SAFEMODE

Strengthening synergies between Aviation and Maritime in the area of Human Factors towards achieving more efficient and resilient MODES of transportation.

deepblue consulting & research

SAFEMODE
Synergies Between Aviation and Maritime in Human Factors

Simone POZZI
Deep Blue

OPTICS2
Final Dissemination Event

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Consortium

The consortium – Core team & Research partners

deepblue consulting & research

University of Strathclyde Glasgow

EASA European Union Aviation Safety Agency

EUROCONTROL

nlr

ENAC

CETENA S.p.A.

CHALMERS UNIVERSITY OF TECHNOLOGY

CERTH/HIT Hellenic Institute of Transport

CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS

WMU WORLD MARITIME UNIVERSITY

HungaroControl

SAPIENZA UNIVERSITÀ DI ROMA

İTÜ İSTANBUL TEKNİK ÜNİVERSİTESİ 1773

DE MONTFORT UNIVERSITY LEICESTER

ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ

UNIVERSITY OF PATRAS ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ

UNIVERSITEIT VAN AMSTERDAM

BeeBI Touch The Intelligence

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Consortium

End-users

AIRBUS

EMBRAER

TUI

RYANAIR

Caledonian MacBrayne
Hebridean & Clyde Ferries

KONGSBERG

AP&A

RSSB
A Better, Safer Railway

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Consortium

International partners – Russia, China, Indonesia, Philippines

Industrial Advisory Board (40 members)

Including EMSA

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Call Topic

Call Topic H2020-MG2.1b:

*"Compile and analyse a **large quantity of global real-world** accident, incident, near miss and other **safety event data**.*

*Use this data to develop **improved methodologies to address human factors within risk based comprehensive design models and operational safety assessment** for waterborne and air transport"*

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Vision and goals

Decoding the HF iceberg

01

The event.
Observable behaviour.

Incident /Accident

The easy-to-see (and easy-to-blame) layer.
What happened, and who did what, but not why.

02

Workload, Fatigue, Situation Awareness,Stress, Interaction among SHEL elements

Human Performance

Interactions between system elements: people, procedures, equipment. Human performance envelope factors affecting the performance.

03

System demands, workarounds, internal and external targets.

Work as done

The way the job is really done, as opposed to how designers may have intended it in a Safety 2 paradigm.

04

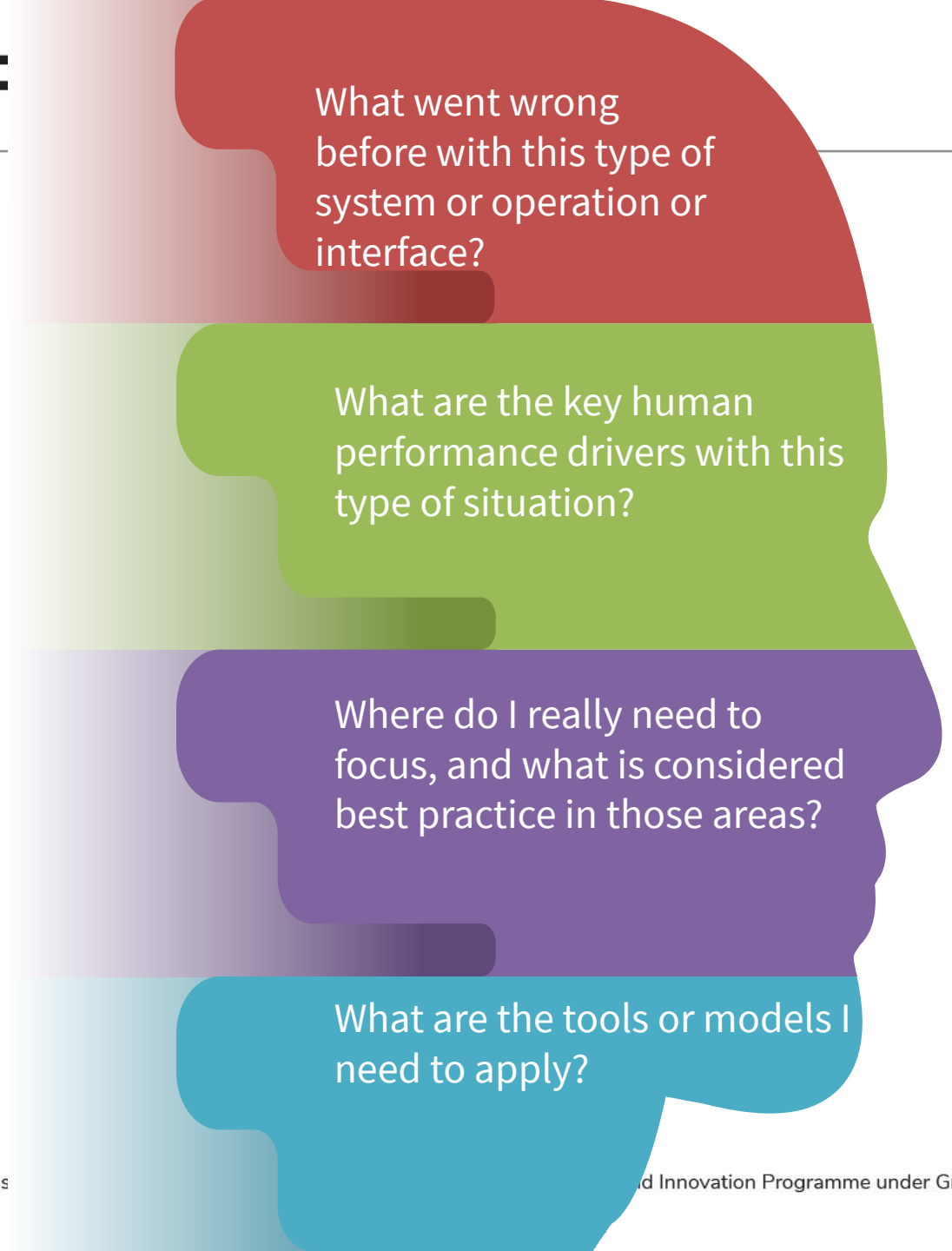
Norms, values, perceptions, organisational culture.

