AEOLIX

Kick-off Meeting

Brussels ,13 September 2016

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ITS Task Force

OUTLINES

►**Supply chain standards**

►**R&D projects**

- NOSCIFEL

- CORE

- InterCor

Norm@Fret : the French Standardization program
for information

▪ Initiative of the French Ministry of Transport – Intelligent Transport Systems – and the Professional Federations from all modes of Transport. Support of the French Ministry of Industry

▪ Created 2004, administered by TTP /I-Trans World Class Industrial Transport Cluster (Pôle de Compétitivité Nord/ Pas de Calais/Picardie)

▪ Participation of Groups of road carriers , railways, aircargo, ports, maritime, inland waterways, shippers / distribution and Customs and TLF - French Freight Forwarders

▪ Objectives:
➢ Strenghten the participation in international standardisation instances UN/CEFACT, CEN and ISO – Chairmanship of UN/CEFACT Transport
➢ Publish normative documents, implementation guidelines, reference guides of « good practices »...
➢ Promotion, dissemination to entreprises (SMEs) and Users of standardized solutions for « intelligent freight» in the transport and logistics sector

The scope and deliverables of the standardization of Electronic Exchanges

- BSP Buy – Ship – Pay International Supply Chain

- Data semantic harmonization

- ebXML: Reference Data Model MMT (MultiModal Transport)   from the CEFACT basic semantics (Core Components)

- EDIFACT Standard Messages (UNSM) and relevant Directories

- Business Process Modeling

- Interoperability solutions

Interoperability : a key issue
5 layers/dimensions

Cooperating partners having compatible visions, and focusing on the same things.

Political Context

The appropriate synchronization of the legislation in the cooperating MS so that electronic data originating in any given MS is accorded to proper legal weight and recognition wherever it needs to be used in other MS.

Legal Interoperability

Legislative Alignment

The processes by which different organisations such as different public administrations collaborate to achieve their mutually beneficial, mutually agreed eGovernment service-related goals.

Organisational Interoperability

Organisation and Process Alignment

Ensuring that the precise meaning of exchanged information (concept, organisation, sservices, etc) is preserved and well-understood

Semantic Interoperability

Semantic Alignment

The technical issues involved in linking computer systems and services (open interfaces, interconnection services, data integration, middleware, data presentation and exchange, accessibility and security services, …)

Technical Interoperability

Syntax, Interaction & Transport

UNITED NATIONS

ebXML — Creating A Single Global Electronic Market

International Consortium :
- UN / CEFACT
- OASIS Organisation for Advancement of Structured Information Standards (Internet world W3C)

Launched Sept 1999

Objective : develop specifications for XML exchange architecture

Standardisation roles split between:
- UN/CEFACT, : **semantic contents** data and business models based on the considerable asset of EDIFACT
- OASIS : technical infrastructure allowing to share registries / dictionaries

Project MMT
Multimodal Transport Data Reference Model

- **Issues to be resolved:**

  - Standards too generic and flexible, difficult to implement

  - UN/CEFACT ebXML« Core Components Library – CCL » containing several thousands of items related to all sectors : cumbersome to be understood and used by enterprises (SMEs..)

  - Need for a professional structured data base not only a dictionary on Excel sheet

Project MMT
Multimodal Transport Data Reference Model

- Objectives:

• Develop a Standardized Semantic framework : implementation tool for Users as a subset of CEFACT Core Components applicable to Transport/ Logistics in the form of a structured data base, taking into account the securityt / safety aspects in relation with Customs

Links with the Transport EDIFACT messaging and other different standards / data dictionaries (TDED, ITIGG, GS1, WCO Data Model, UBL…..)
Interoperability

Cooperation with CORE (data pipeline concept WP10 and a tracking&tracing dangerous goods demonstrator WP16) and INTERCOR European projects

• Make easier data exchanges and standard mappings with different partners: Freight Forwarders, Carriers, Shippers; Logistics providers and other International Supply Chain actors especially SMEs…
The approach is similar to IATA CargoXML proven to be succesfull

