



Automation, integration and interoperability along the supply chain:
Concrete opportunities of building terminal optimization and International
Fast Trade Lanes

Batumi, May 18-19th
6° Black Sea Ports & Shipping - 2017





Agenda

- Situation of the market and commercial flow
- Dir 2010/65 European UCC & Smart Port – Logistic Chain
- Experiences and Ongoing Projects
- Concrete Opportunities

Starting point

Need of **simplification and harmonization** of processes are supported by:

- *Strong ongoing **automation** roadmap*
- Upcoming *“**Dematerialization**” processes*
- ***Internet of Things***
- Considering armonization objective: *European **Maritime Single Window** for all ships arriving from or going to Europe (from 1st June 2015)*
- New *European **Union Customs Code** (from 1st May 2016)*

Specific steps forward are needed on **Customs and Maritime procedures between Black Sea Area vs EU** and there are **big opportunities of PROCESS OPTIMIZATION**





(EU and) Black Sea market

Black Sea market situation

The 2016 has seen Europe trading being *important* for Georgia and Black Sea Area



- The **biggest commercial partner of Georgia is EU**, with around 32.6% of the total volume of trade.
- For the EU the commerce with Georgia represents a **turnover of €2.6 billion in 2015**.
- **EU exports to Georgia amounted to € 1.84 billion in 2016**.
- **EU import to Georgia has a value of € 742 million in 2016**.

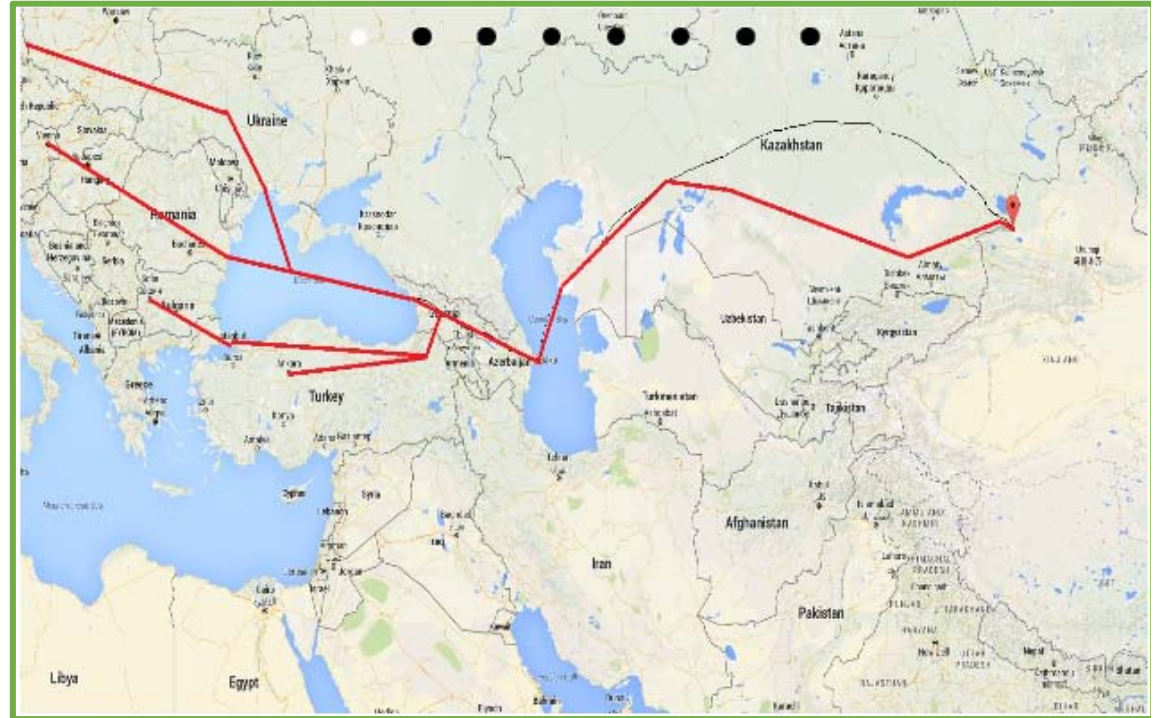
Politics Agreements related to – Customs Duties

Georgia and China have planned to sign a “**Free Trade Agreement**”, that will open the world’s largest consumer market to Georgian products make easier the customs operations.

Georgia and Europe have settled a “**Strategic Framework for Customs Cooperation**” introducing modern, faster procedures and appropriate IT technologies and other infrastructures along the trade lanes to secure and facilitate trade and the customs operations.

The Anaklia Port and the Silk Road Opportunity

The **Anaklia deep sea port** is a key piece of Georgia's plan to establish its position as a major station on a revived Silk Road.



