Jose Manuel Díaz - SASEMARM
Activity 4 – Operational Safety
How Operational Safety changes the world

**Innovation technology** + **Qualified staff** =

**Improved:**
- Accident/Incident response & Crisis Management

**Safety:**
- Interoperability among SAR services, port emergency control centres, passenger ships, ports, VTMIS and Mission Control Centres

**Environment:**
- deployment of training programmes-LNG
- use pre-identifying risks and analysing of the behaviour
  - Recovery of damaged vessels
  - on-board life rafts re-covery systems (OLRS)
  - dynamic predictor

**Focused on Large Passenger vessels**

**Efficiency:**
- Qualified staff
How Operational Safety changes the world

MONA LISA 2.0
SECURING THE CHAIN BY INTELLIGENCE AT SEA

Barcelona Midterm Conference
4-5 November

MONALISA 2.0 PROJECT
SEA TRAFFIC MANAGEMENT
SAFER SHIPS

Co-financed by the European Union
Trans-European Transport Network (TEN-T)
Midterm Findings & results

SA 4.2 MRO Table Top

SA 4.2 Recovery of Damaged Ships

SA 4.3 Risk Assessment in Ports

SA 4.5 Safety Information Systems Integration

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1. MRO tabletop exercise (SA 4.2)

Passenger ship in distress → Emergency Plan Activated

Benefits of the MRO Exercise:

- Testing and evaluating plans, policies and procedures
- Revealing planning weaknesses and resources gaps.
- Improve individual performance and organizational coordination
- Train personnel
- Test MONALISA support tools
1. MRO tabletop exercise (SA 4.2)

Click for video
http://youtu.be/0saH5L-6kqQ
Computer simulation models for assessing towing operations feasibility.

**For?**
- Predict risk
- In rescue operations

**How?**
- Sea states
- Wind
- Damage ship
- Batrimetry
- Tow lines

**Benefits?**
- To assess the actual rescue operation.
- Prepare new training simulation models, with different towing line configurations.
2. Simulation Maneouvering/recovering of Damaged ships
(SA 4.2)

- Surge of Fortuny vessel
- Heave movement
- Pitch Movement

Dynamic response of Tug boats Damaged ship

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2. Simulation Maneuvering/recovering of Damaged ships
(SA 4.2)

This is what happened in reality!

This is how we recreated!

Tensions and displacements evolution of the towing line can be obtained
3. Extensive Risk Assessment in Ports (SA 4.3)

An **Integral** approach to **risk management** of **port** activities

- **All kind of activities in ports**
- **All kind of risk in ports**
- **Common Methodology** - identified - quantified
- **Exportable tool to other Port Authorities**

**Vision:**

**Greener and Safer European Ports**

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3. Extensive Risk Assessment in Ports (SA 4.3)

- Risk Assessment Methodology for Ports:

\[ S_{I_{xy}} = F_{xy} \times C_{xy} \times P_{xy} \]

Frequency \quad Consequences \quad Probability

Scaling the degree of impact + Control Measure = Risk Evaluation

Several interviews with terminals and shipping companies in Valencia Port

NEXT Livorno Port
4. Safety Information System (SA 4.5)

Integrated Safety Information in ONE SYSTEM:

- SASEMAR
- Valencia Port Authority
- Sailing directions
- Hydrographical Information
- Navigation Restricted areas
- AIS
4. Safety Information System

Limited Access

Port can connect without changed their Port Emergency System
4. Safety Information System

Information in layer of:
- emergency
- optimul routes
- vessels
- navigation restricted áreas
- equipment
4. Safety Information System
(SA 4.5)

Decision making tool for:
- Vessels
- Ports
- MRCC

Caution with depths
Type: Dangerous, perilous or risky area for navigation in approach

Caution: Numerous depths less than charted exist in areas inshore of a line joining 39°27'-0N 0°17'-0W and 39°28'-7N 0°17'-0W.

42/14 Embarcación LULA con avería frente a Port Olimpic

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Any Questions
Operational Safety

Safety First, Police after...
Avoiding the unthinkable, and then managing it

“HOW MANY POINTS DO I GET IF I MAKE A ‘RINGER’?”

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