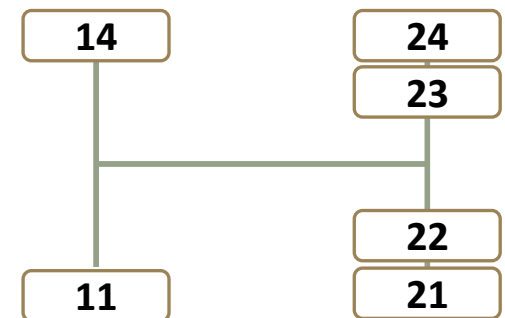
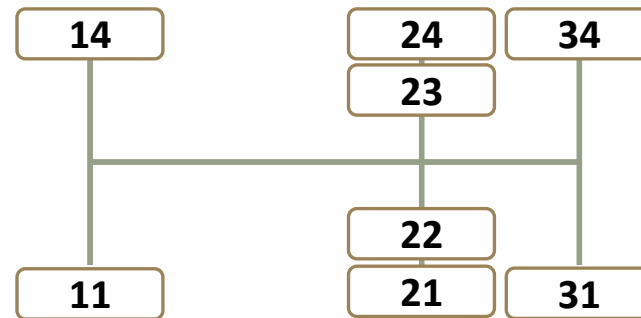
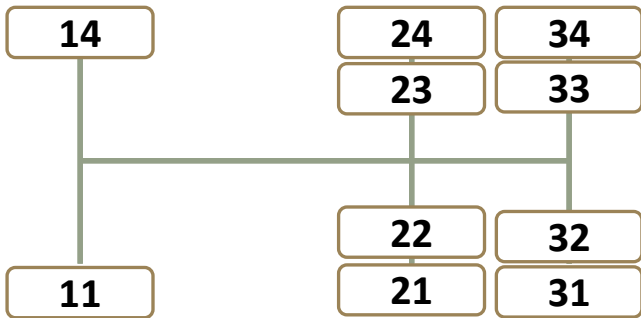
Screw-on

- Transmitting at 433MHz
- Battery lifetime 4+ years

ALTERNATIVE

- Solution for fleets used to sensor as the valve-cap
- Screw-on installation does not require special tools or training
- Easier fitment on a wider range of rims
- Sensor can be easily transferred between wheels or vehicles
- Automotive qualified

- Twelve (12) different Sensors will be provided to the fleet. Each sensor is pre-configured and numbered to a given position in the vehicle:



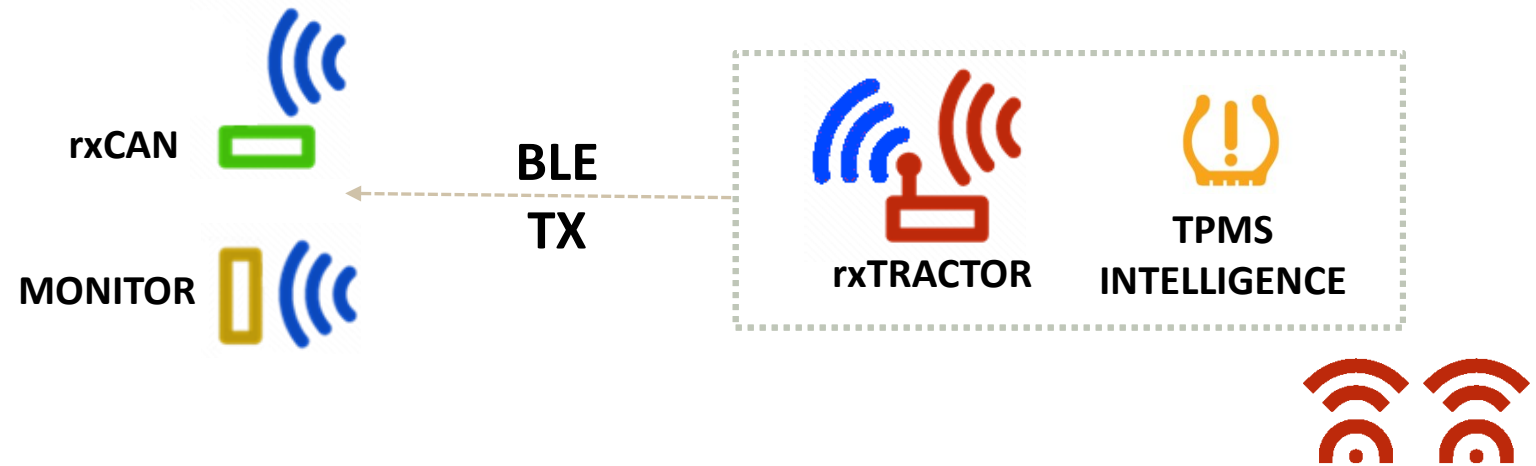
- NN – Indicates the Axle
 - First axle: 11, 12, 13, 14
 - Second axle: 21, 22, 23, 24
 - Third axle: 31, 32, 33, 34
- NN – Indicates the Position in the Axle
 - External Left: N1
 - Internal Left: N2
 - Internal Right: N3
 - External Right: N4

