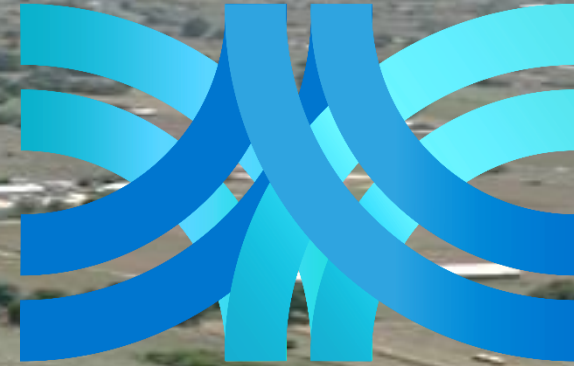


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**ERTA Project - a step into full EETS interoperability**

**Paolo Guarnieri  
Business Development  
Autostrade Tech – AISCAT, Italy**



**autostrade//Tech**



Organized by

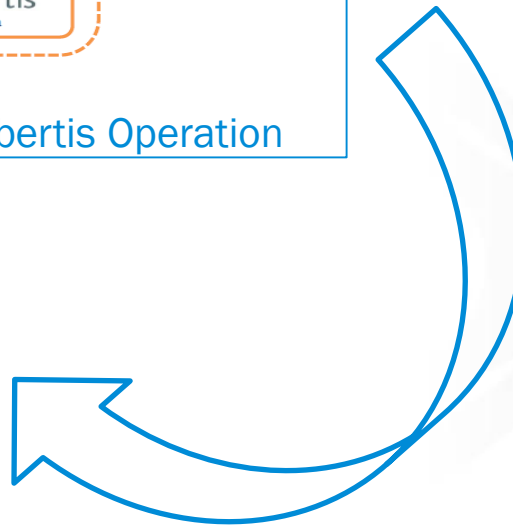
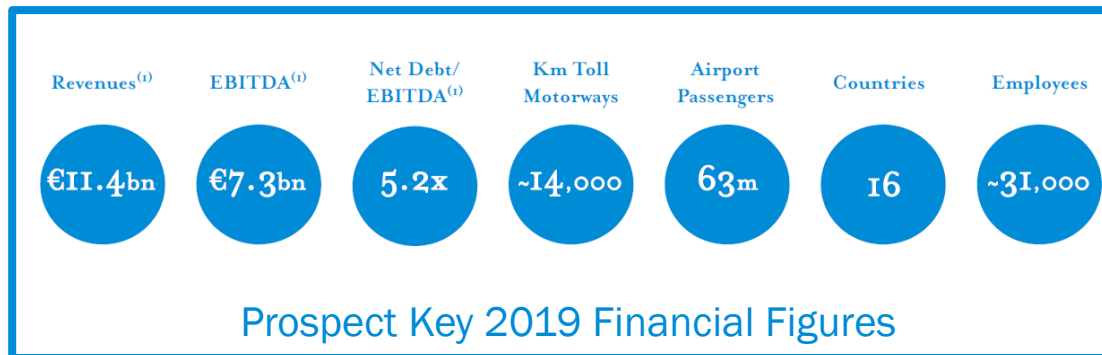
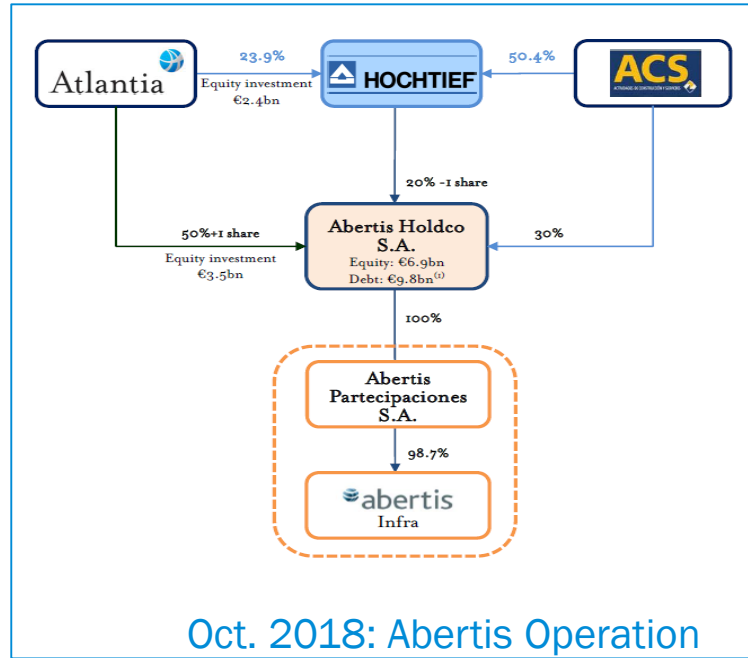