Anaklia will be the last gate connecting China to Europe in the Silk Road, by 2025, the port is expected to be handling 100 million tons of cargo and contributing 0.5% to Georgia's GDP each year.

EU Dir 2010/65 & European Union Customs Code



ANNA
MARITIME SINGLE WINDOW

EU Directive 2010/65



DIRECTIVE 2010/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 October 2010

on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC

Article 5 **Electronic transmission of data**

1. Member States shall accept the fulfillment of reporting formalities in electronic format and their transmission via a single window as soon as possible and in any case no later than **1 June 2015**.
... omissis ...

Article 7 **Information in FAL forms**

Member States shall accept FAL forms for the fulfillment of reporting formalities. Member States may accept that information required in accordance with a legal act of the Union is provided in a paper format until **1 June 2015 only**.



Vessels departing from **Black Sea NON EU** countries should *fulfill DIR. 65 formalities* dealing with new processes and *new IT systems* to be interfaced with the EU National Maritime Single Windows

Shipowners / Agents / Ports are **adapting their systems**.
During 2017 all digital services will be available

New EU Customs code

The new Union Customs Code is applied from **1st May 2016**

The UCC is part of the *modernization of customs* and will serve as the new framework Regulation on the rules and procedures for customs throughout the EU.

The UCC and the related delegated and implementing acts shall:

- *streamline* customs legislation and procedures
- *simplify* customs rules and procedures and facilitate more efficient customs transactions in line with modern-day needs
- complete the shift by Customs to a paperless and *fully electronic environment*
- reinforce swifter customs procedures for compliant and trustworthy economic operators (**Authorized Economic Operators**)



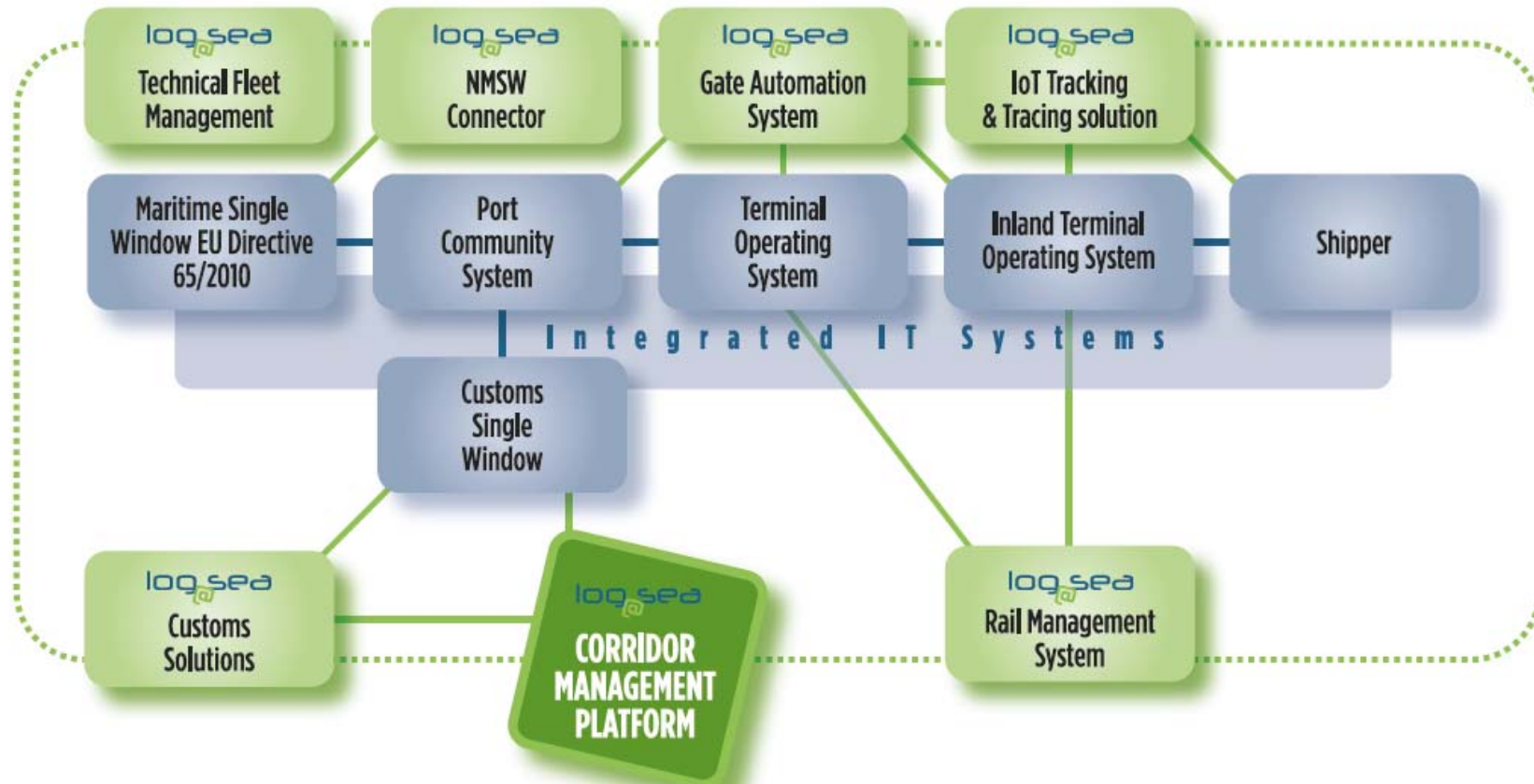
Shippers, MTO and freight forwarders tested **innovative full digitalized procedures** and **adapted their systems**.
during 2016 – important IOT experiences are ongoing