Project MMT
Multimodal Transport Data reference Model

- ### Deliverables

•Structured MultiModal Transport Reference Data Model

•Semantics links with Transport UN/EDIFACT messaging and other standards (including Customs WCO, GS1,..) to support the need for increased interoperability

•Guidelines to produce XML messages based on the UN/CEFACT NDR (Naming and Design Rules) and other methodologies

- ### Current status and work plan

- Approved by the UN/CEFACT Bureau at Forum October 2014

- Project team in place with 2 co-project Leaders

- Open to any Expert willing to contribute: next working   sessions: Birmingham 16 April and Paris 22-24 June 2015

- Project completion by end 2015

Other standardization committees Transport/Logistics

■ **ISO** (liaison with UN/CEFACT Transport)

• TC 204 « Intelligent Transport Systems » -
- WG7.1: data and messages for intermodal freight road-aircargo-road, EFM Electronic Freight Manifest -
>   Governance of Electronic Freight Management
- WG7.2 : data and messages for transportation of dangerous goods and emergency services
- WG7.3: Freight conveyance content identification and communication architecture - Application profile *see example*
>   New Manufactured Vehicles Visibility in the supply chain
- WG4.4: cooperative telematics applications for regulated commercial freight vehicles (TARV)

• TC 104 Containers (identification, electronic seals..)

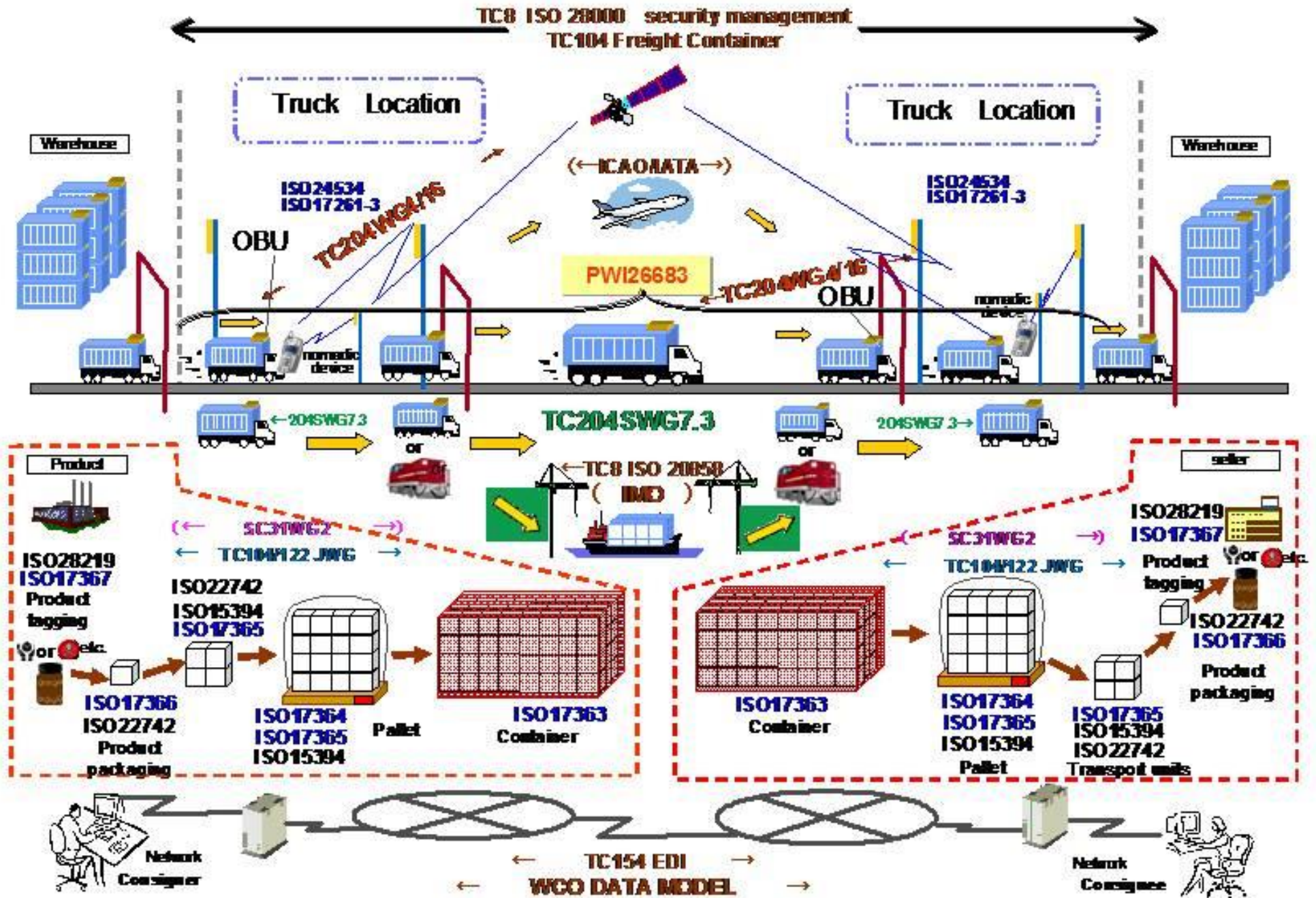• TC 8 Maritime in liaison with IMO International Maritime Organisation:
- Security of the International Supply Chain
- Electronic Port Clearance