# Atlantia Profile and Abertis operation – a «new» Atlantia

## Key 2018 Financial Figures

	Atlantia Group <sup>(1)</sup>	Chg. vs 2017 (Like for Like)
OPERATING REVENUES	€ 6,916m	+16%
EBITDA	€ 3,768m	+1.5%
GROUP NET INCOME	€ 818m	-1.7%
FFO	€ 2,984m	+3.9%
DIVIDEND PER SHARE	€0.90	
NET DEBT	€ 37,931m	5.2x



(source: www.atlantia.it)



# TELEPASS EU: European interoperability for heavy vehicles

- **Telepass EU** is an interoperable GNSS device for over than 3,5 tons HGVs,
- Telepass is the only service provider that allows you to travel with no hurdles in:
  - DSRC toll domains:
    - France: TIS-PL
    - Spain, Portugal: VIA-T
    - Poland: A4 Kraków - Katowice
    - Austria: GO
    - Denmark: BroBizz for Øresund and Storebælt
    - Sweden: BroBizz for Øresund and Svinesund
    - Norway: AutoPass, AutoPassferje
    - Italy: Telepass
  - GNSS toll domains:
    - Belgium: Viapass and Liefkenshoek
    - Germany: LKW-Maut
- **Coming soon:**
  - Slovenia: DarsGO (DSRC)
  - Hungary: HU-GO toll data provider (GNSS)
  - Bulgaria: BGTOLL (GNSS)
- **Autostrade Tech** is the technological provider of the *ERTA platform*
- The Client is **Telepass S.p.A.**