IOT, Big Data Digitalization & Port Automation Smart Port & Logistic Chain

Log@Sea integrated approach

Circle, IB and Aitek, through the strategic partnership **Log@Sea**, are combining their respective experiences and know-how acquired in the fields of marine services, road and rail traffic management systems, gate automation and tracking and tracing services for providing innovative solutions which cover the intermodal



Log@Sea marine and port solutions

Starting from the Marine market

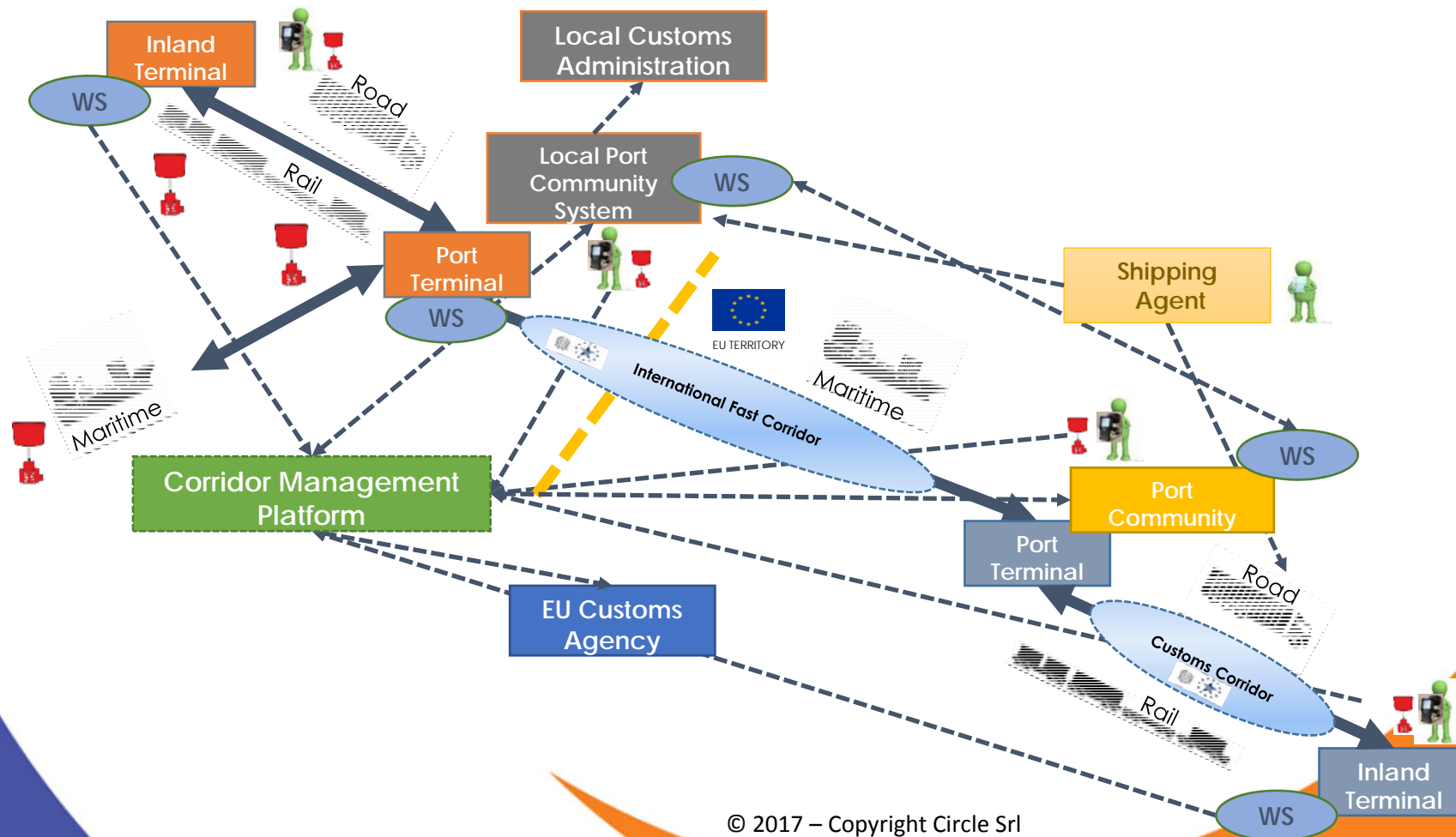
- solutions and tools to satisfy the widest technical management needs, such as the innovative **Marine Technical Fleet Management**.

