

Consortium

HEALTHY SAILING is a **36-month project** (September 2022 – August 2025) whose consortium represents **24 members from 12 countries**

10 universities, 2 governmental public health institutes, 5 research or training institutes, one scientific NGO, 5 shipping companies and one engineering company.

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www.healthysailing.eu



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Horizon Europe Research and Innovation Action

Prevention, mitigation, management of infectious diseases on cruise ships and passenger ferries

Project Nr. 101069764



Safer, resilient, competitive and efficient passenger shipping industry



Healthy **Port and terminal operations**
Port communities
Environments

HEALTHY SAILING OUTPUTS



Establish a comprehensive scientific evidence-base concerning mechanisms that facilitate the on-board spread of infection and effectiveness of different mitigation measures:

Epidemiological studies, systematic literature reviews, risk assessment analysis, mathematical modelling to predict the spread of COVID-19 and Norovirus, setting disease thresholds/alert levels and computational modelling for prediction of respiratory droplet and aerosol dispersion within passenger ship ventilated environments will be conducted to establish the scientific basis. Interventional studies to assess the impact of introduced prevention, mitigation and management (PMM) measures.



Evidence-informed guidelines:

- Prevention, mitigation and management of **COVID-19 in routine ship operations**
- **Vaccination** of passengers and crew in large passenger ships
- Specificities and needs of **medical operations in expedition vessels**
- Updating existing guidelines for passenger ship **ventilation systems**, considering droplet and aerosol transmission risks

Recommendations will also be produced for incorporating environmental health and hygiene standards into existing guidelines/manuals in accordance with evidence produced.



Tested and validated measures for healthy environments and early health threat detection on-board:

- **Toolkit for systematic monitoring of surface cleaning and disinfection** and intervention study evaluating the toolkit
- **Artificial Intelligence (AI) Water Safety Plan decision support tool** to simplify plan development, improve water quality and prevent waterborne diseases
- **Syndromic surveillance system** of infection diseases for passenger ships
- **Integrated health e-surveillance IT system (E-SS)** for infectious diseases, covering all data management needs for efficiently performing real-time syndromic, laboratory and environmental health surveillance
- **Artificial Intelligence (AI) Intelligence Immune System (IIS)**, receiving input data to produce a voyage profile and health threat alerts, characterise threat levels and recommend/monitor health measures
- **Inventory of fast diagnostic laboratory methods** including safe and reliable self-specimen collection protocols for crew and passengers
- **Facilitated access to ship medical facilities** encouraging reporting among travellers



Port operations and community needs addressed through:

- Testing and demonstrating an **integrated e-pass based on one-ID concept** for optimized embarkation, effective and continuous tracking of travellers, and extended use of a wearable RFID
- Development of a **toolkit predicting port response capacities** required for numbers of travellers and interoperability of port/ship contingency plans
- Establishment of a **scientific international panel** for exchange of best practices and to promote a harmonised global approach



Knowledge, awareness and compliance increase via:

- A **blended learning toolkit enriched with hands-on training** for crew, passengers and stakeholders incorporating augmented reality and gaming
- A **toolkit for technology induced behavioural change in hand hygiene** - interventional study to improve hand hygiene practices and assess differences between ship areas regarding contamination rates and hand hygiene practice
- **Guidelines with communication approaches** (including risk communication) as part of PMM measures

