



Maritime CISE

Enhancing maritime domain awareness and responsiveness in Europe

Common Information Sharing Environment



EMODnet Steering Committee meeting

Ispra, July 2nd 2015



European Commission



- Globalising world
- EU's external trade:
 - 90% by sea
- Threats may:
 - enter any EU port
 - affect any EU coastline
 - travel quickly through Internal Market

Growth = safer, secure & clean seas

EU needs an effective Maritime Surveillance

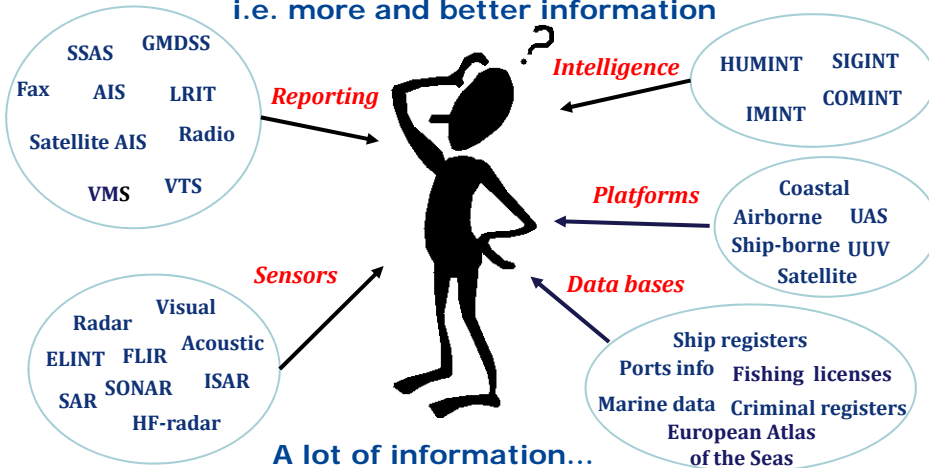
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Problem statement



Effective Maritime Surveillance needs more awareness
i.e. more and better information



A lot of information...
but often not shared!

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Problem definition



Lack of information sharing

Causes

- Legal obstacles
- Technical obstacles (interoperability)
- Cultural mindset

Effects

Sub-optimal maritime surveillance effectiveness



Common Information Sharing Environment (CISE) for maritime surveillance

The CISE aims at creating a **political, cultural, legal and technical environment** to enable **information sharing** between existing and future surveillance systems and networks.

Interoperability between systems should be established in a **decentralized way** using modern technologies. It will give all concerned authorities access to the information needed for their missions at sea based on the '**need to know**' and '**responsibility to share**' principles.

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Political background



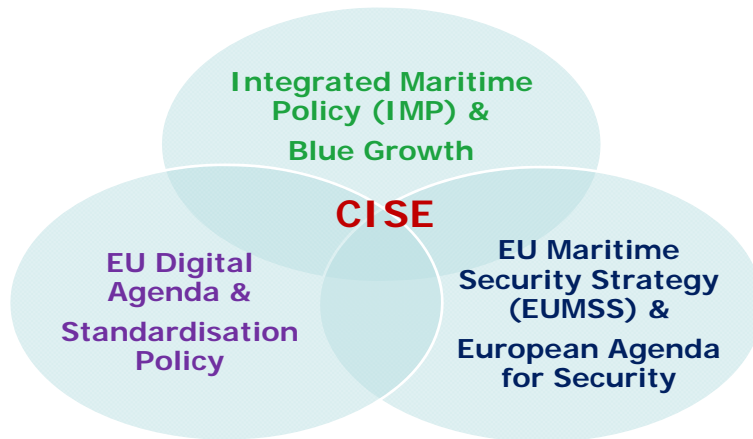
- Commission Communication on an Integrated Maritime Policy for the European Union and Action Plan, presented on 10 October 2007;
- Presidency Conclusions of the European Council on 14 December 2007;
- Council Conclusions on the Integrated Maritime policy on 8 December 2008;
- COM(2009) 538 final of 15.10.2009: Communication: 'Towards the integration of maritime surveillance';
- Council conclusions on integration of maritime surveillance Brussels, 17 November 2009;
- COM(2010) 854 final of 20.10.2010: Communication on a 'Draft Roadmap towards establishing the Common Environment for the surveillance of the EU maritime domain';
- Council conclusions on integration of Maritime Surveillance Towards the integration of maritime surveillance: A common information sharing environment for the EU maritime domain, Brussels, 23 May 2011
- the "Limassol Declaration" on 7 October 2012.
- Council conclusions on the Integrated Maritime Policy, Luxembourg, 24 June 2013
- COM(2014) 451 final of 8 July 2014: "Better situational awareness by enhanced cooperation across maritime surveillance authorities: next steps within the Common Information Sharing Environment for the EU maritime domain".