to the Port community

- solutions and tools for an **integration with Maritime Single Window Platform** – Directive 65/2010 – and interoperability with port Community Systems and the Customs Administration IT Systems (e.g. in Italy with AIDA)
- solutions and tools for a **full integration with Terminal Operating System and Port Community System** for accessing at value-added services
- solutions for automating **gate operations** by using OCR, ANPR, laser and RFID technologies and streamlining the intermodal process thanks to the integration with third systems (Terminal operators, Port Authorities, rail operators, inland carriers, shippers, Customs Administration, etc.).
- solutions for managing **rail operations** inside logistics terminals and **rail planning** activities with an advanced graphic interface (drag & drop functionalities, graphic rail park management, etc.).

LogFast Trade Lane solution

Solutions for monitoring goods along intermodal corridors thanks to the Corridor Management Platform, integrating Internet of Things solutions (RFID es seals and tags) and exploiting innovative customs procedures.



Logistic solutions

Terminal Automation and Corridor management

Our modular IT solutions meet needs of several actors of the logistics chain:

Port Authorities

- Automate port **gate operations** and improve **port security** (using **RFID** and **OCR** technologies);
- Digitalize **Customs** procedures;
- Interoperate with other actors of the supply chain within a **corridor** approach.

Terminal Operators

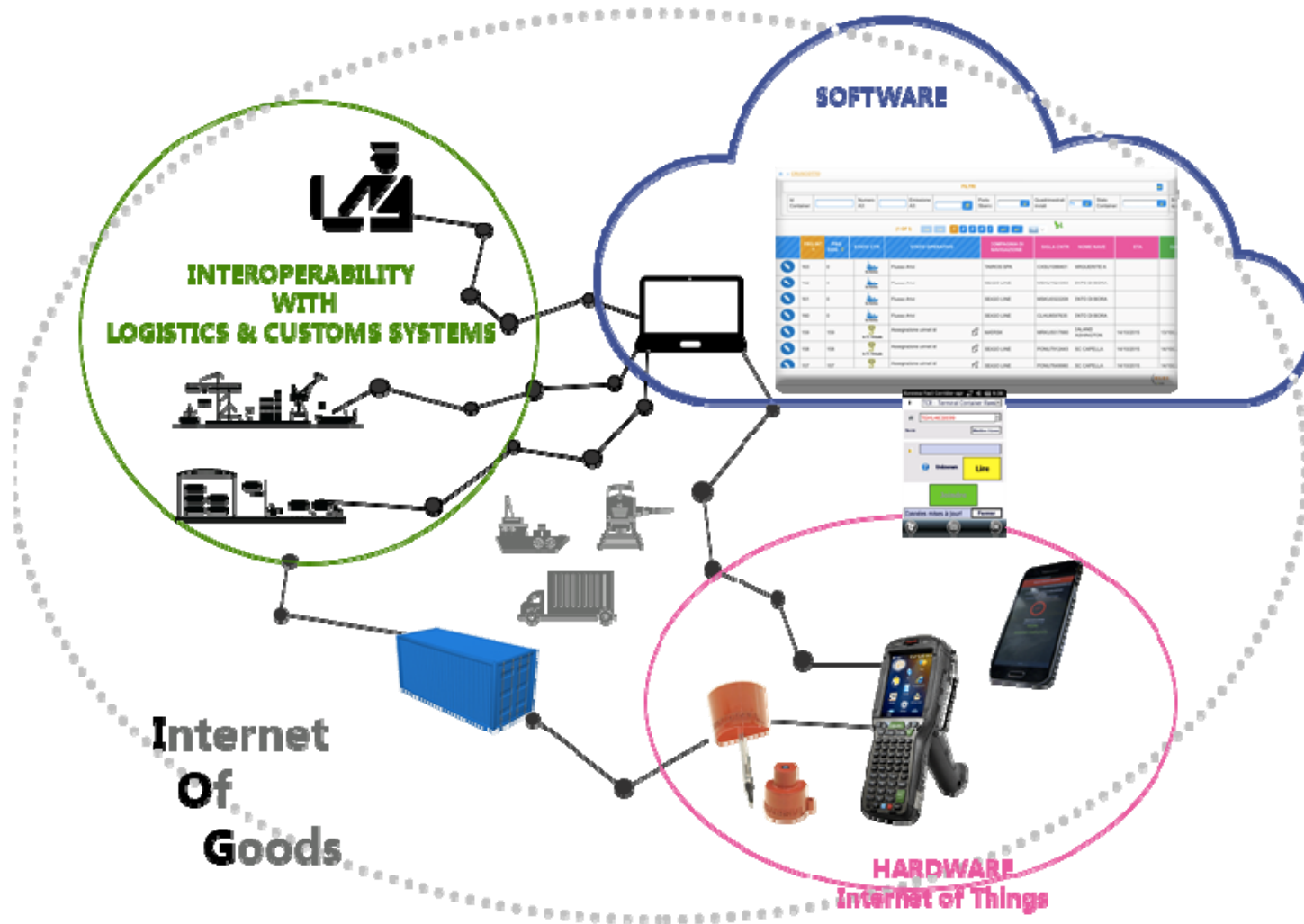
- Automate **gate, crane** and **weighing** operations;
- Digitalize **Customs** procedures;
- Manage and optimize **rail** operations;
- Interoperate with other actors of the supply chain within a **corridor** approach;