COMING SOON



SLOVENIA

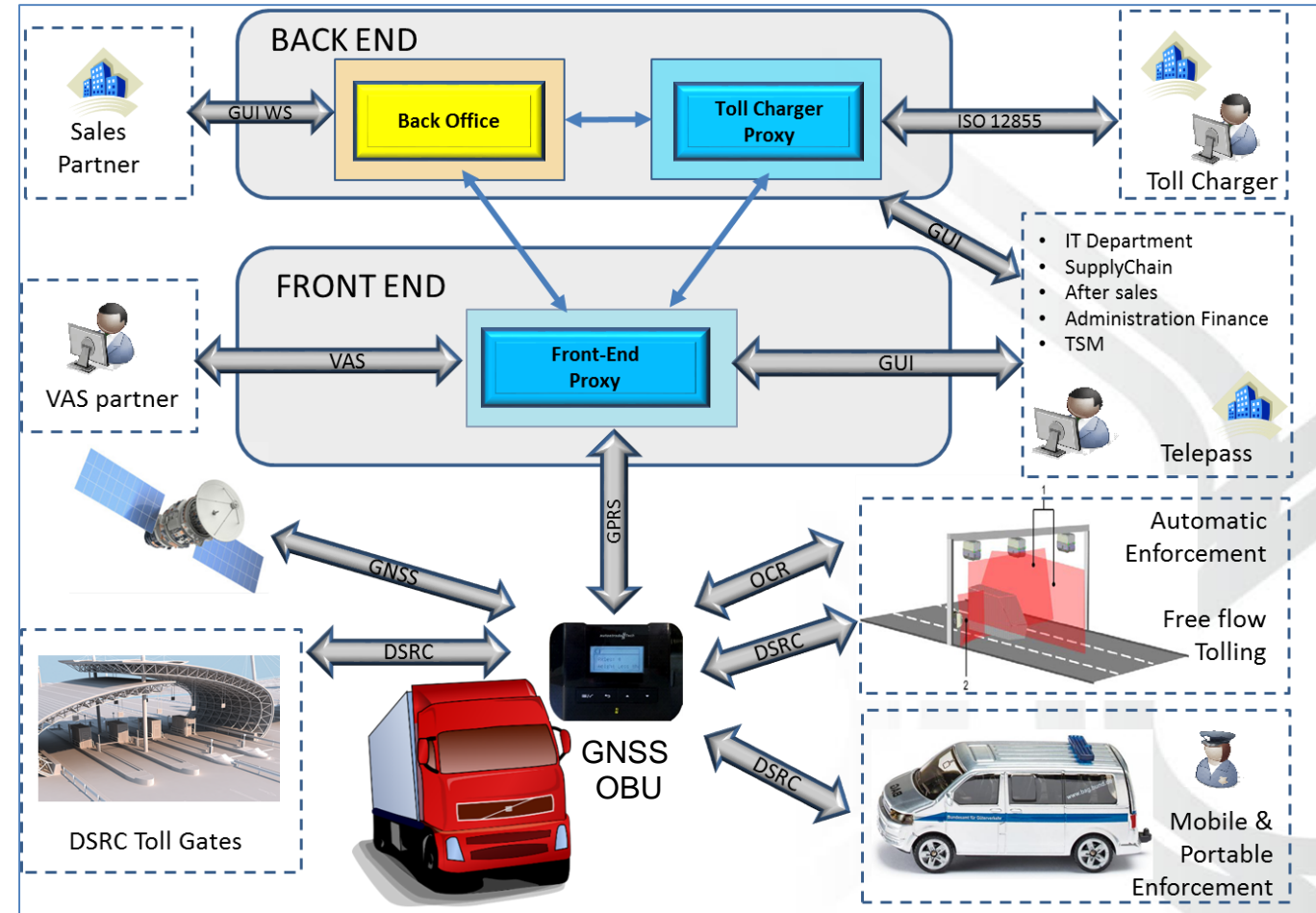


UNGHERIA



# ERTA Project overview

- The ERTA Project is composed of integrated hardware and software components and represents the technological support to the operation of **Telepass S.p.A.** as EETS Provider in GNSS and other European DSRC domains with the TELEPASS EU On Board Unit.
- **Design & Build of the system started on January 2016.**
- Belgian homologation phase has successfully passed on **December 2017**, as accredited by Belgian authority **VIAPASS**.
- Germany context homologation has successfully passed in **April 2019**, as accredited by German authority **BMVI**.
- The system implements functions and processes for the operation in **both GNSS and DSRC contexts**.
- DSRC contexts can be free-flow or not. the OBU has a DSRC module for toll collection and for the compliance check with equipment in GNSS-based toll contexts for enforcement purpose.



# ERTA Project – Telepass EU On Board Unit

## APPLICATIONS

The Telepass EU OBU support applications and services based on both GNSS and DSRC technologies such as automatic fee collection, congestion charging, access control, park & fleet management, vehicle tracking, floating car data & many other V.A.S.

