MoS Forum Brussels – 5/7/2018

Motorways of the Sea
Detailed Implementation Plan 2018 and MoS Study Presentation

Preventing Incidents & Accidents for Safer Ships in the Oceans

Grant Agreement Nº INEA/CEF/TRAN/M2015/1123412

Covadonga Suarez: Project Coordinator (SASEMAR)
Policy Context

The Motorways of the Sea policy is key for the overall integration of EU's transport corridors and a prerequisite for efficient logistics.

DETAILED IMPLEMENTATION PLAN (DIP)

I. Environment

II. Integration of Maritime Transport in logistic chains

III. Maritime safety, traffic management, human element/training

The Picasso Project was the only project approved under the CEF-2015 - Transport call specifically targeting Maritime Safety and the Human element and entailing a wide disciplinary and geographical coverage.
PICASSO at a glance

**Project Leader:** SASEMAR

**Duration:** 26 months (May 2016-June 2018)

**Budget:** 3.8 Million EU

**CEF Funding:** 1.9 Million EUR

**9 Countries** - ES, PT, GR, IL, SE, IT, UK, CY, MT

**14 Beneficiaries** (+ 5 implementing bodies)

**30 Letters of Support** (from the industry, the academy and policy makers)

The overall goal was to achieve a modern and developed maritime sector, with a capable and up-to-date work force that enables the sector to become greener, safer and more efficient and sustainable.
PICASSO Consortium

Coordinator

GOBIERNO DE ESPAÑA MINISTERIO DE FOMENTO

Co-cordinator

magellan

Beneficiaries

Transport Malta

FUNDACIÓN VALENCIAPORT

Cyprus Ports Authority

ANEK LINES

National Technical University of Athens

APDL

CHALMERS

SWEDISH MARITIME ADMINISTRATION

MIT

Dover
Overall Structure

**Activity 1:** On shore/on board safety and security – Led by Valencia Port Foundation

**Activity 2:** Emergency simulations – Led by Malta Transport Authority

**Activity 3:** Training and human factor – Led by SASEMAR

**Activity 4:** Action coordination and communication – Led by SASEMAR
Overview of the achievements
Act. 1 – On-Shore / On-Board Safety and Security

**Aim:** The objective of this activity is to study and test new tools and solutions for on-shore and on-board safety and security conditions, namely port communication systems and their control and monitoring activities, but also to tackle communication problems aboard the ships.
Results

- Technology validated with positive results
- The solution covers an existing gap not yet addressed in the port sector
  - Manned
  - Remotely controlled
  - Autonomous
  - Easier communication with the shore
  - Long range (e.g. anchoring area)
  - Combined security concepts (e.g. with UAV or UUV)
Results

Middleware for ship to shore communications in order to integrate the ship data and prioritise outgoing data flow from ship-to-shore.
Overview of the achievements
Act. 2 – Emergency Simulations

Aim: The aim was to **study alternative solutions to deal with mass evacuations** taking into consideration that in the past years, sea traffic to and/or from many islands in the Mediterranean has increased (with a growing tendency), **leading to the use of larger Ro-Pax vessels** that are more capable to satisfy the demand, transporting thousands of people in each trip.
Emergency Drill – Port of Limassol

THOMSON SPIRIT (1350 pax, 520 crew)

- **Fire in cabin** in a lower deck simulated by smoke;
- **PA announcement** in code for the crew to announce the emergency ("code Bravo");
- **3 fire teams.** 1 to the scene at remainder on stand-by;
- **Primary exit route was closed** – the crew had to find another route;
- Emergency announcement was made by the cruise director in English;
- **80 national passengers + 31 crew members**;
- The passengers were instructed not to do anything until directed by crew members – led to safety;
- **General alarm** was sounded to the crew to position themselves;
- **Evacuation process** commenced;
- **Marshalls** at crucial points to throughout the evacuation route, identified by yellow hat;
- **Passengers** went to their designated muster stations for roll.
Main problem: long response times of the passengers in reacting to fire alarms. The delayed responses can be fatal, although these adverse outcomes can be mitigated by crew assistance.