Shippers

By using specific connectors it allows shippers:

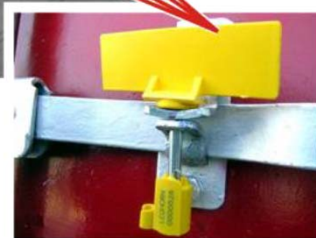
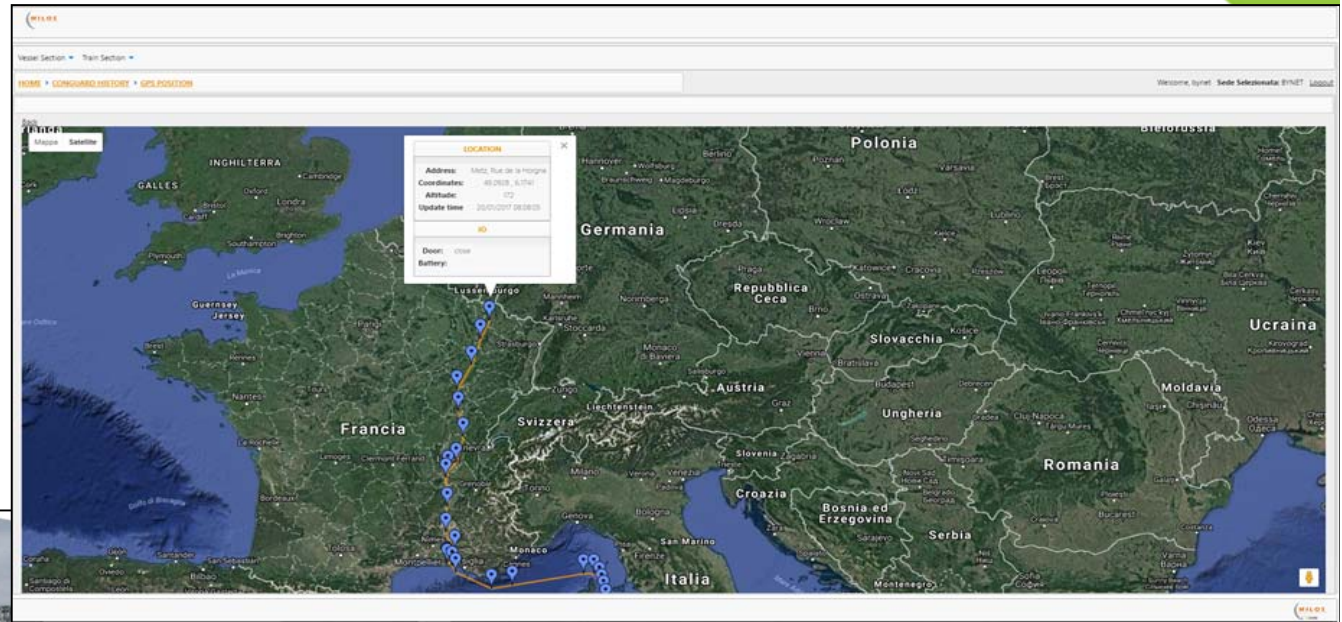
- integrating with **National Logistic Platforms**;
- digitalizing and automating both **Logistic and Customs procedures**.

