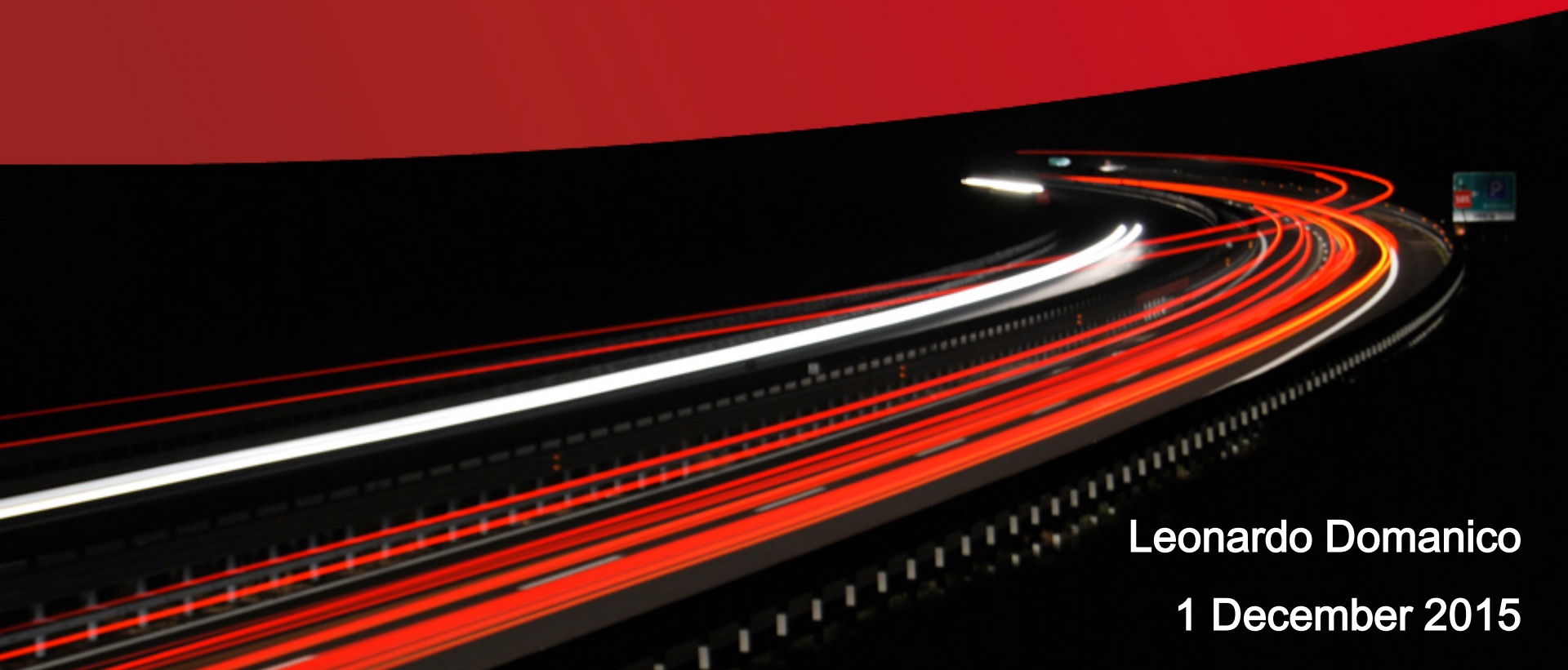




Associazione Italiana
della Telematica
per i Trasporti e la Sicurezza

The Italian ITS Platform for Integrated Logistics



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1 December 2015

- **Transport system figures**
- **Freight transport modal split**
- **Transport system & freight transport objectives**
- **Proposed Solution: UIRNet Platform**
- **ITS National Logistics Platform services**
- **ITS National Logistics Platform next steps**
- **Benefits of the ITS National Logistics Platform**