Culture

A fusion of professional, organisational and national culture affecting human performance and safety.

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Vision and goals



The designer is not a Human Factors expert

Development of the **Human Risk Informed Design** (HURID) framework, with relevant and practicable information and tools

This project has
d Innovation Programme under Grant Agreement N°814961.

Main Achievements




Is SAFEMODE delivering benefits to HF&Safety?

Which are the SAFEMODE highlights after 24 months of work?

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Main Achievements

Two ways of delivering the expected impact:

- Better tools, better data
- Peer-to-peer change of behaviour

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Delivering impact

Two ways of delivering the expected impact:

- **Better tools, better data**
- Peer-to-peer change of behaviour

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Main Achievements

Main achievements – Research Area

- **Unified** Taxonomy, Toolkit and Risk models for **cross-domain** learning
- **SHIELD Database** to collect data and identify top risks, with joint exercise between maritime and aviation to populate it
- **Toolkit being applied in the Case Studies**
- **'Human contribution' is being quantified** in risk models

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Risk Models development planning

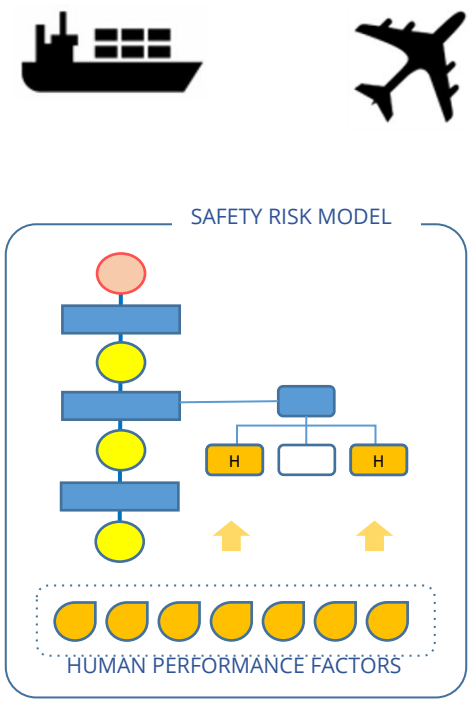
Risk models being developed

- Wake Induced Risk in En-Route - Aviation
- Runway Collision Risk Model - Aviation
- Ship Collision at Open Sea - Maritime
- Ship Collision in Congested Waters - Maritime
- Ship Collision in Narrow Waters - Maritime
- Ship Grounding in Coastal/Swallow Waters - Maritime
- Ship Grounding during approaching to Berth - Maritime