Internet of Things approach



MILOS IoT solutions

The **MILOS Representation Map** allows graphically representing on a map the geographical coordinates of tracked objects.



The **IoT solutions** utilized inside the single nodes (i.e. warehouses, terminals, etc.) make easier and faster the import and export procedure, thanks to OCR and RFID technologies



Corridor Management Platform

Dry Port



Port



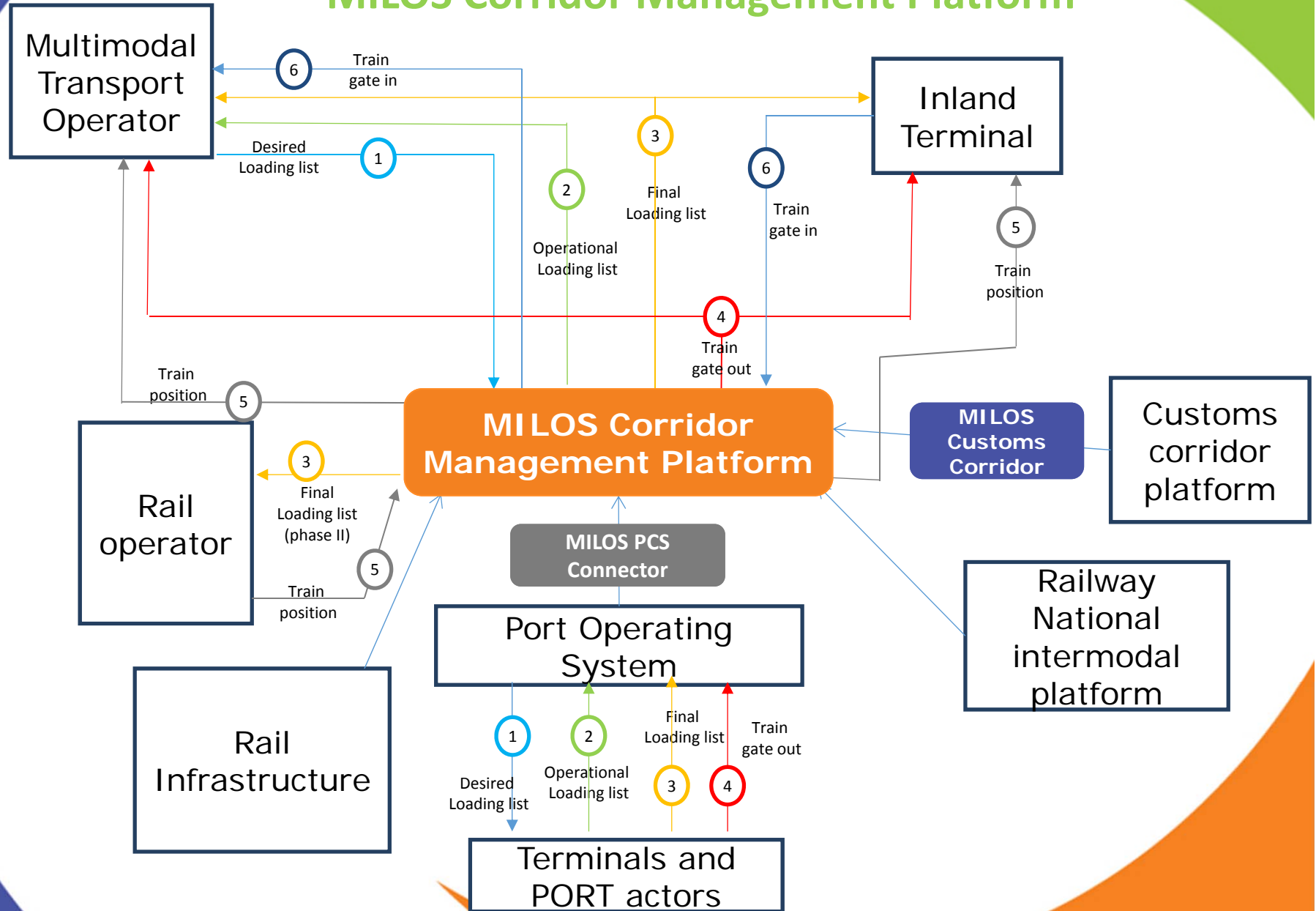
Rail & Truck Transport



Terminals



MILOS Corridor Management Platform



MILOS - Automation & Digitalization (1)

Management of external information:

