EURMARS

An advanced surveillance platform to improve the EUROpean Multi Authority borderR Security efficiency and cooperation

# Decision Support System (DSS) for Maritime Border Surveillance

## Enhancing Decision-Making with Context-Aware Microtasks and Feedback Loops

## OVERVIEW OF THE DSS

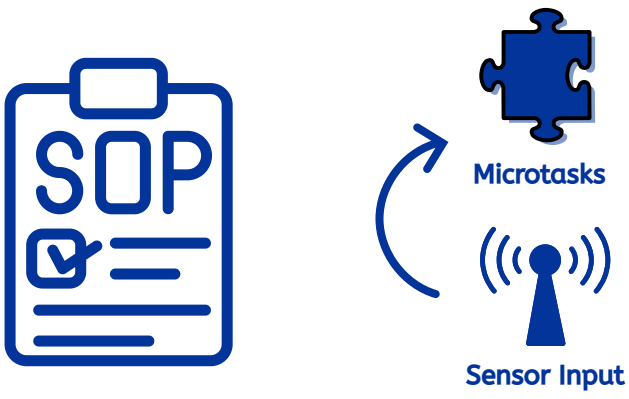
- Designed as part of the EU-funded EURMARS project
- Supports maritime border authorities in operational procedures
- Focused on structured, AI-supported decision-making
- Uses NLP to process real-time and post-incident user feedback
- Translates feedback into microtask recommendations

## CORE FUNCTIONALITIES

- NLP engine (Meta-LLaMA-3-8B) analyzes operator feedback
- Feedback converted into actionable microtasks
- SOPs are enhanced, not replaced
- Real-time (online) and post-incident (offline) feedback loops
- Voting mechanism to refine and prioritize microtasks

## MICROTASKS AND SOP INTEGRATION

- SOPs: Standard Operating Procedures used by maritime authorities
- DSS breaks down SOPs into step-by-step microtasks
- Microtasks adapt based on sensor input and incident context
- Ensures consistent execution of complex procedures




## FEEDBACK AND LEARNING MECHANISM

- Online feedback: brief inputs during operations
- Offline feedback: detailed input post-operation
- Both feedback types influence future microtasks
- Voting system ensures relevance and quality of tasks

## BENEFITS OF THE DSS

- Enhances operator efficiency and decision accuracy
- Improves situational awareness and response time
- Promotes multi-authority coordination
- Maintains human oversight and accountability
- Adapts to evolving threats via continuous learning

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