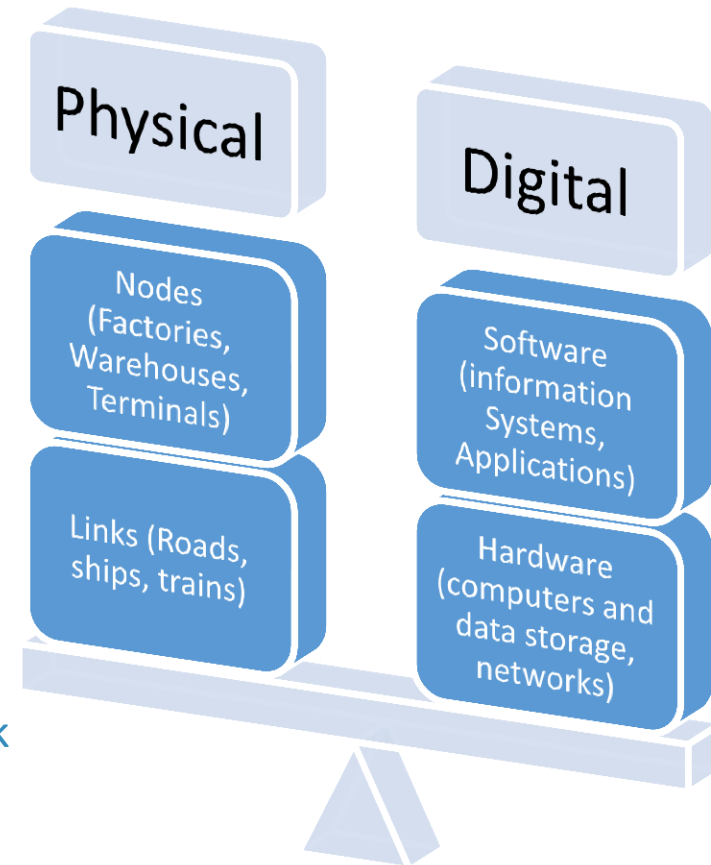


# Deploying Cooperative ITS in hubs

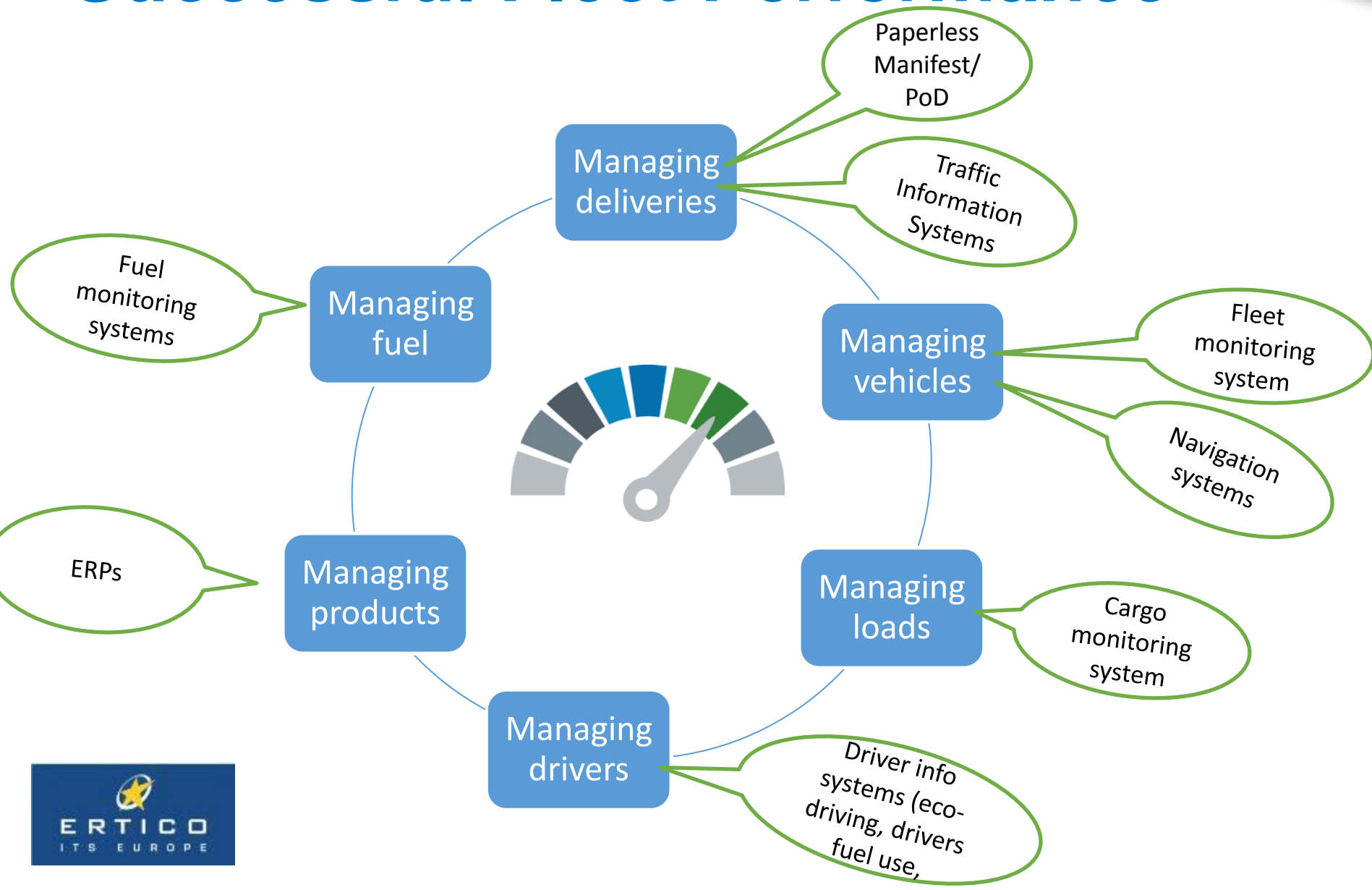
Lina Konstantinopoulou, ERTICO

# Infrastructure: Definitions

- Physical infrastructure is a number of combined supporting resources that allow trucks, ships, trains, airplanes and other types of transportation vehicles to operate.
  - Ability to physically move freight from one location to another as well as perform operations such as consolidating goods or temporarily storage.
- Digital infrastructure is other type of supporting resource includes information systems and equipment that use, store, generate or modify information related to the freight transportation operations.
  - Information is the cornerstone of efficient freight transportation (what, where, when and how to pick up assignments, transport and deliver freight according to the current situation, known customer demands)



# Different IT Systems for Successful Fleet Performance



# Real Challenge?

- A vast amount of technologies are already available today to manage different aspects but are not linked to each other, thus missing the opportunity to optimise the performance of their cooperation,
- Make use of real-time communications for the vehicle, freight and infrastructure and enhance the provision of core services) in European logistics hubs (Ports, terminals, cities)
- Improve logistics activities efficiency
- Cooperative model with logistics hubs, fleet operators, and public authorities and service providers

# Stakeholder expectations

## Logistics Hubs

- optimize truck traffic on and in the inbound area (long- and short-distance traffic),
- enhance the freight distribution services around hubs
- Keep hub community happy and informed real time