## MAIN FEATURES

- Easy-to-install
- Integrated system: GNSS, dual mode DSRC and GPRS class10 for **Hybrid Tolling Solutions**
- **Interoperability:** fully compliant with EU directives
- Multi GNSS application functionality: different schema of GNSS tolling applications vehicle tracking & other **V.A.S.**
- High quality satellite **localization performance** (GLONASS, GPS and GALILEO compliant). EGNOS compliant.
- **OTA** (over the air) software update feature.
- Integrated 3D gyro & 3D accelerometer (**inertial sensors**) for hybridization features and V.A.S.
- **High security:** data encryption, Anti-jamming and anti-spoofing, Anti-tampering protection
- Extended OBU lifetime in case of main power unavailability (4 hours minimum)
- **rechargeable Li-Ion backup battery**, replaceable through a dedicated plastic door
- Extra flexible data storage memory up to 512Mbytes (optional).
- USB service port for: power the OBU; charge the backup battery;
- CE & RoHS compliant. Available also with ATEX certification (on demand).



# ERTA Project – Back and Front End

## The Front-End Proxy:

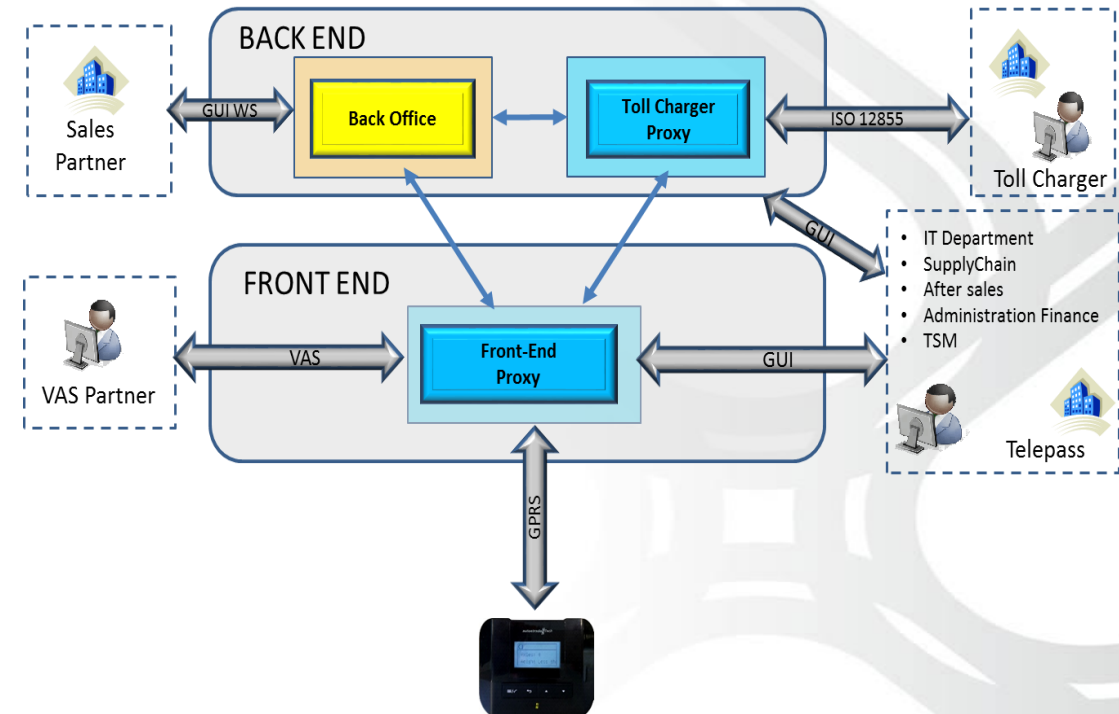
- receives the toll-relevant raw data recorded by the OBUs,
- processes raw data for aggregation, validation and further elaboration by the Back Office,
- calculates the tolls associated to the toll road network used and the liable vehicle,
- receives from every OBU data about diagnostic and alarms,
- sends to OBU new configurations and SW updates.