■ **CEN** TC 278 (ITS), European counterpart of ISO TC 204

Current Standards and their development Bodies for Intermodal Transport

Tools for SME's

Two approaches
– plug and play: NOSCIFEL
– do it yourself: NORMAFRET

NOSCIFEL : Take out a Suscription to Connecteurs Intelligents to comply securely with partners's Information Systems ;

NORMAFRET : To have available standards, upload ressources, exchange good practices.

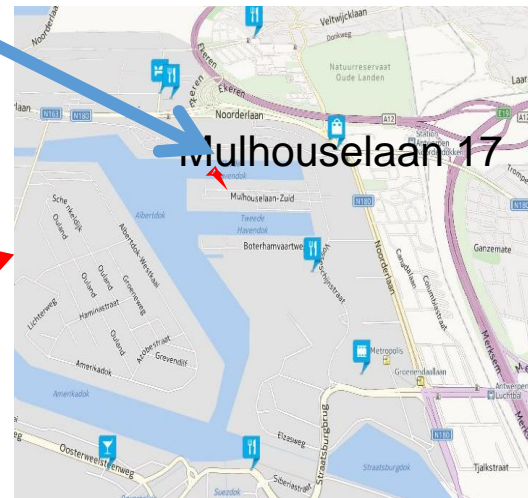## BIC is the registration office for the LoCodes   *ISO Standard 9897*