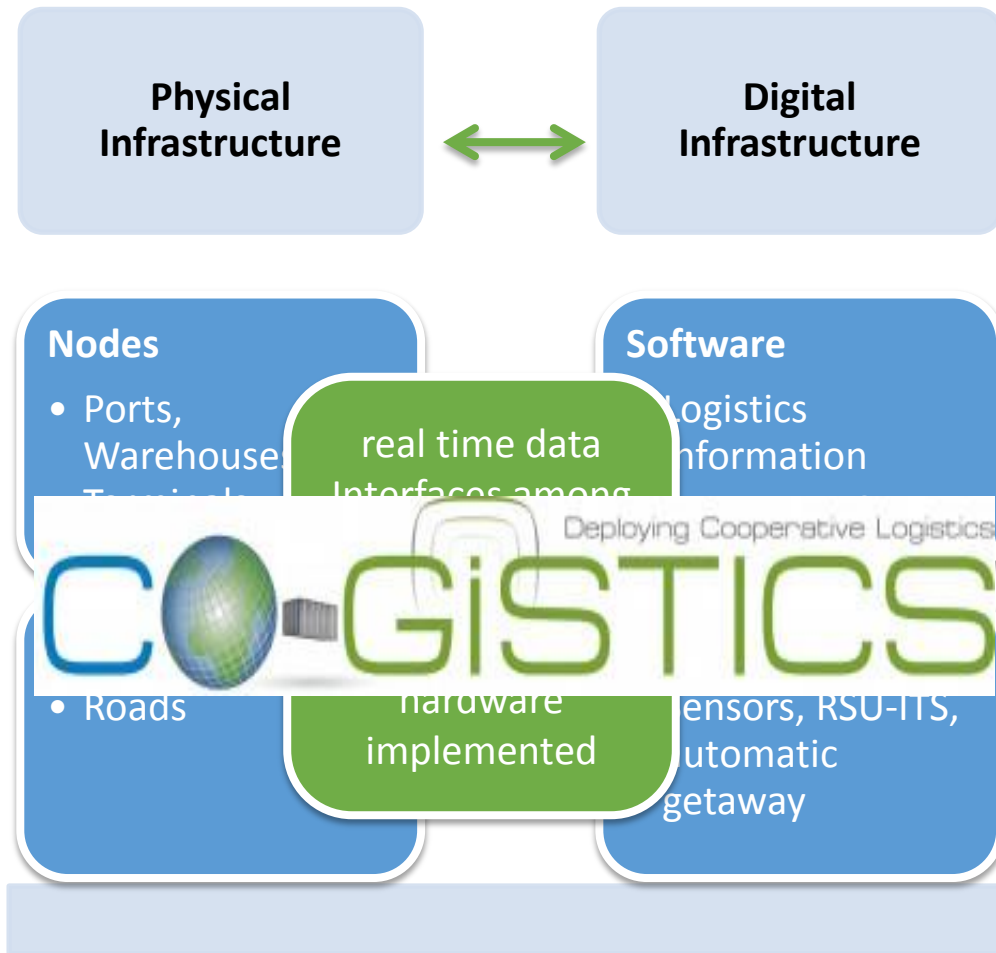
## Fleet operators

- Reduce costs by :
- estimating CO2 emissions of a certain cargo operation and adopt eco-driving style
- reduce fuel consumption of the freight trucks
- receive real time synchronization among different modalities.
- plan the entire operation of his vehicle fleet with real time delivery spaces or truck parking

## Cities

- Reduction of CO2 emissions
- Reduce road fatalities
- Reduce number of freight trucks
- Optimise network traffic management (passenger-freight flows)