→ **Italian transport network (in 2013)**

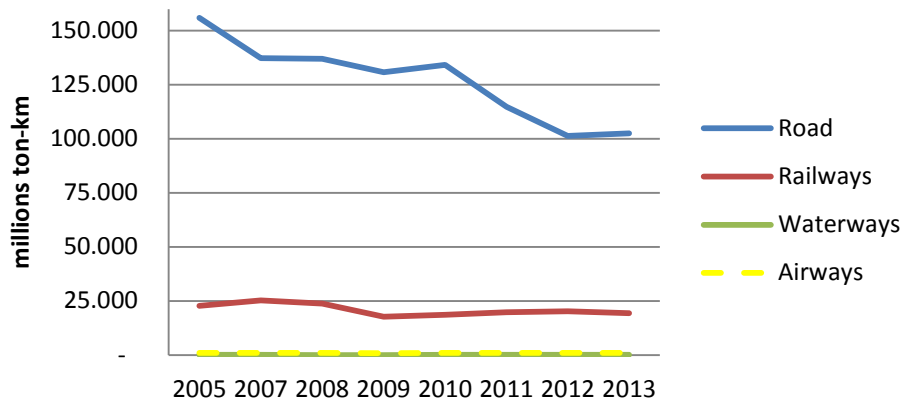
- ✓ **263** ports
- ✓ **44** airports
- ✓ **26** freight villages
- ✓ **16.742 km** of railway network
- ✓ **253.730 km** of local roads network
- ✓ **6.668 km** of highway network (of which 5.724,4 equipped with electronic tolling)

- **Road** is the transport mode more used for both freight transport and passengers transport, despite the geographic shape of Italy that should favourite the other transport modes

Freight transport modal split

Freight transport in Italy 2013:

- ✓ **Road: 102,592 (56,97%)** millions ton-km
- ✓ **Railways: 28,979 (16,09%)** millions ton-km
- ✓ **Waterways: 47,508 (26,38%)** millions ton-km
- ✓ **Airways: 991 (0,55%)** millions ton-km

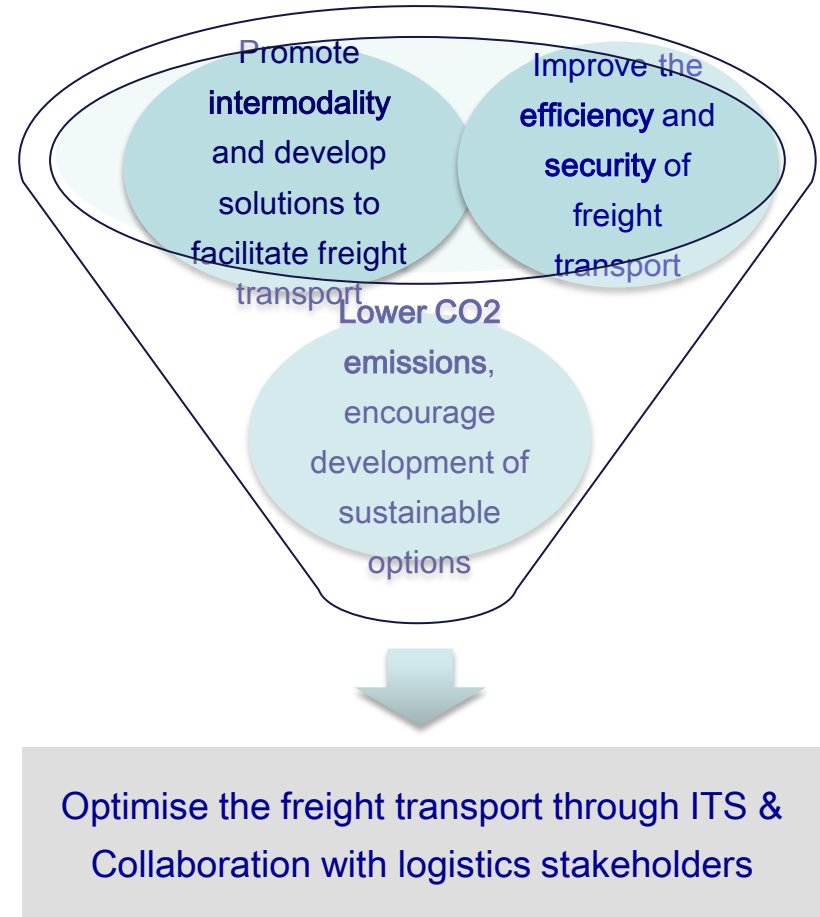


Road transport is slowly decreasing while the other transport modes are increasing