This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

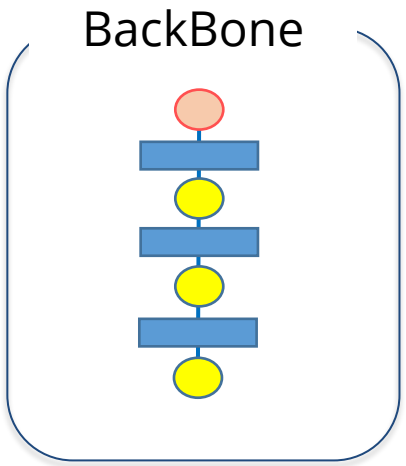
Structure & main elements of the RM

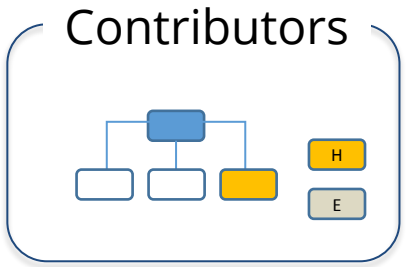
The main parts composing the risk models are :

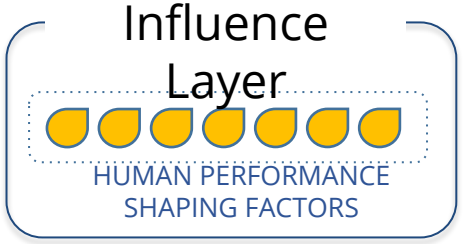


Scope

- Type of risk
- Operational Environment
- System elements







This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Risk Models development planning