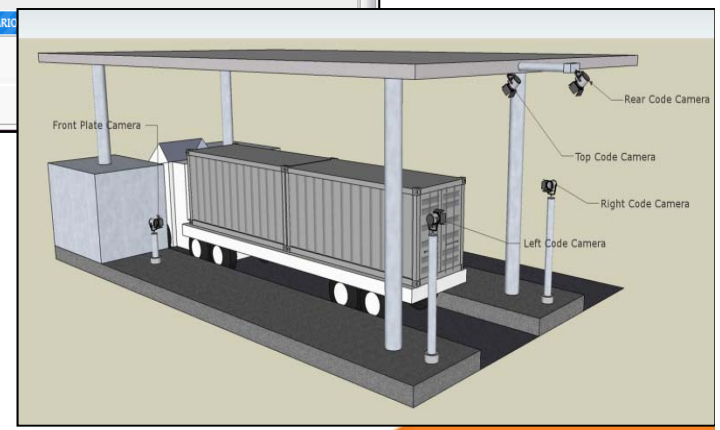
Port Community System
Customs IT System
National Logistics Platforms

The screenshot displays a software interface for managing external information. It features a form with sections for 'AUTISTA' (Driver) and 'MEZZO' (Vehicle). The 'AUTISTA' section includes fields for Azienda (nuova878 - pippo), Partita Iva (024684884), Indirizzo, Comune (Genova), Provincia (GE), Nazione (IT), Patente (00000002), Cognome (Rossi), Nome (Mario), Badge, and N. Attesa. The 'MEZZO' section includes Targa Motrice (00000002), Targa Rimorchio, and Pianale. Below the form is a 'NOTE' section. At the bottom, a table lists data with columns: ID, B.LINE, RIF. CLIENTE, TIPO, UTI, PESO NETTO, PESO LORDO, DOGANA, VGM, COMMITTENTE, and DESTINATARIO. The table contains one row with ID 2017-LUG-ENT-00012-1, B.LINE 585-1, TIPO CASSA BOX MULTIFUNZIONE 30', UTI MSKU 7076702, PESO NETTO 2.500,000, PESO LORDO 5.500,000, DOGANA N, VGM N, COMMITTENTE LOGISTIC SRL, and DESTINATARIO. Arrows from the text boxes point to the 'MEZZO' field, the camera feeds, and the 'UTI' field in the table.

| ID | B.LINE | RIF. CLIENTE | TIPO | UTI | PESO NETTO | PESO LORDO | DOGANA | VGM | COMMITTENTE | DESTINATARIO |
|----------------------|--------|--------------|-----------------------------|--------------|------------|------------|--------|-----|--------------|--------------|
| 2017-LUG-ENT-00012-1 | 585-1 | | CASSA BOX MULTIFUNZIONE 30' | MSKU 7076702 | 2.500,000 | 5.500,000 | N | N | LOGISTIC SRL | |

AUTOMATIC DATA ACQUISITION
from Gate lanes hardware (OCR, RFID, etc.)

Complete integration with Terminal Operating System functionalities



MILOS - Automation & Digitalization (2)

The *new MILOS Rail Management - graphic version* allows performing the train planning activities easily and quickly with the maximum efficiency thanks to graphic tools.

The screenshot displays the MILOS RGM software interface. At the top, there is a menu bar (File, Edit, Tools, About) and a window title bar (Milos RGM). The main area shows a train plan with a timeline from 0 to 140 minutes. A green callout box with an arrow points to a 3200 Kg unit being moved, labeled «Drag & Drop» functionality. To the right, a summary table provides details for the voyage.

| Voyage | 055382-16022017-190800 | Total length | 490,01 m |
|-----------|------------------------|---------------------|--------------|
| Route | LUG-GIO-18 | Tot weight | 998,681 tons |
| Direction | OUT | Tot wagons tare m. | 492,2 tons |
| Status | treno arrivato | Tot units tare mass | 100,43 tons |
| ETD | 16/02/2017 19:08 | Tot goods net | 406,051 tons |
| ETA | 17/02/2017 07:10 | Tot goods gross | 506,481 tons |

Below the train plan, there are tabs for Booking, Wagon, and Wg. groups. A red box highlights a table of available bookings. A green callout box with an arrow points to this table, labeled "A list of all available bookings for prompt ITU selection". To the right of the table, a detailed view of a 3200 Kg unit is shown.