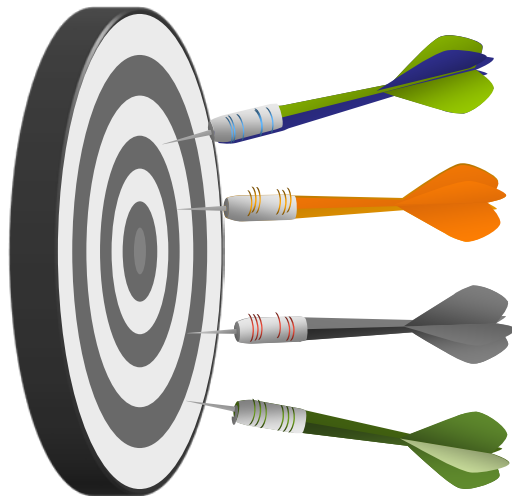
- ✓ Despite the economic crisis, **goods and people mobility is increasing** in Italy: **+50% (forecast to 2030)**

- **Challenge in Italy:** improve the freight transport, favouring a more balanced modal to the detriment of the road.
- **UIRNet**, a company established in 2005, is the way adopted by Italian Ministry of Infrastructures and Transports with the main goal to implement the Italian ITS Logistics Platform
- The Italian Infrastructures and Transports Ministry supports UIRnet in all the major legislative ITS initiatives: **ITS Decree** (March 2013) and the **National ITS Action Plan** (February 2014)

- **UIRNet is a neutral player**
- The main objective is to **simplify the complex system of haulage and logistics for all the actors involved**, through the Intelligent Transport System
- The services are equally available to all actors involved in freight transport
- UIRNet does not favor any category of actors over others



UIRNet aims at increasing...



→ **EFFICIENCY**

→ **RELIABILITY**

→ **SECURITY**

→ **ENVIRONMENTAL**

... Through...

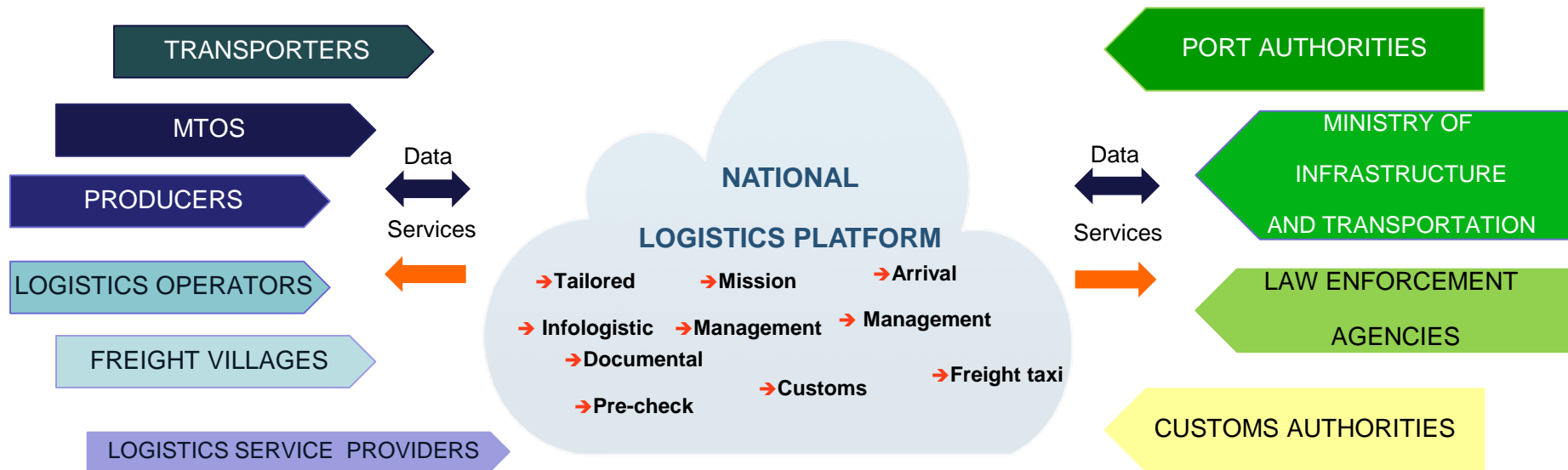
TECHNOLOGY

Enable real-time data communication and reduce digital divides thanks to **interoperable, scalable and integrated IT Platforms**, legacy systems, smartphones, On Board Units, CAN Bus technology, Security systems, ...