Online HF Toolkit

Products

HF Toolkit

Processes

P01 HPAP

P02 HPCP

Models

M01 SHELL

M02/B Fatigue

M03/B LOAT

Techniques

Fatigue and Fatigue Risk Management

BACKGROUND KEY CONCEPTS BENEFITS HOW IT WORKS ILLUSTRATIVE EXAMPLE

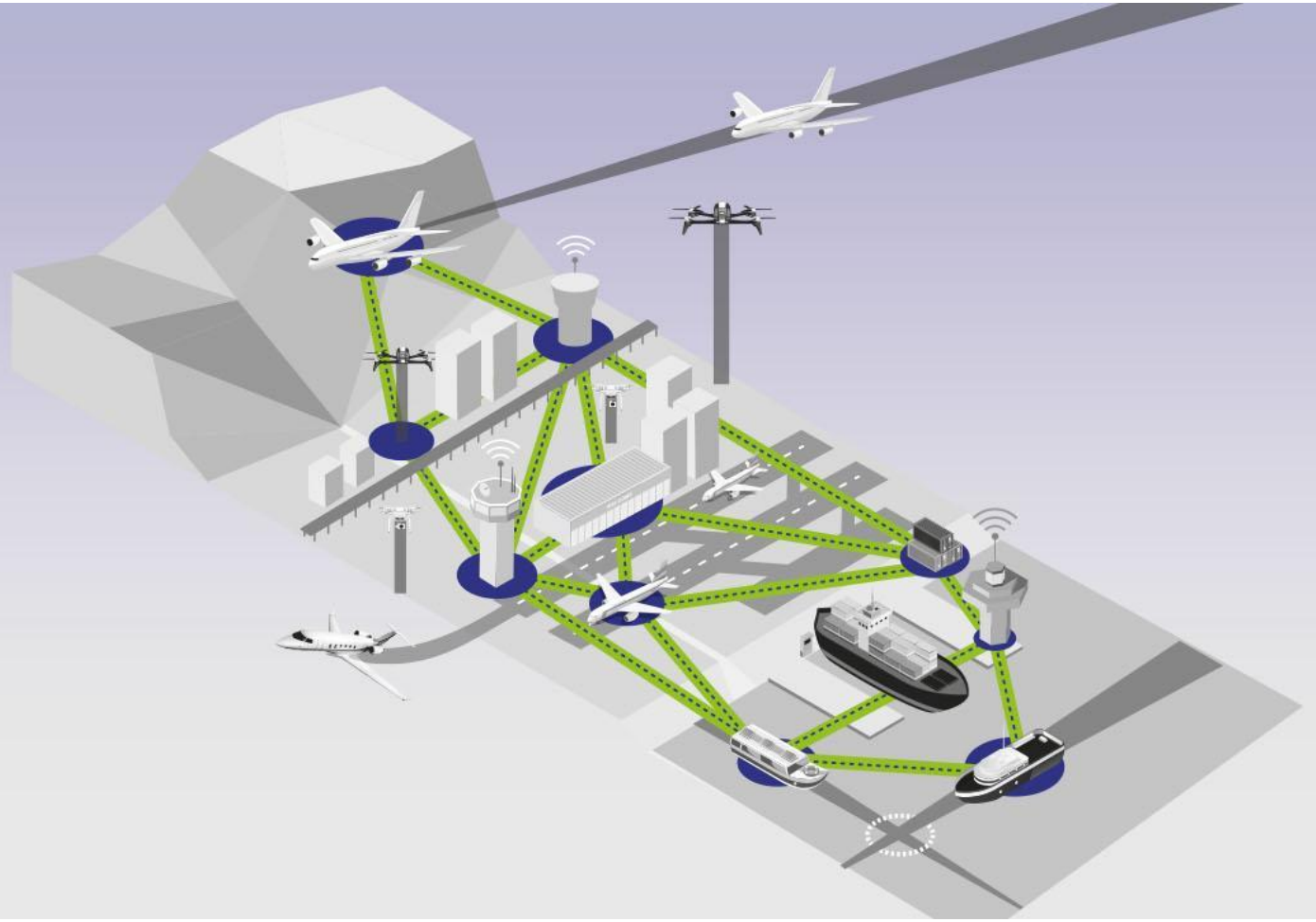
Background

Society has evolved to a state where services and industries are available 24-hour a day. Most of the industries we rely on for our 24-hour existence require constant monitoring, and air and marine transportation are no exceptions. The challenges raised by a continuing shift towards 24h operations are major and not without consequence, and there are great demands on existing systems to support this move. At present most air traffic control centres and ship bridges have operational requirements that demand 24-hour-a-day, 7 days per week work schedules. With global commerce continually growing, so too will the corresponding increase on the demands placed on those working in the transport and service sectors. The question remains if these systems can meet these challenges, otherwise these realities will take their toll on safety.

Main Achievements

Two ways of delivering the expected impact:

