2010-EU-210005-S

"MIELE – Multimodal Interoperability E-services for Logistics and Environment sustainability"

With the support of

Trans-European Transport Network Executive Agency

Clustering the MoS in the Med Area; BUILDING THE FUTURE 28 February 2011
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Main objectives

- To design the architecture and to develop a pre-deployment pilot interoperable ICT platform (the «MIELE Middleware») able to interface ICT logistic systems in Italy, Portugal, Spain, Cyprus and Germany (the «National Vertical Pilots»)
- To investigate possible interface with ICT logistic systems of non EU countries

- Part A (Activities A1 & A2): pre-implementation phase
  - proof of concept of National Vertical Pilots («National Working Concepts»)
  - detailed specifications & architecture of MIELE Middleware
- Part B (Activities A3 & A4): deployment of 6 demonstrators
  - 5 National Vertical Pilots
  - MIELE Middleware
- Transversal Activities:
  - A5 Impact Assessment
  - A6 Dissemination, Exploitation Stakeholders‘ contribution, Coordination and Management

With the support of
**Beneficiaries/Implementing bodies**

- **BENEFICIARIES**: Italian Ministry of Transport; Cyprus Ports Authority; Jacobs University (D); CIMNE + Autoridad Portuaria de Gijon + COMPASS + PLAZA (ES); Instituto Portuario e dos Transportes Maritimos (PT)
- **IMPLEMENTING BODIES** = RINA + Grimaldi Napoli + IB + CAP + Terminal San Giorgio (IT); ADMINISTRAÇÃO DO PORTO DE LISBOA + ADMINISTRAÇÃO DOS PORTOS DO DOURO E LEIXÕES (PT)
- **ADMINISTRATIONS**: Italian Ministry of Transport, Cyprus Port Authority, Instituto Portuario e dos Transportes Maritimos
- **PORT AUTHORITIES**: Gijon, Lisboa, Douro & Leixoes
- **OPERATORS**: PLAZA, Grimaldi Napoli, Terminal San Giorgio
- **ICT EXPERTS & TECHNOLOGY PROVIDERS**: Jacobs University, CIMNE, COMPASS, IB, CAP
- **CLASSIFICATION SOCIETY**: RINA
## Stakeholders’ Group (STG)

<table>
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<tr>
<th>Member States</th>
<th>Stakeholders involved</th>
<th>EoI</th>
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<td>ITALY</td>
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<td>Sardão (road transport company)</td>
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As of 31st August 2010
Background

• IMO FAL Committee 01/2010 (expected ratification 09/2011)
• FAL Form 1-2-3-4-5-6-7 and 8 → UN/EDIFACT with standard lookup tables used and XML format
• Guidelines for MARITIME SECTOR. Technology, methodology, approach, implementation, etc. for single window system
• Progressive use of e-CERTIFICATEs and CEDA (Certificate Electronic Document Authority)
• PROTECT group and other logistic standard:
  • www.uncefact.org → shortseaxml.org, norstella.org, smdg.org, edifice.org
  • www.oasis-open.org → ebxml.org
  • www.odette.org
  • www.gs1.org → rosettanet.org
  • ......
• Directive 2010/65/EU
Background: e-Maritime vision
Clustering the MoS in the Med Area; BUILDING THE FUTURE 28 February 2011

“SINGLE WINDOW SYSTEM MARITIME” (IMO FAL COMMITTEE 36/2010-37/2011)
Starting points

- EU projects MARNIS, SKEMA, TIGER, BOPCOM, TADE/VTMIS, COST326, MBB, PIPE, PORTMOS, ..... 
- Italian project SIS-TEMA 
- Implementing bodies‘ past experience/understanding on e-maritime, e-navigation, but also e-freight , e-traveller…

Other EU Projects

- EFFORTS
- FREIGHTWISE
- FLAGSHIP
- .....
Outline of Part A

Verification of existing ICT technologies; Pre-implementation phase of the Action:

• Detailed users’ needs, existing standards & rules (Activity A1, Sub-Activity SA1.1)
• Architecture design and specifications of MIELE Middleware (Activity A1, Sub-Activity SA1.2)
• 5 National Working Concepts (Activity A2, Sub-Activity 2.1)
• Architecture design and specifications of National Vertical Pilots (Activity A2, Sub-Activity 2.2)

External Peer Review

DECISION ON CONTINUATION OF THE ACTION
Outline of Part B

Deployment of a full scale, integrated and interoperable demonstrator resulting from the integration of Miele Middleware + 5 National Vertical Pilots