# CO-GISTICS - Connected Digital and Physical Connectivity



# C-ITS Deployment in EU logistics hubs





# TM 2.0 and links to hinterland

Physical  
Infrastructure

Digital  
Infrastructure





# TM 2.0 Potential use cases

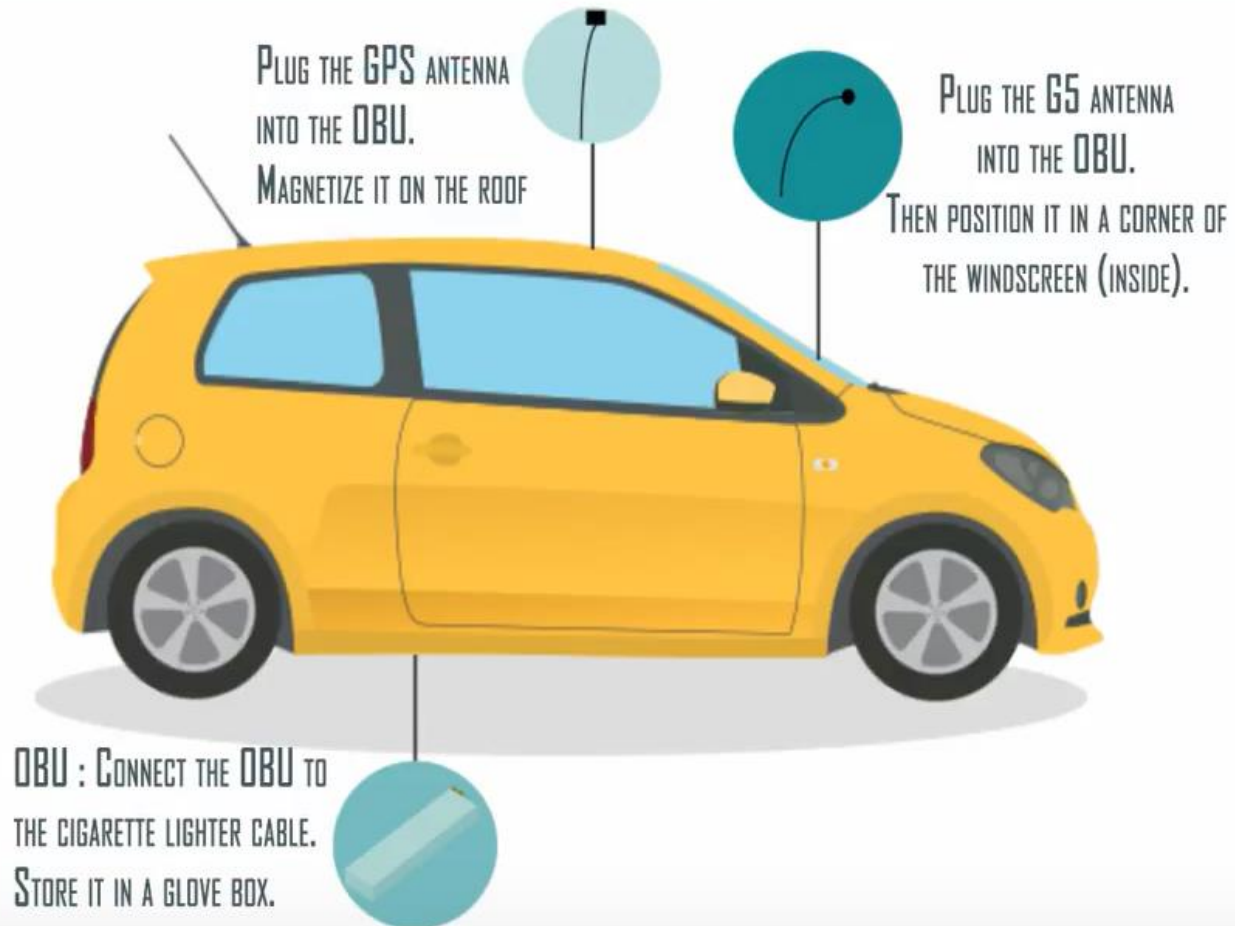
- **Network-wide floating car data (FCD)**
  - Online traffic conditions, travel times, waiting times, in the port and the surrounding area... (individual)
- **Integrated Traffic control**
  - transmit information already outside the hub area
- **Cooperative traffic control with speed recommendation (personal Green Wave – in addition to the adaptive light signal control)**
  - fuel saving and harmonious flow of traffic
- **Parking information for truck parking spaces within and outside the hub area**
  - with information already outside the hub area
- **Integration of information and functionality from container terminals, truck Appointment, Pre gate parking, cargo transport optimisation**