- Better tools, better data
- **Peer-to-peer change of behaviour**

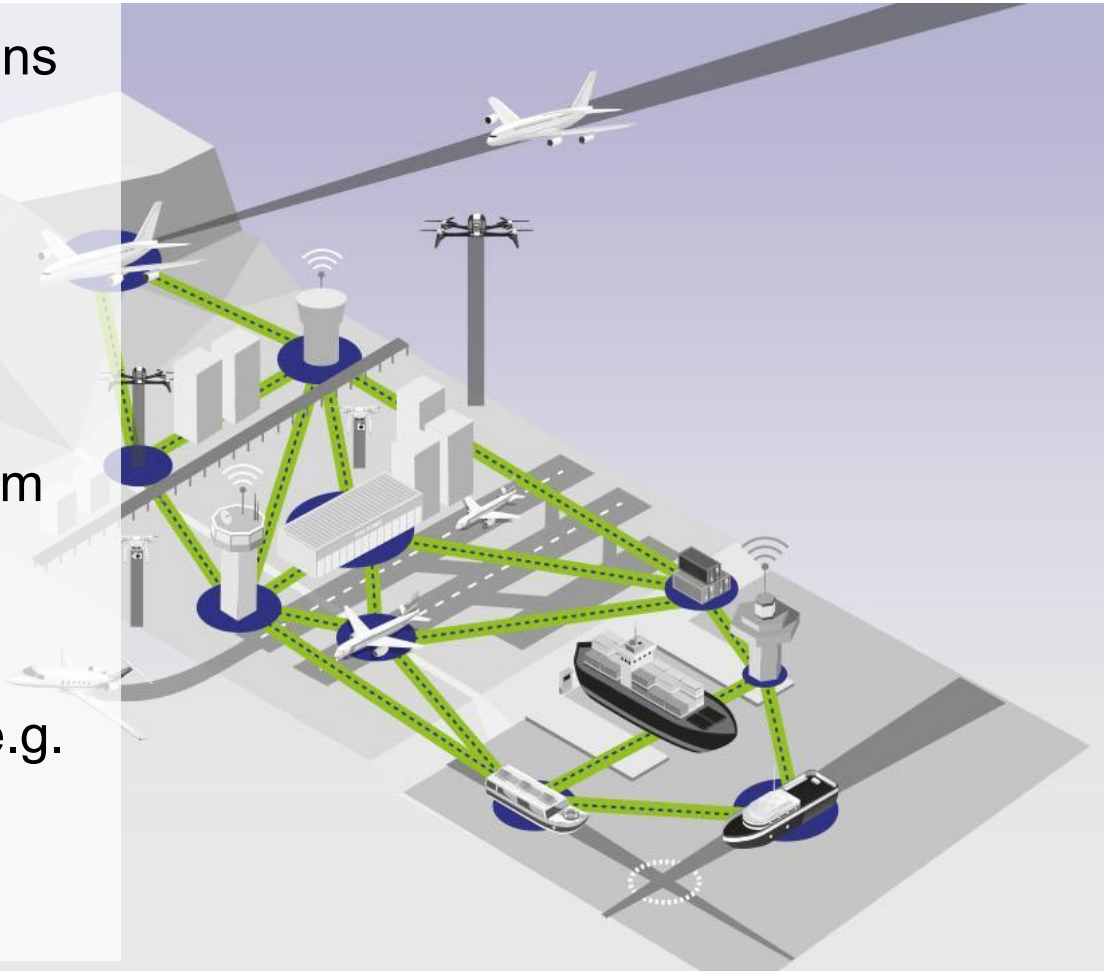


This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Main Achievements

Main achievements – Application Area

- **Case Studies** involving different Partner organisations – with varying HF expertise
- High level design framework **HURID is being developed, applied, refined**
- **Just Culture** and Learning approaches are being explored in Maritime, to see what can be learned from Aviation
- Successful **engagement of EMSA**, maritime administrations (e.g. MCA), casualty investigators (e.g. Digifema Italy) and other stakeholders…

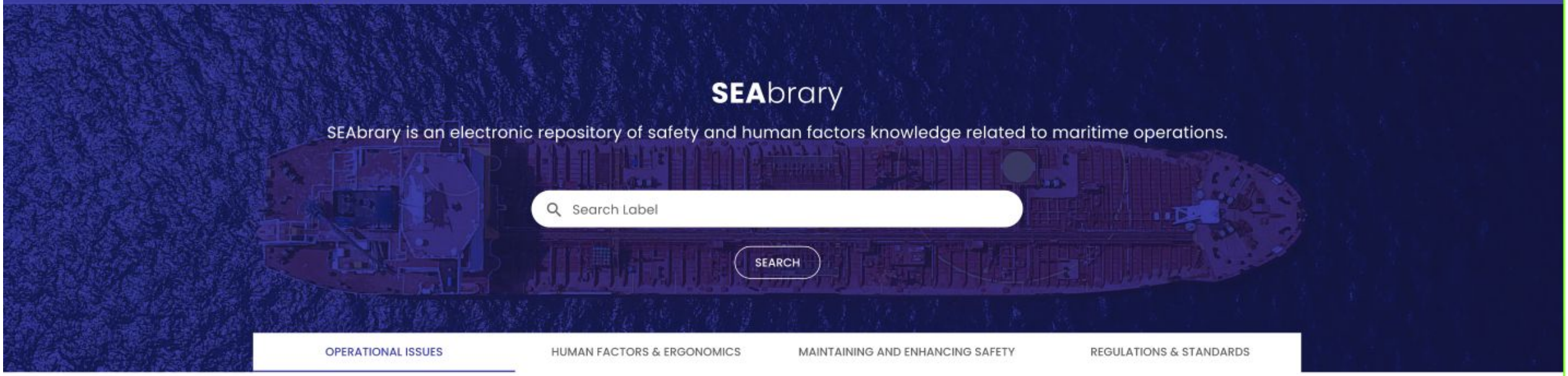


This project has received funding from European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement N°814961.

Sign In

SEA BRARY

About SEAbrary Contact



SEAbrary

SEAbrary is an electronic repository of safety and human factors knowledge related to maritime operations.