The LoCodes are used in electronic data interchange t

Country City Facility
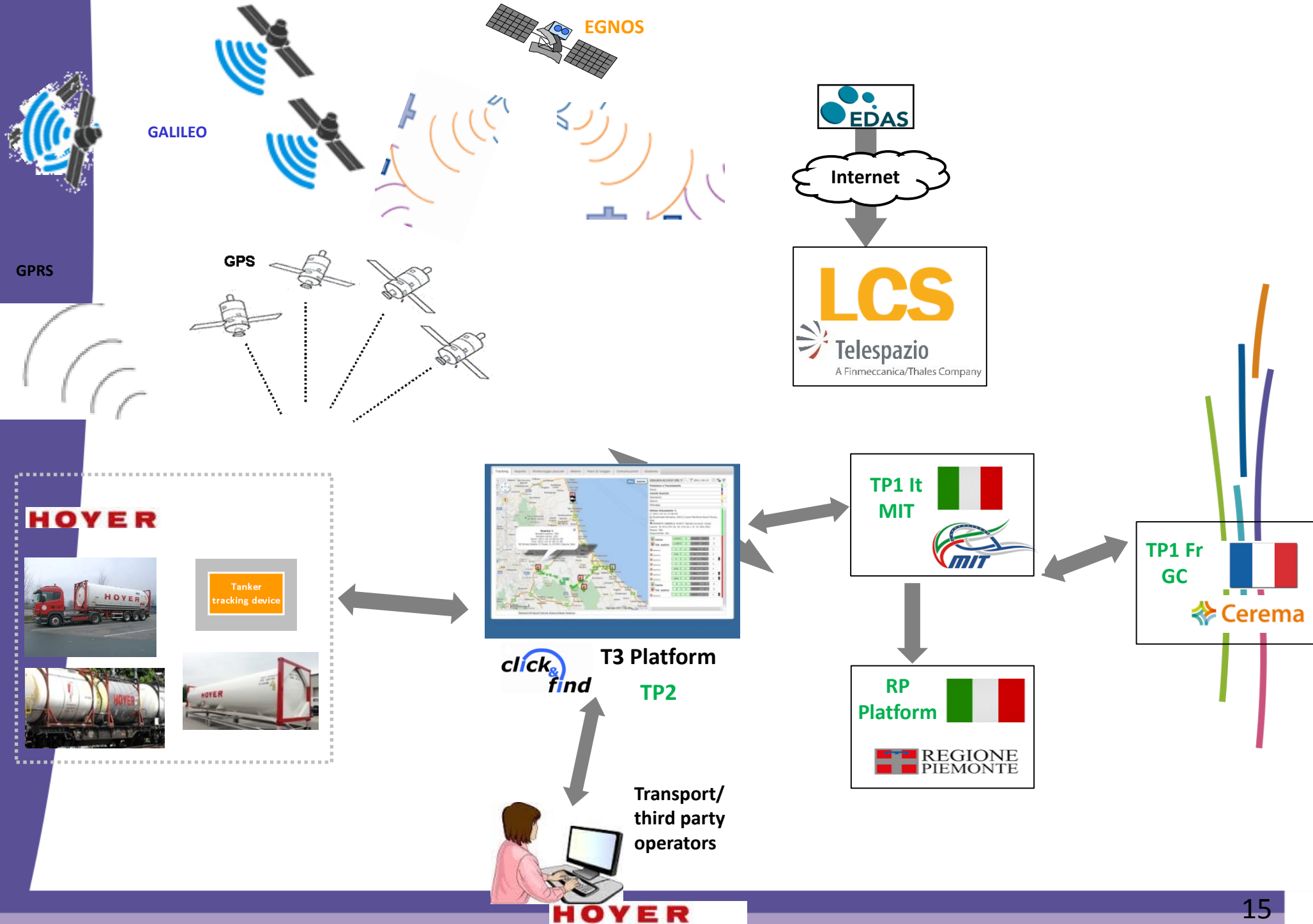
Globally in use in container trade, this stand