&

COLLABORATION

Build a wide network among transport operators, industries need transport services, infrastructure administrators and transport institutions in order to **ease common operations, favour innovation and boost investments**



REAL-TIME traffic flow scheduling

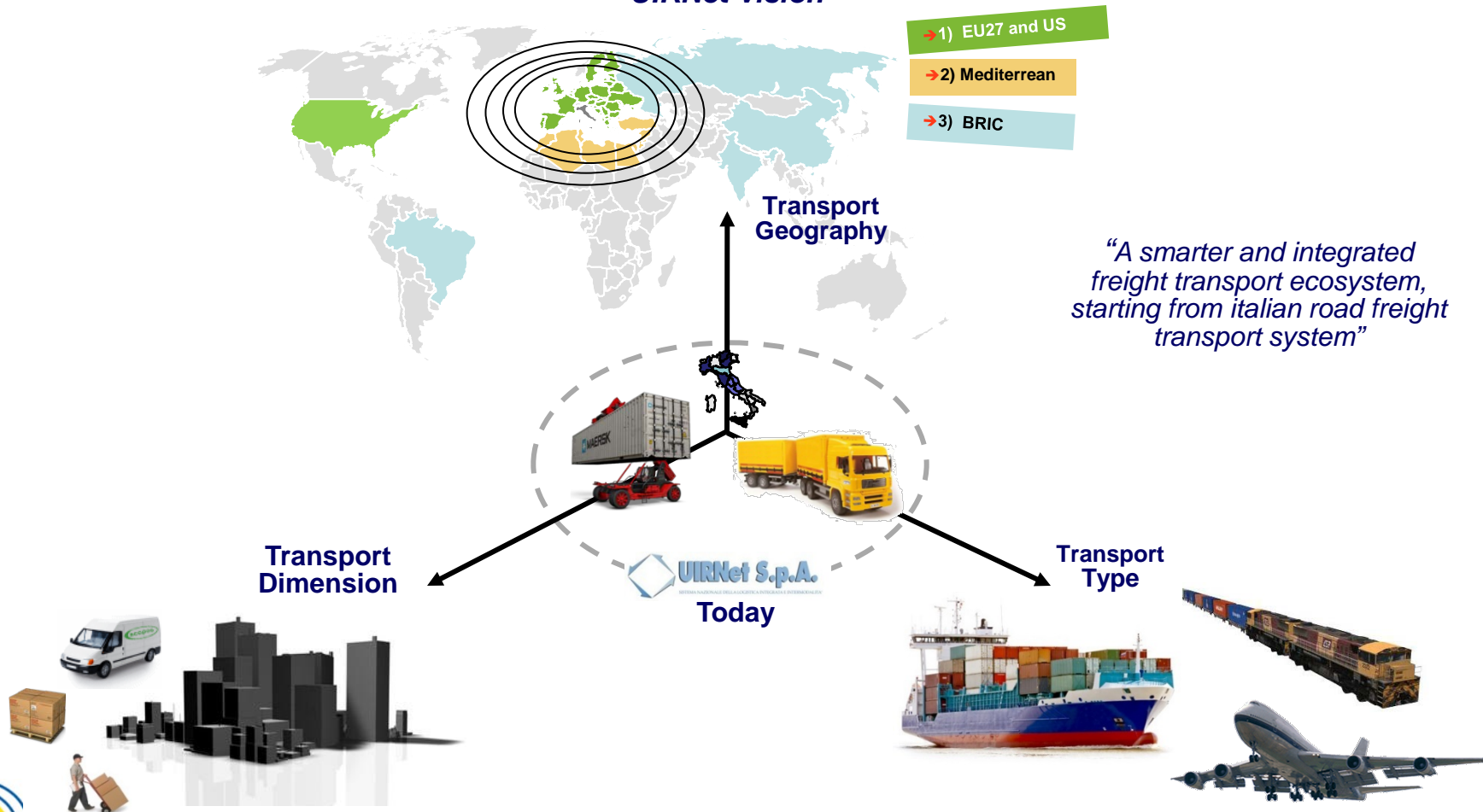
The Platform collects missions from all subscriber vehicles and tracks, managing congestion and contingencies through alert and re-routing

REAL-TIME arrival management

The Platform integrates companies and logistic nodes to manage incoming subscriber vehicles

The National ITS Logistics Platform in the implementation phase.....