• Definition of use cases for National Vertical Pilots (Activity A3, Sub-Activity SA3.1)
• Individual (isolated) Demonstrators of each National Vertical Pilot (Activity A3, Sub-Activity SA3.2)
• Working Concept of MIELE Middleware (Activity A4, Sub-Activity 4.1)
• Development of MIELE Middleware & integration with National Vertical Pilots (Activity A4, Sub-Activity 4.2)
• Integrated and interoperable demonstrator: MIELE Middleware + 5 National Vertical Pilots (Activity 4, Sub-Activity SA 4.2)
**Final aim**

- Spanish Vertical Pilot
- Portuguese Vertical Pilot
- Italian Vertical Pilot
- German Vertical Pilot
- Cyprus Vertical Pilot

**Interfaces between MIELE Middleware and Vertical Pilots**

**Current situation**

- Spain
- Portugal
- Italy
- Germany
- Cyprus
Steps toward the final aim

SA 1.1 User needs

SA 1.2 MIELE Middleware specifications/architecture

SA 2.1 National Vertical Working Concepts
Steps toward the final aim

SA 2.2 National Vertical Specifications

SA 3.1 + SA3.2 National Vertical Pilots

SA 4.1 MIELE Middleware working concept
Steps toward the final aim

SA 4.2 MIELE Middleware Development ......

SA 4.2 ......& integration with National Vertical Pilots

Spanish Vertical Pilot
Portuguese Vertical Pilot
Italian Vertical Pilot
German Vertical Pilot
Cyprus Vertical Pilot

MIELE Middleware Pilot

SA 4.3 Integrated & Interoperable Demonstrator

Spanish Vertical Pilot
Portuguese Vertical Pilot
Italian Vertical Pilot
German Vertical Pilot
Cyprus Vertical Pilot

MIELE Middleware Pilot

Integrated Demonstrator
SA 1.2 Architecture design & specifications of MIELE middleware

- UN/EDIFACT/XML
- MIELE MIDDLEWARE CONVERTER
- UN/LOCODE

PORT SW - MIELE

UN/EDIFACT/XML Messages
- FAL 1:7, SECREP, CUSREP, WASDIS, IFTDGN...

MIELE OWNER / SHIP Agent

- e-FORM COMPILER
- IMPORT ICT SYSTEM – A1
- IMPORT ICT SYSTEM – A2

- Converter EDIFACT into FLATFILE, CSV...
- DOWNLOAD
- DOWNLOAD

AUTHORITIES

- UN/EDIFACT/XML VIEWER
- UN/EDIFACT/XML repository

ICT Systems

- FLATFILE/CSV/ EDIFACT V. OLD
- ICT Systems

SA 1.2 Architecture design & specifications of MIELE middleware

- MIELE MIDDLEWARE CONVERTER
- UN/EDIFACT/XML repository

ICT Systems

- FLATFILE/CSV/ EDIFACT V. OLD
- ICT Systems

SA 1.2 Architecture design & specifications of MIELE middleware

- MIELE MIDDLEWARE CONVERTER
- UN/EDIFACT/XML repository

ICT Systems

- FLATFILE/CSV/ EDIFACT V. OLD
- ICT Systems
SA 4.1 MIELE Working Concept (MWC)

ICT SYSTEM

FLATFILE/CSV

Name | type ship | IMO number | Call sign | Voyage number | Port Arrival or departure | Date Time arrival or departure (ETA-TA-ETD-TD) | Flag state ship | Name Master | Last Port Call / Next ... Position ship in port | Number crew | Number pax ...

with Voyage Ship Planning in continuous upgrade

... as time goes by ...

MMR converter

MIELE MDW

MMR converter

UN/EDIFACT/XML native version IMO FAL COMMITTEE 37/2011

MMR converter

UN/EDIFACT/XML old or particular version

SA 4.1 MIELE Working Concept (MWC)

IT MIELE SW PORT1 STD FAL 37-2011 CUSREP.P1

IT MIELE SW PORT 2 STD FAL 37-2011 CUSREP.P2

IT MIELE SW PORT 3 STD FAL 37-2011 CUSREP.P3

FR Port 4 CUSREP.P4

ETA – ATA in progress
ETD - ATD

Optimize and improve all the BERTH MANAGEMENT activities
SA 4.2 MIELE Integration

Germany
Port of Wilhelmshaven
PORT SINGLE WINDOW

Cyprus
National Port Community System
NATIONAL PORT COMMUNITY SYSTEM

Spain
Gijon Port Authority
PORT SINGLE WINDOW
PORT COMMUNITY SYSTEM

Portugal
E-PORT Platform
PCOM

Italy

UN/EDIFACT/XML
IFTDGN
FAL Form 7

UN/EDIFACT/XML
IFTDGN
FAL Form 7

UN/EDIFACT/XML
IFTDGN
FAL Form 7

UN/EDIFACT/XML
IFTDGN
FAL Form 7

MMR converter

MIELE MIDDLEWARE

MMR converter

UN/EDIFACT/XML
IFTDGN
FAL Form 7

RIS
We have a dream?
We have a plan