BE**ANR**ACEA

Country/location ISO standard

Mulhouselaan 17

Consistently Optimised Resilient Secure Global Supply-Chains

EGNOS

GALILEO

GPRS

GPS

EDAS

Internet

LCS
Telespazio
A Finmeccanica/Thales Company

HOYER

Tanker tracking device

click & find

T3 Platform

TP2

Transport/ third party operators

TP1 It MIT

MIT

RP Platform

REGIONE PIEMONTE
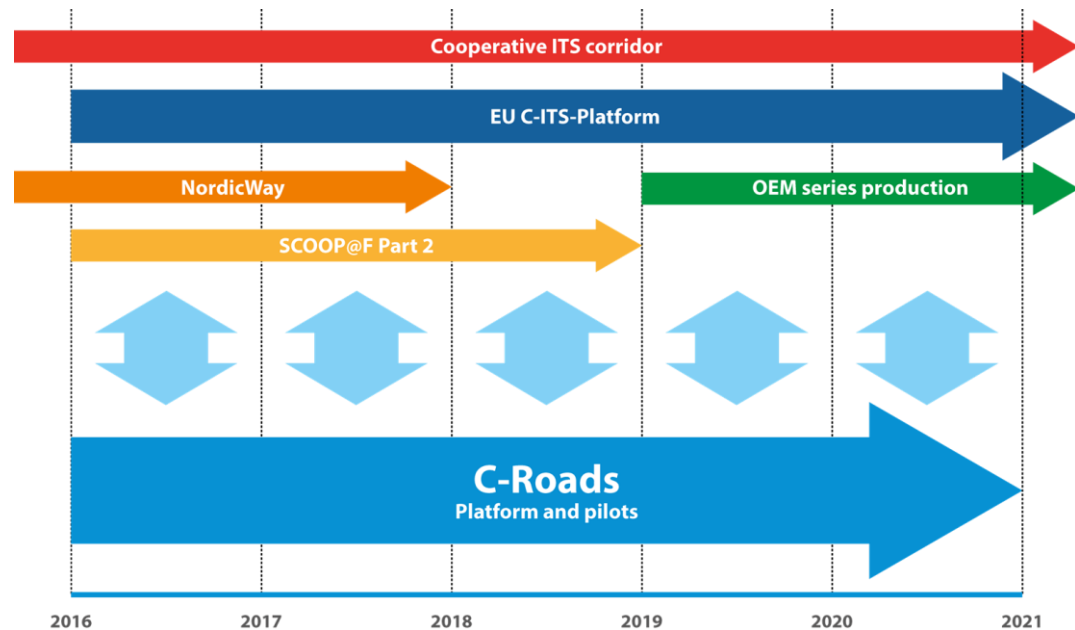
TP1 Fr GC

Cerema

HOYER

15

17

CEF 2015 ITS Call

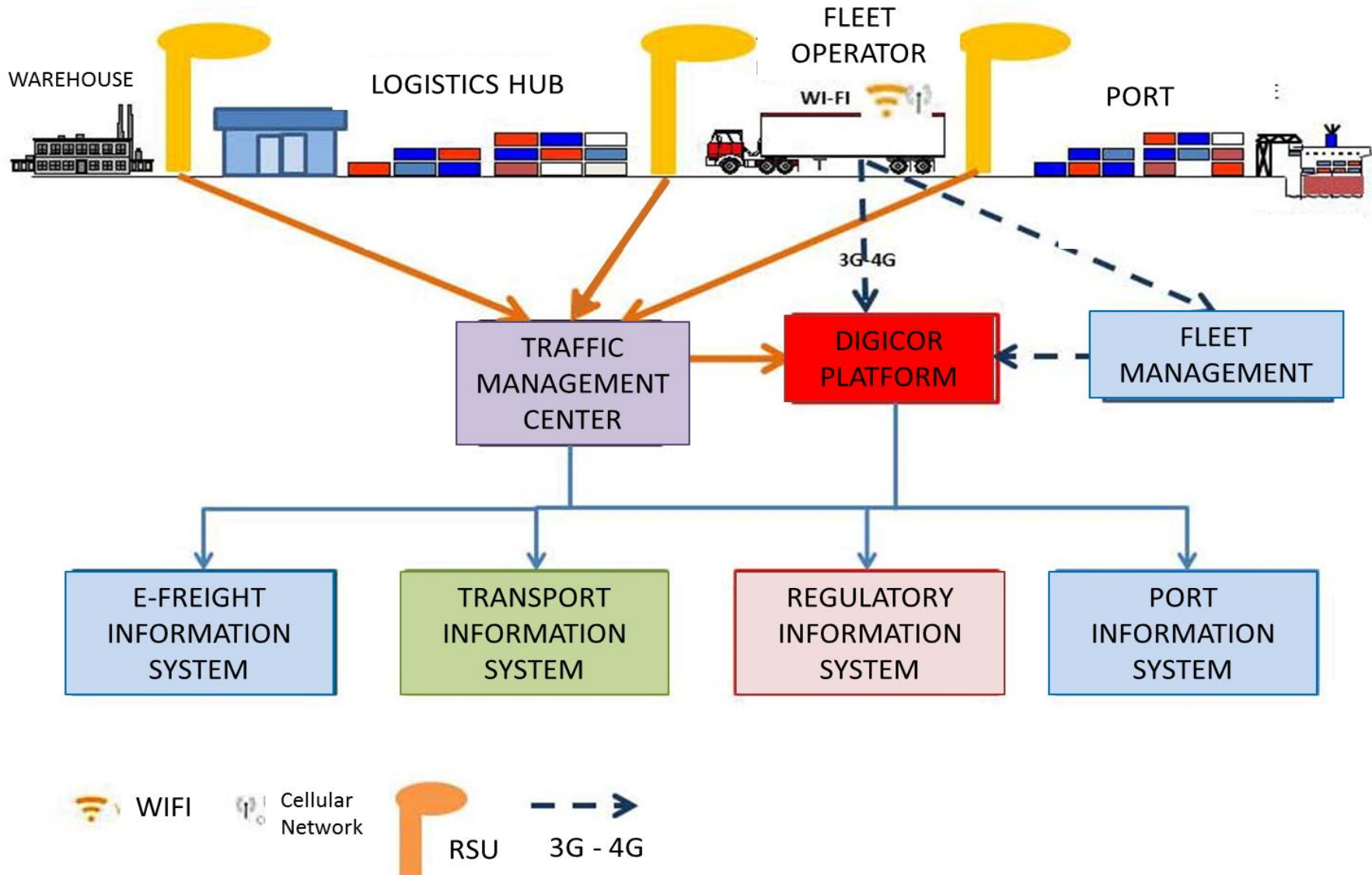- 2 projects submitted under CEF 2015 ITS Call (16 Feb. 2016):