## The Back Office is in charge of the:

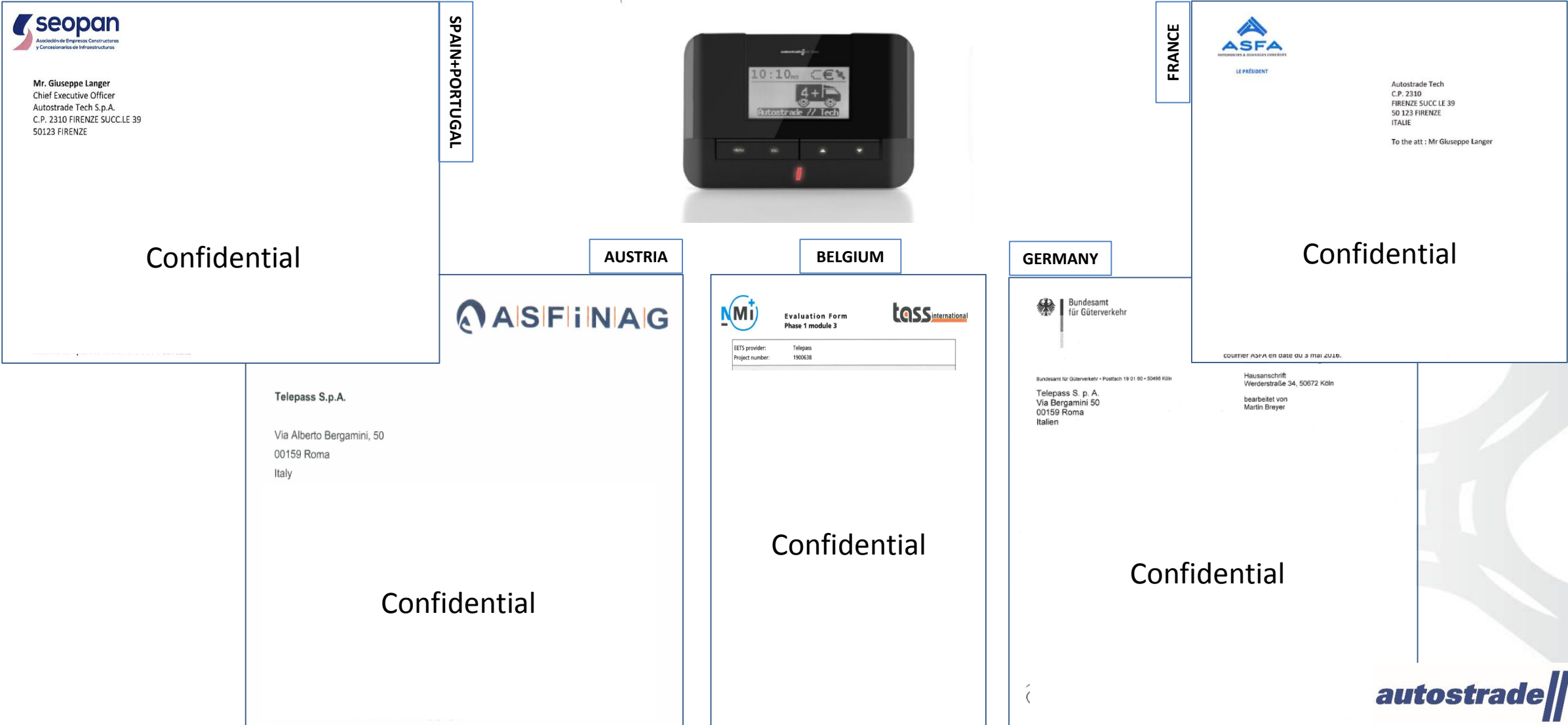
- billing and invoicing to customers (for GNSS-based toll contexts, on the basis of the toll declarations received from the Front-End Proxy),
- vesting of toll revenue to Toll Charger,
- management of the contractual relationship with customers,
- supporting technical fulfillment of the obligations (legal, fiscal, financial, confidentiality-related and privacy-related) concerning the operation as a Toll Service Provider.

## The Toll Charger Proxy is dedicated to the:

- management of the interfaces between Telepass and the Toll Chargers,
- receives relevant data from the Back Office and the Front End,
- processes the flows received from the Toll Charger and manages them for the correct addressing of information.



# Conclusion



# THANKS FOR YOUR ATTENTION!

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