- The sensors will have a marking on the cap with the NUMBER assigned to that sensor.



- The sensors will transmit that information to the receiving unit.
- Upon having a warning, the driver will know the position with the issue.

- A receiving unit will need to be installed outside the cabin, to properly receive TPMS information.
- The system should behave as follow.

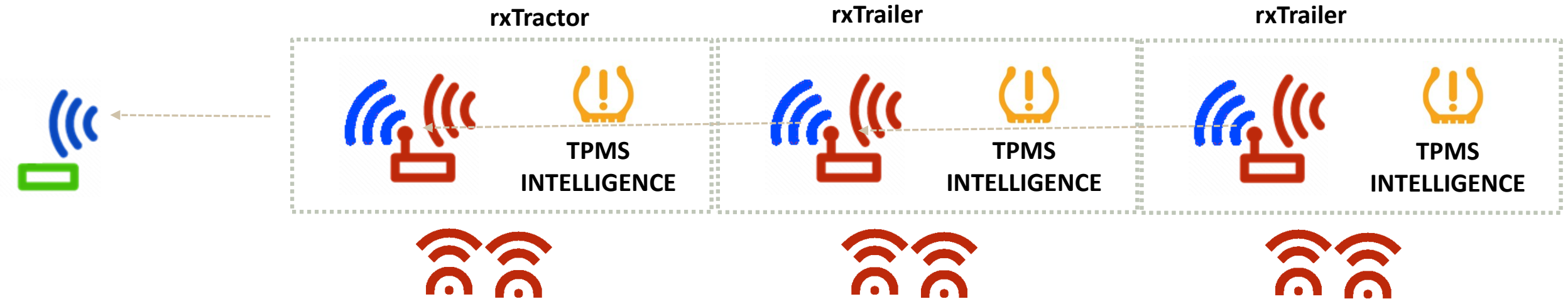


- The *rxCAN* (and the *Monitor*) will need to pair to the transceivers during installation (tractor) and drop&hook (trailer).

- The *rxTractor* will hold the information of which sensors are installed in the Tractor.
 - This guarantee that internet is not required during the trip or when changing *rxCan* or *Monitors*.
- The *rxTractor* will filter and transmit only the relevant sensor information.
 - Limit the amount of information when in the company garage – too many sensors.
- The *rxTractor* will have a warning strategy and Tx that information in case of warning.
 - The actual warning is shown by the *Monitor* or *rxCAN*.

- The *rxTrailer* will hold the information of which sensors are installed in the Trailer.
 - Avoid requiring internet connection when a driver initiate the trip with the vehicle.
- The *rxTrailer* will filter and transmit only the relevant sensor information.
 - Limit the amount of information when in the company garage – too many sensors.
- The *rxTrailer* will have a warning strategy and Tx that information in case of warning.
 - The actual warning is shown by the *Monitor* or *rxCAN*.

- Each Transceiver transmits directly to the *rxCAN* or *Monitor*.



1. Integrated Telematics

- The gateway integrates a full Telematics, with GPS and LTE connection
- The Tire Pressure Monitoring System (TPMS) would comprehend:
 - Sensors
 - Telematics Gateway
 - Display (Optional)

- NLP (FSK)
- Bluetooth
- LTE



2. Separated Telematics

- The gateway is separated from the receiver.
- The Tire Pressure Monitoring System (TPMS) would comprehend:
 - Sensors
 - Telematics Gateway
 - Receiver
 - Display (Optional)



NLP (FSK)



Bluetooth



LTE



Thank you

Choose Italmatic as your partner for TPMS to get best technical innovation, quality, service and the right product for your needs at the best price.