UIRNet Vision



→ **The National ITS Logistics Platform services:**

- ✓ **Core services (ready)** provide the basic functionality essential for other services (SmartTruck, Control Tower, Booking, Freight Taxi).
- ✓ **Other services** provide advanced features based and enabled on Core services and their data/results (infrastructure access control, customs control, ...)
- ✓ **Specific services** provide solutions for specific problems/geographic area/transport infrastructures (city logistics, parking area, dangerous freight transport,...)

UIRNet completed the Core services development and is conducting a preliminary test of a subset of them. The pilots are testing some of the National ITS Logistics Platform services, with **30,842 vehicles** registered and **2,665 transport companies** involved.

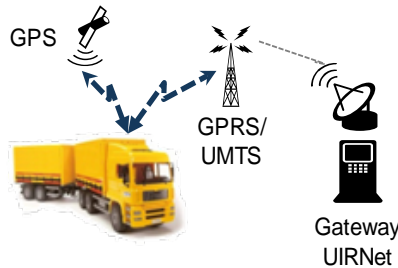
SmartTruck

Trips planning



- Trip plans definition
- Paths calculation
- Truck drivers / vehicles assignment
- Monitoring services and policies configuration
- Document upload
- OBUs settings (acquisition frequency, current position request, start/stop tracking...)
- Geographical element management (POI and zones definition)
- ...

Trip plans monitoring



- Vehicles Tracking
- Trips in progress status
- Time monitoring
- Corridor monitoring
- Geofencing
- Infomobility
- Documents status
- ...

Trip plans management



- Trips in progress and single vehicle aggregate viewing
- Update Trip plans
- Goods monitoring
- Communication with truck drivers
- Alert notifications (Time Monitoring, ..., OBUs status)
- Contingencies management
- Emergency request
- Re-routing
- ...

User target: transport operators

SmarTruck allows transport operators to easily plan and monitor trips.

Smartruck also allows to know where vehicles are and if their proceeding is regular.

Full interaction among fleet managers, truck drivers and logistics nodes is continuously guaranteed.

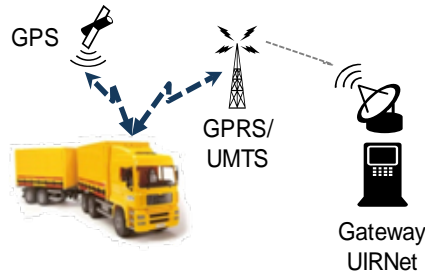
The documentation management is automatically performed and all the data are collected in a DB to generate statistics.

Benefits:

Processes optimization through a more efficient management of fleets and improved communications.

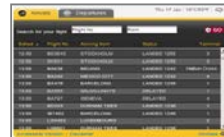
Control Tower

Trip plans monitoring



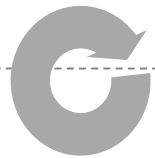
- Vehicles Tracking
- Time monitoring
- Corridor monitoring
- Geofencing
- Trip plan status
- Notice of arrival
- Document status
- ...

Arrivals monitoring



Board of vehicles arrivals

- Board of vehicle arrivals (with trip plan or notice of arrival)
- Time monitoring (ETA)
- Document status
- ...



Arrivals management



- Reception and handling preparation
- Alert on expected congestion, terminal status, non complete documentation for vehicles in arrival
- manage contingencies
- Re-routing
- ...

User target: logistics nodes, industries, carriers, MTO, maritime agents

Control Tower allows to a node to get information, accurately and in real time, on vehicles running towards it. For each vehicle arriving it is possible to know the estimated time of arrival (ETA), to receive alerts on events that could have an impact on ETA and to get the documentation before the arrival.

The node may also get aggregated information as the number of vehicles arriving by hour, the planned number of vehicles expected in the next few days (as transport companies enter their trip plans).

The node can also publish in real time its operability status.

Benefits

Integration between nodes and fleets. More efficient management of logistics hubs, thanks to a more regulated flow of vehicles

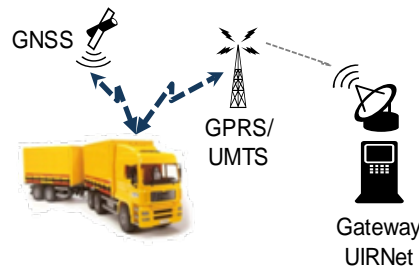
Booking

Trips planning



- Service availability (around vehicle and along planned route)
- Booking services to vehicles
- Booking services to goods
- Booking services to truck drivers
- Booking of time window of arrival
- ...