- InterCor

- C-ROADS France

InterCor

- 3 years (mid 2016-mid 2019) | 16 beneficiaries | 30 M€

- France : 10 beneficiaries | 8,2 M€

- New services in the field of **freight and logistics**

- Demonstrating a **large-scale interoperable deployment of C-ITS through the Netherlands, Belgium/Flanders, UK and France** to achieve safer, more efficient and more convenient mobility of people and goods

- **Extending the strategic cooperation between C-ITS front running countries and assisting other member states to step-in**

- Fostering a *hybrid communication* **approach** based on the experience from France and the Netherlands

- A specific focus on **security across borders**

General architecture

DIGICOR Architecture

WAREHOUSE   LOGISTICS HUB   FLEET OPERATOR   WI-FI   PORT

3G-4G

TRAFFIC MANAGEMENT CENTER → DIGICOR PLATFORM ← FLEET MANAGEMENT

E-FREIGHT INFORMATION SYSTEM   TRANSPORT INFORMATION SYSTEM   REGULATORY INFORMATION SYSTEM   PORT INFORMATION SYSTEM

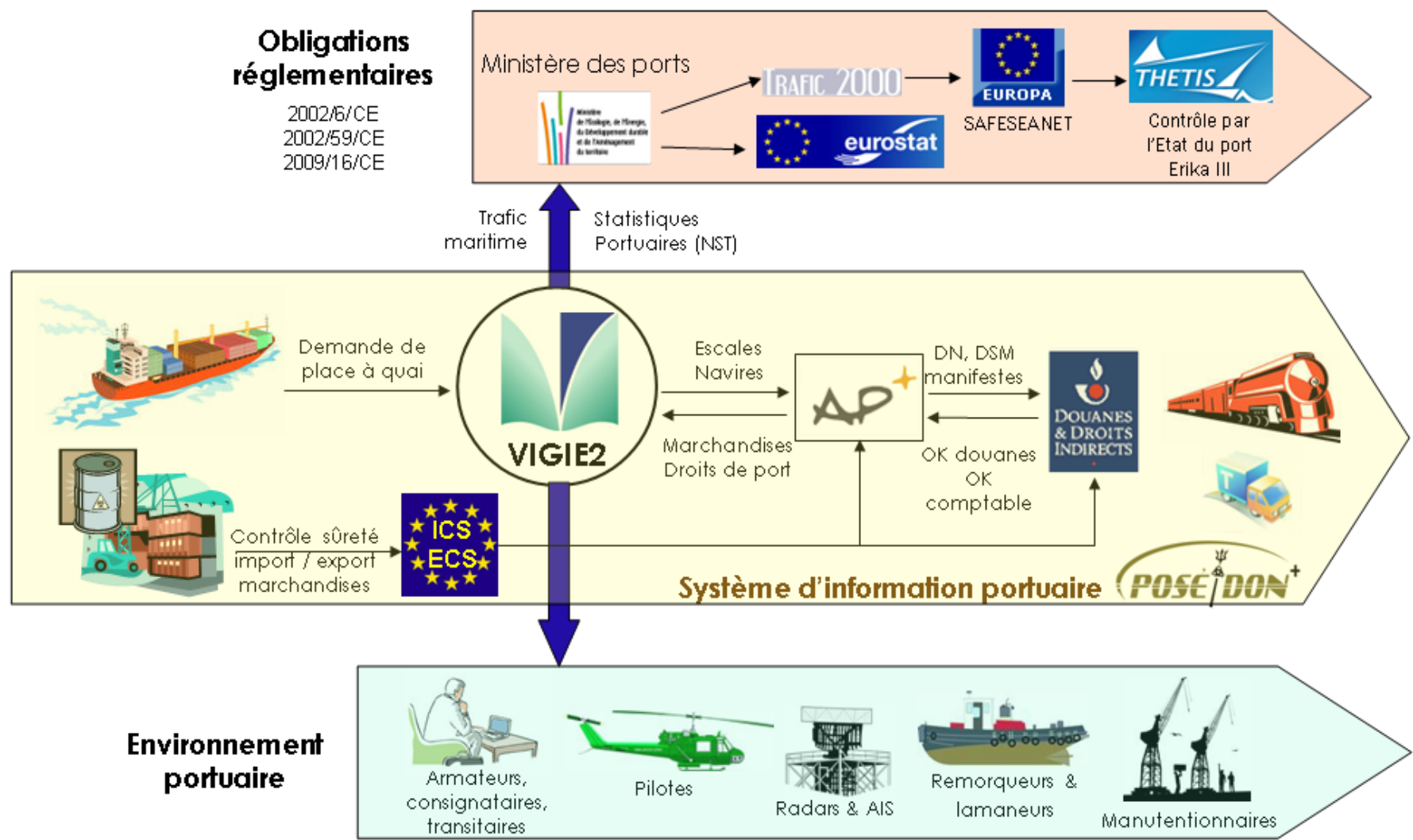WIFI   Cellular Network   RSU   3G - 4G

InterCor Proposal

- Integration of different information sources like vehicles, infrastructures and logistics operators to optimize overall process: how to combine information on load and discharge operations at terminals or warehouses / information on real-time traffic conditions, available (secure) parking spaces and optimal routing (route and advised speed) in order to simultaneously respect ruling social provisions, to optimize load/ discharge operations and to minimize fuel consumption and emissions resulting from transport (reduction of congestion in freight corridors and nodes)

- Safe European management of the transport of dangerous goods by means of secured data exchange between transport companies and authorities (monitoring, control, access to sensitive infrastructure (e.g. tunnel), incident/accident management)

- Interoperable and seamless exchange of data between 4PL/ shippers, freight forwarders, truck drivers, warehouse / freight areas as well as other modes' operators such as ferry or train operators

- Integrated data exchange and information services for freight & logistics (Fleet monitoring & control, Activity reports transmission, access control to secured zones, Positions alert…)

InterCor

Organise port of calls in a complex regulatory context

FloraHolland stock market