# How does CO-GISTICS work?

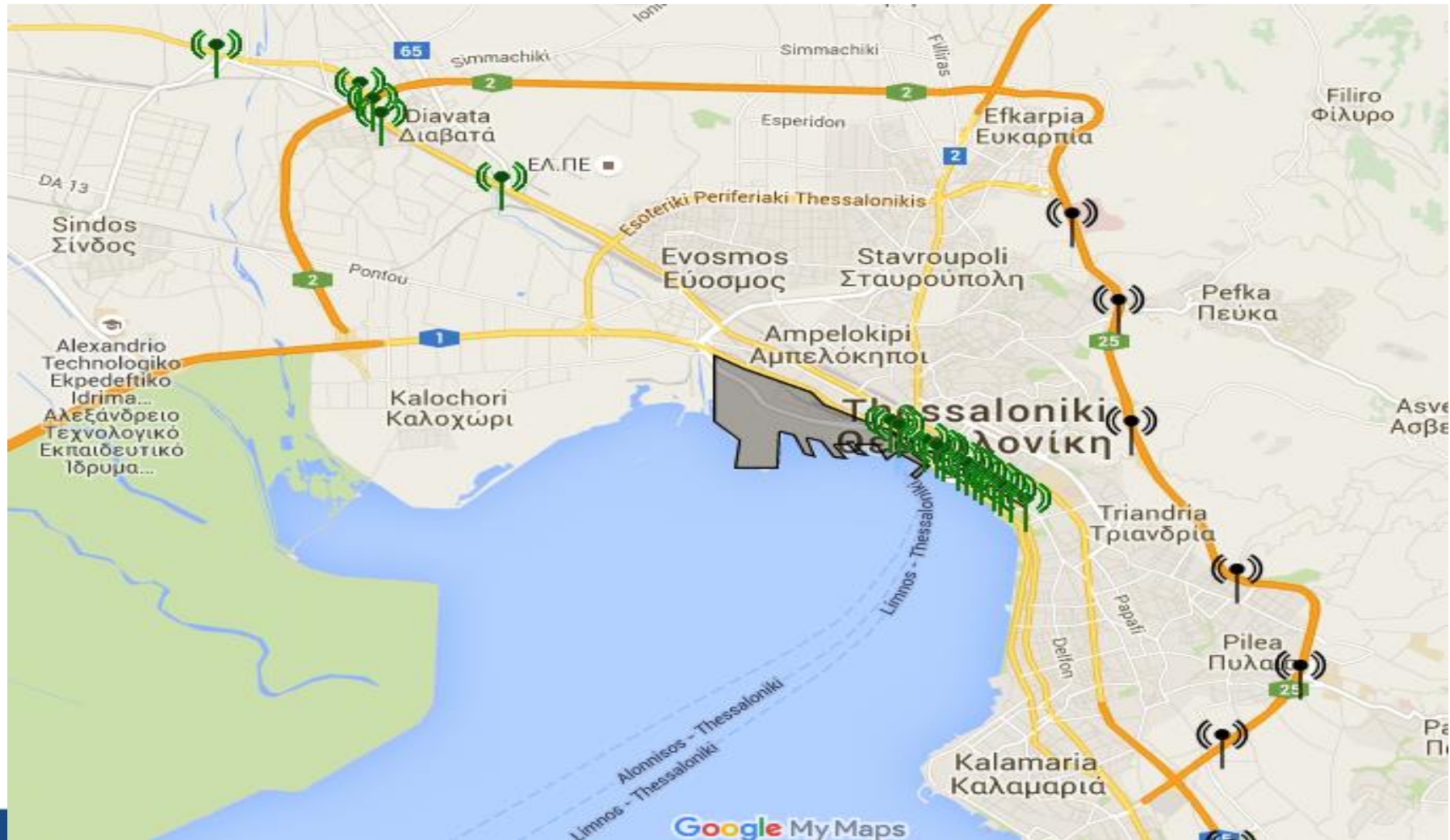
# CO-GISTICS pre –demo installation



# CO-GISTICS – installation in the vehicle



# CO-GISTICS – installation in the Traffic Lights



# Service: Cargo Transport Optimisation

Access 24 hours a day  
and 7 days a week

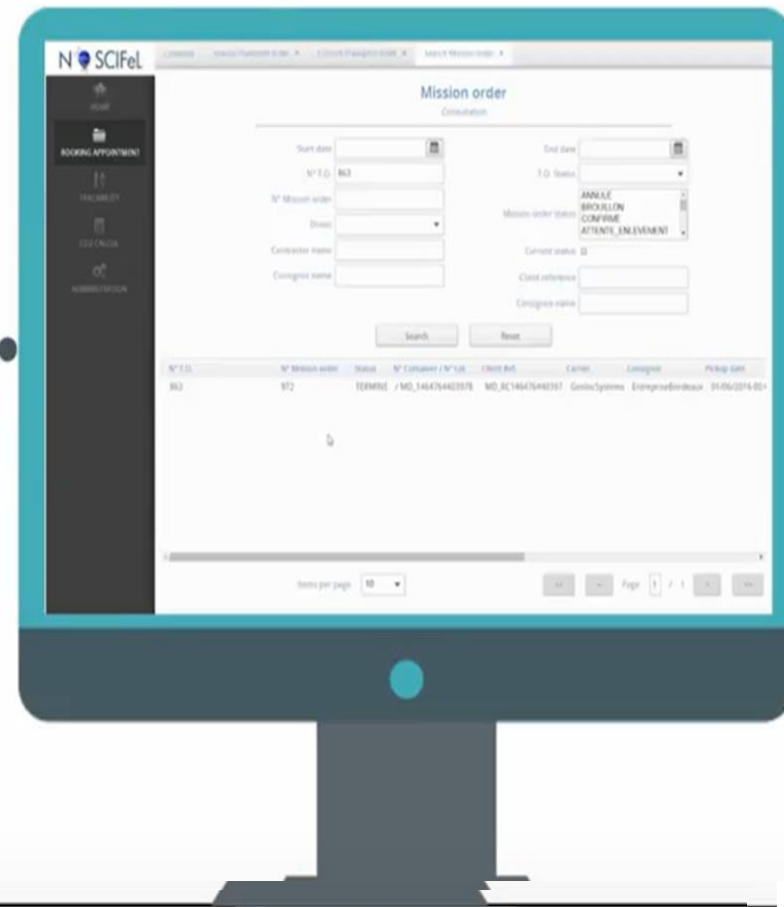
Organize collection and  
delivery operation