Search Label

SEARCH

OPERATIONAL ISSUES | HUMAN FACTORS & ERGONOMICS | MAINTAINING AND ENHANCING SAFETY | REGULATIONS & STANDARDS

- Infringement of port regulations
- Wildlife impact
- Approach to berth operations
- Fire and explosion on board
- Sea worthiness

SEE ALL CATEGORIES

Popular Articles

Safety Culture

posted 30 March 2020 in Category: Safety Culture

Recent Articles

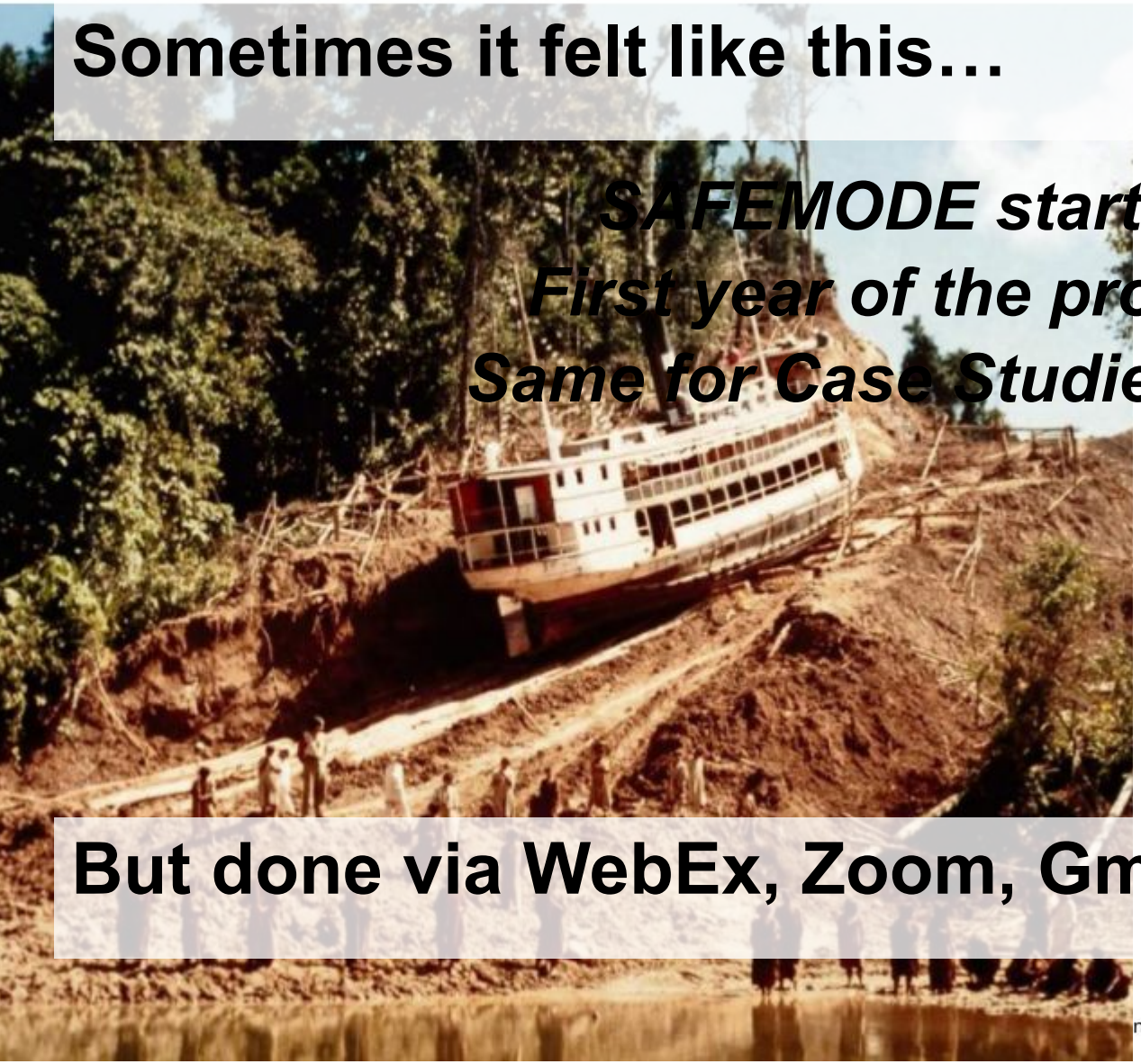
Safety Culture

posted 30 March 2020 in Category: Safety Culture

Main Achievements

Main Achievements

Sometimes it felt like this…



SAFEMODE started in June 2019…

First year of the project hit by COVID19

Same for Case Studies scheduled this year

But done via WebEx, Zoom, Gmeet…

Thank you for your attention!
Questions?

Simone POZZI | simone.pozzi@dblue.it

https://safemodeproject.eu/

SAFEMODE

This project has received funding from European Union's Horizon 2020
Research and Innovation Programme under Grant Agreement N°814961.