Passenger behaviours in distress situations is an important factor to considered.

More realistic scenarios including aspects beyond IMO requirements are useful for the crew training. Regulatory organisations and software evacuation modelling can be greatly assisted by the findings of this type of drills.

The implementation of B-BS is possible during the standard operation of the passenger ship, including drills. The B-BS procedure demonstrated potential for improvement of crew behaviour on-board and enabled the observers pinpoint behavioural gaps during the drill. Further research is required to explore further the implementation procedure and produce results from a large number of tests.
The main aim of MALTEX-EVAC 2017 was achieved, by bringing together an extensive emergency response and management system that demonstrated the ability to effectively mitigate the risks of a Mass Rescue Operation. Initial evaluation of the exercise is leading to the conclusion that it was a successful multi-agency cooperation, which has been based on the Stakeholders planning, professionalism, volunteers, resources and adequacy of facilities.

Main highlights:

- Report and Alarm;
- Scaling up;
- Leadership and Coordination;
- Transport Malta and all other stakeholders may consider the use of electronic identification systems (RFID’s)
Mass Evacuation Exercise – Port of La Valletta
Results & Recommendations

- Subsequent exercises to test the logistics for a rescue operation involving a much larger number of persons in view that vessels can carry to see if a response of such a size can be adequately supported.
- **To invest in the best training and support** for all stakeholders involved
- To **equip all involved with capable tools, processes and technology to ensure timely response to an incident.**
- To organise **more frequent table top exercises.**
Overview of the achievements
Act. 3 – Training and human factor

Aim: To ensure required training of maritime crew and staff, as the key elements to prevent accidents. Paying due care to the safety concerns in this project, an innovative systems for safety and training were developed.
**Results:** Software for detection of small objects at sea

**SAR unit:**
Helimer Cantábrico, Gijón

**System completed:** (heated buoy, maneikin, GPS spot buoy)

**High Resolution camera attached to the helicopter:**
FLIR Camera 300 ft.
Results: IT tools for crew training (serious game): Safety and Advanced SAR methods

SAR module integrated and in operation

SAR Operation processes validated: a serious game was designed to train the auxiliary staff of a RO-PAX ferry with their emergency tasks assigned according to the assembly list. That task is basically to steer and assist, in case of abandonment, to the ship´s passengers from their location in the time of alarm to the assembly stations.

Training Module: Collaboration with IMRF and delivering the first educational module for Mass Rescue Operation - SAR – OSC training module using the EMSN network.
Results: Emergency situations managing course: Leadership and operational courses & Advanced port firefighting

The scope was to develop and test new methodologies as to adapt existing ones to the marine and seaports environment, with a view to achieving a better readiness of the stakeholders involved in managing crisis situations in ports.

Workshop completed: 9th - 13th Almere (NL), CSMART Premises:
• Development leadership
• Situational awareness
• Decision – making
• Communications
• Resource Management

Training Course Advanced port firefighting: Jovellanos Training Centre 12th – 16th March 2018
Conclusions → Looking into the Future: PICASSO 2

There are still a good deal of development priorities for Safety, Traffic Management and the Human Element worth to be further explored along the coming years, as a continuation of the previous projects, as per the DIP, these are the main ones:

- Safe handling and storage of alternative fuels
- R&D for simplification of ship designs and autonomous ship
- Migration: search and rescue, preparedness, management
- LNG safety guidelines, safe storage and handling of alternative fuels
- Further development of ICT
- Route planning
- Information sharing platforms to efficiently use and analyse big data in sea traffic management
- Support better training (for soft skills, digital skills, new technologies, LNG - safety, security and cyber security
Social Media and contact information

You can find us on:

- [http://picassoproject.eu/](http://picassoproject.eu/)
- [@PICASSO_EU](https://twitter.com/PICASSO_EU)

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Thank you for the attention!