Complete dematerialization  
of your transport document

Strengthen your  
communication with the tracking  
of goods

Minimize your CO2 impact  
while respecting the legislation

Calculation of CO2 -GHG





# Service: Priority Speed Advice

## PRIORITY AND SPEED ADVICE THE MOBILE APPLICATION

GLOSA INDICATES THAT THE NEXT TRAFFIC LIGHT WILL BE RED



THIS GREEN INFORMATION HERE IS CALLED "ECO" THIS MEANS THAT THE NEXT TRAFFIC LIGHT IS GOING TO STAY RED MORE THAN 7 SECONDS. THE APPLICATION ADVISES THE DRIVER TO CUT THE ENGINE.

A SUPPORT FOR THE DRIVER



FLUIDIFY THE ROAD TRAFFIC



IMPROVE SECURITY, ENERGY  
EFFICIENCY, CO<sub>2</sub> REDUCTION



DECREASE THE ANXIETY

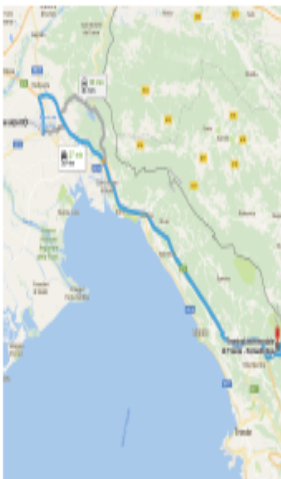


# CO-GISTICS Final demonstration event- 8-9 June 2017

**Part 1 from the airport to the Interporto di Trieste**  
(about 40km and 30 mins)

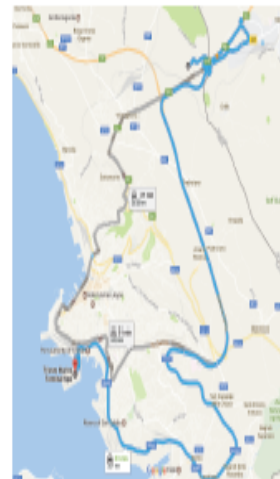
**Cargo Transport Optimisation** will demonstrate how it is possible to redirect the trucks to a parking area or directly to the port of Trieste, showing the port entry authorization on their own device,  
**Speed Advice (macro)** service will indicate to the user (trucks) the correct speed to enable them to reach the port area on time for boarding.

**Intelligent Parking (Interporto di Trieste)** service will be used to access the Interporto di Trieste area (inland terminal) with an automated electronical payment system which will drastically reduce the time spent on entrance and exit procedures.



**Part 2 from Interporto di Trieste to the Port of Trieste**  
(about 16km and 25 mins)

- **CO<sub>2</sub> Eco-drive support (LCMM)** calculates in real time the fuel consumption and CO<sub>2</sub> emission based on smart device based position data, independent from on-board sensors. It then communicates driving behavior to the drivers to increase efficiency and driving style.



