Matteo Apollonio

e-Freight implementation action: Pilot deployments in port of Trieste - final results
Agenda

Introduction about the Action
  - e-Freight as one common framework facilitating interoperability in Transport & Logistic
  - e-Impact as e-Freight Implementation Action
  - Ports and partners involved
  - Benefits expected
  - e-Freight standard and access point infrastructure

Trieste Port Pilot: Business Case 1 - «Multimodal e-Freight Planning and Booking»
  - Stakeholders and beneficiaries
  - Objectives and processes covered by e-Freight connectivity infrastructure
  - Final results

Presence in other Ports: possible application of e-Freight in effective scenarios
  - Major DBA Group references in logistic context
e-Freight: one common framework for ICT in Transport & Logistics

e-Freight born to go beyond the lack of interoperability between organization and groups of industries that during last years have defined own specifications and implementation guidelines to exchange documents via EDI interface.

e-Freight is developed to ensure that only necessary and sufficient information is being exchanged, that the number of messages and their complexity is kept to minimum, that the messages are unambiguous and without forcing those who already have invested much in the area to stop using what they have.

“If we are using 5 different logistics companies, then we have to communicate with logistics service providers in 5 different ways. We only want to communicate one way only”.

(Interoperability manager of a large shipper company)
e-Impact: e-Freight Implementation Action

e-Impact is e-Freight Implementation Action and includes studies and real-life pilot deployments

Member States involved:
Italy, Poland, Portugal

Implementation schedule:
Start date: July 2015
End date: June 2018

Project Coordinator:
Administração do Porto de Lisboa

Implementing body:
Rete Autostrade Mediterranee S.P.A., designated by MIT

Estimated cost of the action:
€3,900,000

Percentage of EU support:
50%
e-Impact: partners and ports involved

The core ports involved are:
- **Italy**: Trieste
- **Poland**: Gdansk, Gdynia, Szczecin and Świnoujście
- **Portugal**: Leixoes and Lisbon

It’s developed along three core network corridor:
- Atlantic
- Mediterranean
- Baltic–Adriatic
The overall project incorporated lessons learned and best practices from other EU-funded research and development projects, notably including among other Freigthwise (2006-2009), e-Freighth (2010-2014) and iCargo (2011-2015).

The global vision is to interconnect many transportation projects found worldwide using UBL ISO/IEC 19845 as internationally-standardized common document format.

Information technology -- Universal business language version 2.1 (UBL v2.1)

- e-Freight is based on the OASIS Universal Business Language (UBL)
- UBL defines a generic XML interchange format for business documents, became ISO std. in 2015

UBL provides:
- **a suite** of structured business objects
- **a library of XML schemas** for reusable data components such as "Address", "Item", and "Payment"
- **a set of XML schemas** for common business documents such as "Order", "Despatch Advice", and "Invoice"

Main e-Freight’s messages:
- **TSD** (Transport Service Description) is a standard description of transport services suitable for automatic detection
- **TEP** (Transport Execution Plan) describes all the information needed related to the execution of a transport service
- **TES** (Transport Execution Status) provides information about the progress of the transport and of the cargo condition
The expected benefits of the Action (belongs to the technical proposal nr. 2014-EU-TM-0686-S nr. 2014- EU-TM-0686-S) are:

- implementation of **e-Freight standard**
- **reducing the cost** of exchanging information between different actors and transport modes, along the logistic chain
- achieving **paperless** and **seamless** information flows in the chain
- **simplifying** and **reinforcing** the message delivered to the stakeholders
- leading to a more efficient, **less polluting freight transport**
- facilitating the use of **multimodal freight transport** solutions
e-Impact: e-Freight connectivity infrastructure (access point/connector) chosen for Pilots

The eDelivery building block for the connectivity infrastructure and the Domibus software for the Access Point has been adopted in e-Impact.

**eDelivery** is a CEF in public administrations sector.

The access point enables to exchange electronic data and documents with other public administrations, businesses and citizens, in an interoperable, secure, reliable and trusted way.

*Through the use of this building block, every participant becomes a node in the network using standard transport protocols and security policies.*
e-Impact Business Case 1: Port of Trieste

e-Freight Multimodal freight journey planning and booking

• The business case is focused in establishing a pilot multimodal journey planning and booking solution associated to EMT intermodal operations (Ro-Ro services and rail connections) in Trieste port, exploiting the e-Freight Framework.