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EU policy framework of CISE



CISE - Guiding principles

1. CISE must allow interlinking any public authority in the EU and in the EEA involved in maritime surveillance.
2. CISE must increase maritime awareness based on need-to-know and responsibility-to-share principles.
3. CISE must privilege a decentralised approach at EU-level.
4. CISE must allow interoperability among civilian and military information systems.
5. CISE must allow interoperability among information systems at the European, national, sectorial and regional level.
6. CISE must privilege reuse of existing tools and technologies.
7. CISE must allow seamless and secure exchanges of any type of information relevant for maritime surveillance.
8. CISE must be sector neutral.
9. CISE must make it possible for information providers to change their service offering.



CISE is a major EU endeavour

to make maritime sectors cooperate

for more effectiveness and less costs



CISE requires strong political commitment

supported by sound technical foundations

and strategic vision





CISE does not imply a change of responsibility

CISE will not create new IT systems

*CISE will not replace or duplicate
existing initiatives*

*CISE will help existing systems to
support their users more effectively
through better information*



To have more data is important

*To have them at the very moment they are needed is
crucial*

*Mechanism should be established in such a way
that computers could automatically exchange
most of the data needed by the users*

*Human intervention should be kept to a
minimum, assuring overall supervision
for the information exchange rules*





The key word is interoperability

The following terminology framework will deal only with the four levels of interoperability:



Semantic Interoperability



Computers, like human beings, do not understand each other if they speak different languages.



Technical Interoperability



Computers do not understand each other if they use different communication means.



Second step: common communication means

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Implementation



What is needed to implement CISE?

- *The Common Data Model to speak the same language*
- *The Services to exchange the data*
- *The Technical Interoperability (Gateway / Protocol) to transport the data from one point to another*
- *The Security of the Network to protect the data during its travels*

What will CISE be made of?



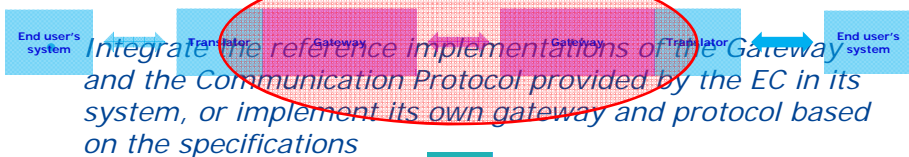
- some **hardware** (for interfacing to the network)
- quite a bit of **software**
- but mostly, specifications and rules:
 - **Data Models** - *the structure and the meaning of the data exchanged*
 - **Services** – *the way used by requester to ask the data and by the provider to deliver them*
 - **Gateway / Communication Protocol** – *the manner with which the different participants access the network*
 - **Security** – *the key rules to ensure that the data exchanged through CISE will not be compromised*

What are the roles in the implementation of CISE?



Each authority/agency that participates in CISE will:

- *Identify what additional data it needs to receive through CISE and build a translator to convert from the CISE data model to the one used in its system*
- *Identify what it is able and willing to share through CISE and build a translator to convert from its own system internal Data Model to the CISE Data Model*
- *Implement the Services that CISE is willing to make available to other CISE participants*



What are the impacts on Existing systems

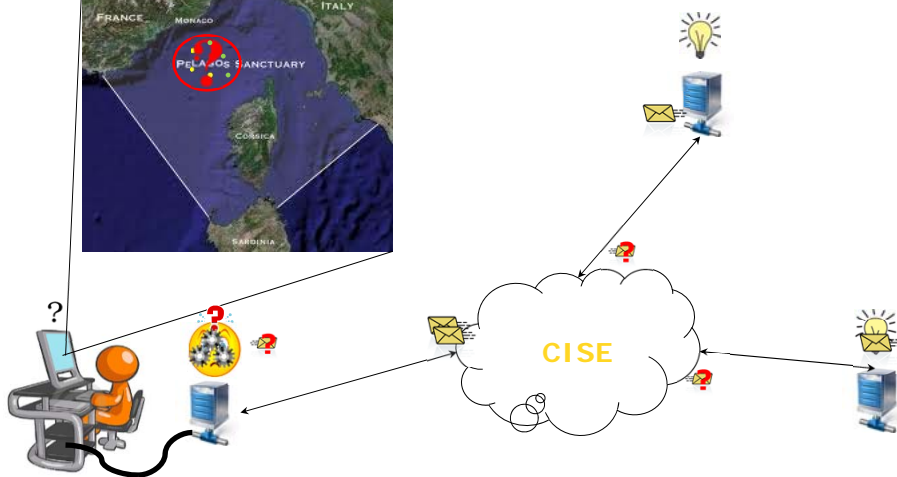


Existing systems will require minimal adaptation:

only as far as is needed by the system's owner to reap the benefits of the increased data exchange, and

only for the data that is to be shared.

