A DRIVER FOR ENHANCED INFORMATION EXCHANGE ON MARITIME SURVEILLANCE ACROSS EUROPE

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Outline

• EU Policy on Maritime Surveillance
• CISE initiative
• The EUCISE2020 FP7 PoV project
• National IT interoperability projects
• Perspectives on CISE implementation
EU policy on Maritime Surveillance

EU supports and promotes:
• Enhanced exchange of information between maritime surveillance systems
• Improved maritime surveillance awareness
• More efficient and effective operations at sea

EU calls for complementarity among the existing maritime surveillance IT systems across the EU, also building on the Inter-agency cooperation on the European Coastguard functions
OVER 300 MS authorities distributed in 7 maritime sectors

…would work more efficiently if data would be **properly** shared
What is CISE?

CISE aims at creating an operational and technical interoperability environment to enable seamless and reliable information sharing between existing and future surveillance systems and networks.

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CISE develops and promotes:

• a set of agreed specifications for a technical interoperability layer that will ease information exchange.

Semantic and technical interoperability

- Agreed common data and service models
- Agreed solutions for technical issues (technical interface, security)

= CISE technical Interoperability Layer

• common procedural guidelines that will support an operational interoperability layer

• possible models for SLAs and MoU that would support the legal aspect of information exchange
Key Principles promoted by CISE

- Inter-connecting public authorities responsible for maritime surveillance
  - civil and military
  - regional/sectorial organisations, EU agencies
- Voluntary
- Decentralised (point to point exchange of information)
- Neutral solution (all sectors and systems are important)
- Reuse of maritime data
- Reusing existing tools and systems
- Confidence for information providers (ownership of the information, access rights, security)
Roadmap

CISE Phases

2011 | First communication
2012 | Pilot Projects (BlueMass Med, Marsuno)
2013 | CoopP & Incubator
2016-17 | EUCISE2020

CISE Projects

- 2014: Project call and award
- 2015: Project development
- 2016-17: Project development

Projects to improve IT interoperability at national level
The EUCISE 2020 FP7 PoV Project

- 39 Partners, 16 EU/EEA maritime countries
  - Open to new partners and to collaboration with EU Agencies

- Pre-operational Validation of the CISE concept
  - Real surveillance systems
  - Real data
  - Network of operational centres
The EUCISE 2020 FP7 PoV project

Objectives:

• To validate at operational level the main CISE elements (architecture concept, concepts of operation, standards of data and services, new services, new processes)

• To develop an open European test-bed for incremental advancement of CISE in the medium-long term

• To assess which organisational instruments are necessary to sustain the appropriate governance structure and to stimulate public-private cooperation
The EUCISE 2020 FP7 PoV project

Phases:

Phase 1
Design

2015 - 2016
• Consolidation and refinement of the interoperability specifications and requirements
• Design of the Test Bed

Phase 2
Development

2017
• Development of the Test Bed implements the interop specifications + the network (subcontracted)

Phase 3
Validation

2017 - 2018
• Validation of the CISE concept using real maritime surveillance systems and data
• Ex-post assessment
End-to-End Communication (tested in EUCISE 2020)

- Collaborative platform
- Security services
- Registry of authorities and services

Partner A Legacy System
- Data format A
- Information Services A

Adaptor A
- CISE Gateway / Node 1
- Common Data Model
- Common Communication Protocols and Information Services (Service model)

Partner B Legacy System
- Data format B
- Information services B

Adaptor B
- CISE Gateway / Node 2
EUCISE2020 Achievements (2017- 2018)

• Refinement of the Use Cases
• New version of the Common Data and Service models
• Requirements and technical specifications for the common software components
  • Gateway/Node
  • Adaptor
  • Network Security
  • Service/Authority Registry
  • Collaborative services
• First software prototypes (September 2017)
• Templates for Service Level Agreements (SLAs)
National Interoperability Projects

Annual calls for project proposals opened to national authorities
• Under the European Maritime and Fisheries Fund (EMFF) for 2014-2020
• Budget set aside to support the integration of maritime surveillance at national level and across MS

Objective:
• Foster the information exchange across sectors and borders by supporting the improvement of IT interoperability between national authorities’ systems

Activities funded at national level:
• Studies
• IT developments
National Interoperability Projects

2014 Call
• 7 projects
• 28 Authorities from 5 Member States: ES, FI, GR, PT, RO
• Duration: 1-2 years (from Jan 2016 to Dec 2017)

2015 Call
• 3 projects
• 13 Authorities from 4 Member States: BG, CY, ES, GR
• 1-2 years
• Duration: 1-2 years (from Jan 2017 to Dec 2018)

2016-2017 Call
• 3 projects
• 12 Authorities from 2 Member States: BE and FR
• Duration: 1-2 years (from Jan 2018 to Dec 2019)
MS with Interop Projects

- CISE-ext
- CISE DMS
- SAIS
- SHAREMARE
- SMACS IT-2I
- 501 YIN
- 602 SINKER
- MAIDEN
- FIN-CISE
- CISEROM
- InBulMars
- Hellenic CISE
- CY CISE

Legend:
- Blue: MS involved in the 2014 Call
- Orange: MS involved in the 2015 Call
- Green: MS involved in the 2016-17 Call
EUCISE2020 test-bed Network
Perspectives on the CISE implementation

The future CISE implementation (by 2020) is set to be based on the following key aspects:

• **EUMSS context** (direct support to Maritime security)

• **Complementarity** - with the other developments (MARSUR, EUROSUR, NSW, VMS/FLUX, EU Inter-agency cooperation, etc)
  - Interoperability solutions
  - Exchange of information
  - Governance

• **Ensure civil-military information exchange**

• **Approach**: Distinguish 3 layers of information flows and interoperability within and between them
Layer 1: the exchanges among EU Agencies (mandatory)

Objective: Consolidate the information received from Member States and other sources to enhance a common situational awareness at sea

- EU Agencies will continue to develop new added-value information services and include relevant information exchange with military authorities;

- The cooperation/interoperability between EU agencies systems will be further improved.
Layer 2: the exchange between Member State authorities and EU Agencies (mandatory)

Objective: Continue to support a better flow of information to comply with EU legislation

- EU Agencies will further consolidate and distribute the information from Layer 1 to Member State authorities;

- Aim at extending the data sharing and exchange between the EU level and a wider group of Member State authorities that do not currently benefit from the available information;

- The interoperability between each EU agency's systems and MS systems will be further addressed.
Layer 3: the exchange within and among Member States authorities (voluntary)

Objective: Allow for a point-to-point information exchange nationally, across sectors and borders

- The exchange will be comprised of information held at national level, including that provided by Military authorities – coherence/complementarity with data exchange in layer 2 should be achieved

- CISE Interoperability solutions will be promoted to support MS authorities inter-connecting their systems and will be further consolidated after the end of the EUCISE2020 – validation of national solutions against interoperability solutions used under layers 1 and 2 and agreed standards should be performed;

- The support to operational and coordination aspects between Member States authorities, the transition to operations and the day-to-day operations could be performed/ supported by an EU agency (EMSA).
Conclusion: EU approach to future maritime surveillance

- Enable a clear distinction between:
  - mandatory initiatives *(compulsory information exchange embedded in Union law)* and
  - non-mandatory initiatives *(voluntary information exchange, not covered by the union law, i.e. civ-mil information exchange or nationally held information)*

- Ensure coherence and complementarity in providing services

- Take into account essential needs such as consolidating the trust and cooperation between EU maritime stakeholders; facilitating seamless and secure exchange of information, etc.

- Distinguish 3 layers of information flows and interoperability within and between them
Thank You