| B. lin... | Client | Load Unit | Gross Weight | Unit type | Cov... | Status | Full route | Previ... | F/E | Goods | RID |
|-----------|----------------|-------------|--------------|--------------|--------|-----------|------------------------|----------|-------|---------|-----|
| 2266-2 | GUIDO BER... | GBTU0020801 | | CASSA BOX... | No | ARRIVATO | FIORENZUOLA-LUGO-GL... | 31804... | EM... | | No |
| 2266-8 | GUIDO BER... | GBTU0021686 | | CASSA BOX... | No | ARRIVATO | FIORENZUOLA-LUGO-GL... | 31804... | EM... | | No |
| 2266-12 | GUIDO BER... | GBTU0016289 | | CASSA BOX... | No | RICHIESTO | FIORENZUOLA-LUGO-GL... | 37804... | EM... | | No |
| 2266-4 | GUIDO BER... | GBTU0020440 | | CASSA BOX... | No | RICHIESTO | FIORENZUOLA-LUGO-GL... | 37804... | EM... | | No |
| 2266-6 | GUIDO BER... | GBTU0020442 | | CASSA BOX... | No | RICHIESTO | FIORENZUOLA-LUGO-GL... | 37804... | EM... | | No |
| 2267-1 | FLLI DI GRE... | TRLU9041203 | 12050.000 | CONTAINE... | No | ARRIVATO | LUGO-GIOVINAZZO | | FULL | TRONCHI | No |
| 2267-2 | FLLI DI GRE... | TOLU4243572 | 9550.000 | CONTAINE... | No | ARRIVATO | LUGO-GIOVINAZZO | | FULL | TRONCHI | No |
| 2267-3 | FLLI DI GRE... | TRLU9030111 | 12050.000 | CONTAINE... | No | ARRIVATO | LUGO-GIOVINAZZO | | FULL | TRONCHI | No |
| 2267-4 | FLLI DI GRE... | TOLU4593776 | 16050.000 | CONTAINE... | No | ARRIVATO | LUGO-GIOVINAZZO | | FULL | TRONCHI | No |

Unit type: CASSA BOX MULTIFUNZIONE 30'
Int. code: 30
Tare mass: 3200.000 Kg
Capacity: 54.990 Kg
Max weight: 36000.000 Kg
Length: 9.125 m
Height: 2.750 m
Width: 2.550 m
Rail profile: C30

Experiences and ongoing projects



Some Shipping references



InfoSHIP EGO installations

- 14** Costa Crociere and ex Ibero (Data Collector module only)
- 1** tanker d'Amico + 1 bulk carrier + 14 in progress
- 1** ferry Grimaldi Napoli + 1 roro cargo + 5 in progress
- 3** ferries GNV + 4 in progress
- 1** container ship MSC + 120 in progress
- 1** ferry Moby in progress



InfoSHIP ELB installations

- Costa – starting on the entire fleet, ORB, GN part III, Garbage Record Book, Waste Delivery, Injury, GN Part II
- 3** roro cargo Grimaldi Napoli – MIELE research project activities
- 1** ferry GNV – SIS-TEMA research project activities
- V&F for 3 ferries GNV + other 7 in progress

Shipper, terminal & Corridor references



Terminal Management

14 Port &/or Inland Terminals

Port Authorities

8 Port Community Systems integrated

MTO / rail companies

8 Multimodal Transport Operators / RailCompanies / Shunting Companies

Public Authorities

9 Public Authorities / Customs / Minister

Lots of innovative *intermodal fast corridor* procedures and *international trade lanes* were launched





Concrete Opportunities



Georgia and Black Sea Opportunity

Why digitalization of documents and procedures and the use of new technologies are important for Georgia and Black Sea area:

Possibilities of building **Fast Trade Lane** between EU and NON EU countries

- Providing services to the actor of the chain (**Tracking and tracing, proof of delivery**)
- **Reducing administrative burdens**
- **Moving and concentrating Customs procedures**
- **Reducing time and costs on the full door to door chain**

Starting from EU project pilots experience...

The European Union funded project aimed to provide a suitable array of measures in order to facilitate the development of **TEN-T Motorways of the Sea network connecting Europe**.

Two innovative procedures were tested in cooperation with partner:

- **Pre-clearing** in a **Ro-Ro** international freight transport using **passive eSeals** from Africa to Leghorn.
- **International Fast Corridor model** (and RoRo preclearing) using **active** (and passive) **eSeals** (in Morocco and Turkey).



Call 4 Stakeholders

Within the next few months the ***international fast trade lane model and the usage of active and passive RFID esels (IOT)*** are further used and tested in ongoing EU projects

More than 20 international actors of the Door-to-Door logistics Chain have already signed an Expression of Interest

Concrete opportunities for ***Black Sea Region ports and logistic actors.***

Deadline for joining as stakeholder *31.07.2017*

Contact us at abatello@circletouch.eu Or

**visit us @
booth 24**



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