**Part 3 from Port of Trieste to Congress Venue**  
(about 5km and 12 mins)

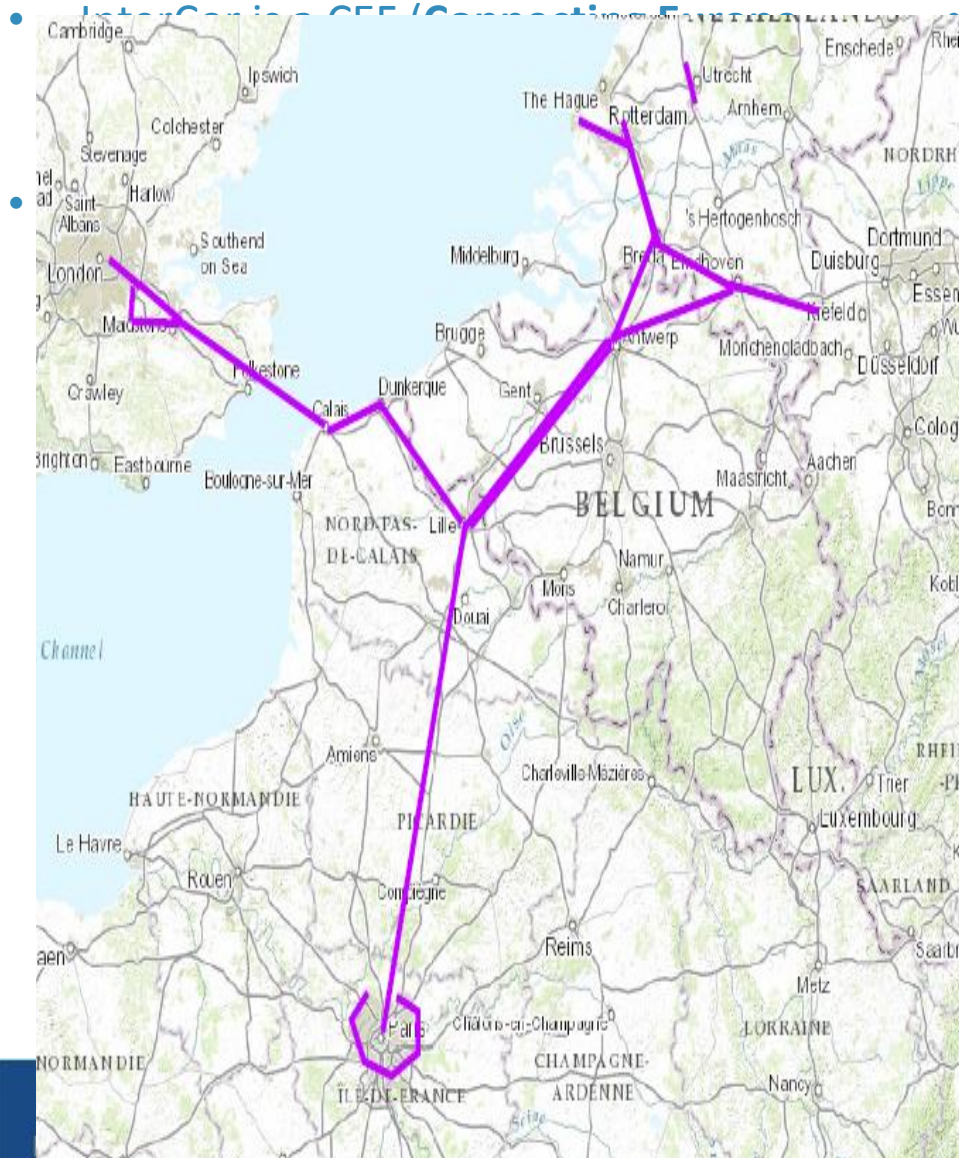
- **Speed Advice (micro)** will provide energy efficiency advice to the participants whilst passing the equipped traffic lights, including: optimal speed enabling passage through an intersection and whether to cut the engine at a red light.



On the second day, live streaming demonstrations of the other pilot sites will be shown. It will also be possible to participate in the live demonstrations of the following services.

- CO<sub>2</sub> Monitoring
- Eco-drive Support (LCMM)
- Speed Advice (micro)

# Further deployment : InterCor corridor



Pilot C-ITS services on freight and logistics by building on a common hybrid communication architecture and taking into account commonly agreed specifications from existing C-ITS corridors first results.

- Traffic management
  - In Vehicle Signage
  - Probe Data
  - Road Work Warning
  - GLOSA
- Freight and Logistics
  - Truck parking
  - Multi-modal cargo
  - Tunnel logistics

# The ERTICO - ITS Europe Partnership

## Mobile Network Operators



## Research



## Service Providers



## Suppliers



## Traffic & Transport Industry



## Users



## Vehicle Manufacturers



## Public Authorities



\* Non-shareholder

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