Trip plans monitoring



- Vehicles Tracking
- Time monitoring
- Corridor monitoring
- Geofencing
- Plan trips status
- Document status
- ...

Trip plans management



- Alert notifications (Time Monitoring (ETA), ..., OBUs status)
- Richiesta soccorso
- Re-routing
- Re-booking of reserved services
- Booking of new services
- Update of time windows of arrival
- ...

User target: transport operators, goods suppliers

Booking is an extension of the Control Tower service, which allows transport companies and goods' suppliers to book a service in fast and easy way and aimed at vehicles, goods and people.

The fleet / trip plans manager displays with a single click the services and can decide what to book by completing the booking form.

Benefits:

- Reduce waiting time with the booking of time windows for loading and unloading of goods
- Easy to search for services

Freight taxi

Transport supply



- Entering offered vehicles
- Search offered goods
- Bookmark manager
- Reservation of goods

Matching

Libero carico	Libero veicolo	Libero carico	Libero veicolo
Libero carico Cm - 25.11.2007 SAR - 25.11.2007	Libero veicolo SAR - 25.11.2007 SAR - 25.11.2007	Libero carico Cm - 25.11.2007 SAR - 25.11.2007	Libero veicolo SAR - 25.11.2007 SAR - 25.11.2007
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- Guarantee of business with companies in good standing

Transport demand



- Entering offered goods
- Search offered vehicles
- Bookmark manager
- Reservation of vehicles

User target: transport operators, industries

Freight Taxi provides transportation suppliers (which have a cargo space available) or industries (who have goods to ship) with secure additional business opportunities.

With Freight Taxi, industries have a selection of available vehicles and goods can be loaded and shipped in a timely manner.

Once a trip plan is set, users can locate goods, see the routes and know the time remaining to unload and then complete the trip plan established.

Benefits:

- Increased vehicle saturation rate and empty trips reduction
- Increased efficiency in the matching of transport demand and supply

→ **Other & Specific Services planned before 2015:**

- ✓ **National database of the freight transport drivers (ID Card)** to allow the identification of the drivers at the logistics centers
- ✓ **App Mobile**, to use the UIRNet services with smartphone
- ✓ **Parking area management project** to operate in a safe & secure way the national parking areas, providing new services for drivers/freight transport operators (Buffering and service area trial in the Catania area)
- ✓ **Dangerous goods project**, to manage and control the road dangerous freight transport (Picoge MP, DG Base Module,..)
- ✓ **Port Community System**, to manage freight transport flows in the Port areas (PCS Taranto)

- ➔ **Logistic Platform “Enlarged” (before 2018)** to share and exchange available logistics information, involving other Logistics Platforms of :
 - ✓ Railway freight transport
 - ✓ Road freight transport
 - ✓ Customs
 - ✓ Ports
 - ✓ Freight Villages
 - ✓ Regions
 - ✓ Private transport operators
- ➔ The **Logistic Platform “Enlarged”** will provide better efficiency of the Italian logistic sector and new services that now are not available and/or not implemented

Benefits of the ITS National Logistics Platform

Main social and economic impacts of the ITS Logistics Platform:

- ✓ **Logistics enterprises** benefits: - **2,5 Billions of € / year (+ 0,17% of National GDP)**
- ✓ **GDP** benefits: (considering the reduction of the 50% of the logistics performance gap respect Germany (best performer) or respect main European competitors (Ge, Fr, Sp, UK)): **4,7 ÷ 2,6 Billions of € is the impact on Italian GDP (+0,34% ÷ 0,18% of National GDP)**
- ✓ **Environmental** benefits: - **1,6 ÷ 2,5 Billions of €/ year**
- ✓ Positive impact on **employment** in Italy (before 2018 considering the reduction of the 50% of the logistics performance gap, respect Germany (best performer) or respect main European competitors (Ge, Fr, Sp, UK)): **+ 95.000 ÷ 52.000 of new jobs**

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Thank you for your kind attention!

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