• This operation involves Ro-Ro services operated from Turkey and Greece to Trieste and rail connections from Trieste to North Europe, daily linking Italy with Germany, Luxembourg and Switzerland.
### e-Impact Business Case 1: Port of Trieste – Main Actors

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trieste Port Authority</strong></td>
<td>is the stakeholder, that supports the action</td>
</tr>
<tr>
<td><strong>Europe Multipurpose Terminal</strong></td>
<td>is the Terminal operator that manages the intermodal processes and freight traffic involving: RO-RO services from Turkey/Greece to Trieste and train connections from Trieste to North Europe</td>
</tr>
<tr>
<td><strong>EKOL / Konmbieverkehr / Freight Forwarder</strong></td>
<td>is the vessel/rail/road operator, future beneficiary of e-impact solution</td>
</tr>
<tr>
<td><strong>DBA LAB</strong></td>
<td>is the technologic partner, that is the information system provider</td>
</tr>
</tbody>
</table>
Starting from ISO IEC 19845 regulation and OASIS UBL standard, the following processes in Trieste Business Case was covered:

- **Train voyage booking service** for the *route South-North* (mapped with TEP)
- **Vessel voyage booking service** for the *route North-South* (mapped with TEP)
- **Truck announcement** and **booking service** for the *route East-West and West-East* (mapped with TEP)
- Real time **track of ITUs inside the terminal** and during the loading/unloading activity (mapped with TS)
- Real time **track of voyages status** (mapped with TPS)
# e-Impact Business Case 1: Final Results

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Percentage</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Improve the <strong>work efficiency</strong> of the Terminal Operators</td>
<td>&gt; 5%</td>
<td>✓</td>
</tr>
<tr>
<td>2.</td>
<td>Real time <strong>update</strong> and <strong>data collection</strong> about goods, persons and vehicles in the Terminal area</td>
<td>enabled</td>
<td>✓</td>
</tr>
<tr>
<td>3.</td>
<td>Systems <strong>integrations costs</strong> (interoperability) <strong>decreased</strong> through utilization of the e-Freight framework and connectivity infrastructure</td>
<td>&gt; 30% &gt; 10%</td>
<td>✓</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Supply chain visibility</strong> over operations at terminal</td>
<td>enabled</td>
<td>✓</td>
</tr>
<tr>
<td>5.</td>
<td><strong>Automation</strong> and <strong>synchronization</strong> between loading and unloading operation to efficiently manage the maritime and railway operations</td>
<td>10% &lt; .. &lt; 15%</td>
<td>✓</td>
</tr>
<tr>
<td>6.</td>
<td><strong>Reliability</strong> of <strong>transport</strong>: better proof of delivery for container transport and compliance</td>
<td>enabled</td>
<td>✓</td>
</tr>
<tr>
<td>7.</td>
<td><strong>Compliance</strong>: <strong>Customs clearance</strong>, carrier release can be checked more efficiently</td>
<td>int. with AIDA</td>
<td>✓</td>
</tr>
</tbody>
</table>
DBA presence where «multimodal e-Freight planning and booking» system is applicable

DBA Port solutions are **logistic information systems** developed to support all members in the port community, connecting people, systems and information, regardless data formats and sources.

### Major references:
- Port of Baku
- Port of Koper, Slovenia
- Port of Bar, Montenegro
- Port of Ploče, Croatia
- Port of Savona, Italy
- Port of Ancona, Italy
- Port of Venice, Italy
- Port of Livorno, Italy
- Adria Terminali, Slovenia
- MSC
- Maersk
- Glovis
- DHL
- Posco – Esdc
- BLG Logistics
- DB Schenker
- Kuehne Nagel
- Pacorini
- Rail Cargo Austria
- Adria transport
- AND MANY MORE…

Ports with DBA Group software applications in use
PORT OF TRIESTE, ITALY – IMPLEMENTATION OF EMT’S TERMINAL OPERATING SYSTEM

Port Solution:
Terminal management integrated system design and implementation.

Hardware Infrastructure:
• Automatic Gate System
• ANPR system
• RFID system
• TLC system: wired and wi-fi
• Mobile devices

Software:
• Web-based system
• Automatic Gate Management
• Yard Management
• Vessel Management
• Train Management
• Interoperability with External Systems (AIDA, PCS, etc.)
PORT OF BAKU, AZERBAIJAN – IMPLEMENTATION OF PORT MANAGEMENT SYSTEM

Port Solution:
DBA develops the Port Management System composed of 5 basic modules to automatise operations in Port of Baku and Alyat.

Customer:
Port of Baku - Baku International Trade Seaport CJSC

Application Modules:
• PCS
• RoRoTOS
• General Cargo TOS
• Billing
• Control Room
Thank you