What happens when a user needs additional data

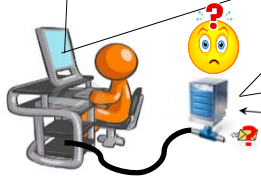
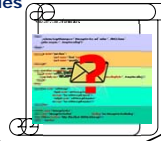


Note: Envelopes represent network messages, not traditional mails

What happens in the requesting computer



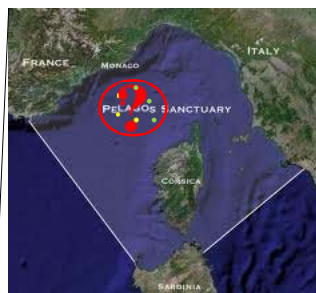
Search the request
Retrieve the rules of
the service and the
address of the
providing authorities
according to the
CISE rules



CISE

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What happens in the providing computers



Recharge the data to
be sent to the
requesting authority
of the data in
accordance with
CISE rules

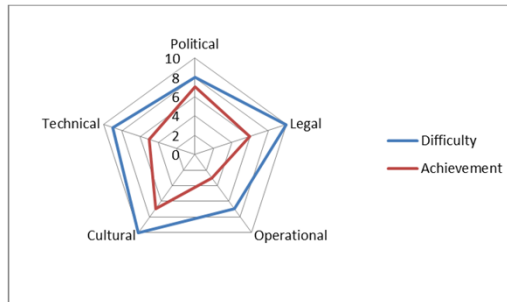


CISE



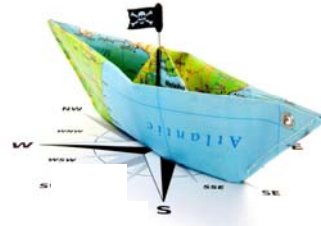
CISE is a multi-dimensional endeavour:

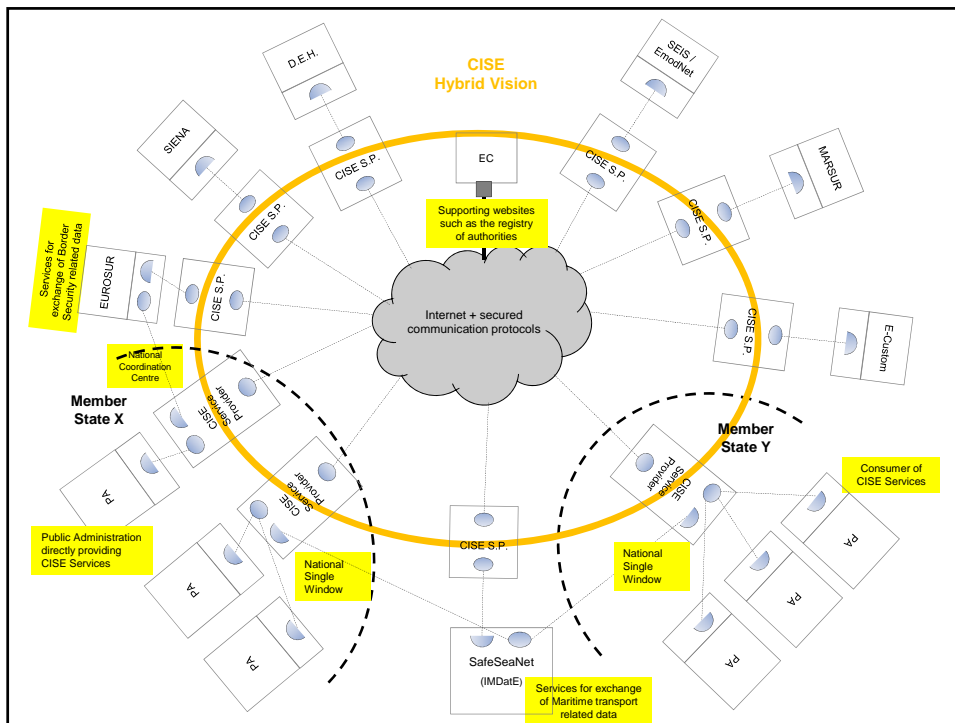
- Political
- Legal
- Operational
- Cultural
- Technical



Key takeaways

- ✓ *CISE is a set of specifications for interoperability*
Once Member States implement them, information will be easier to share.
- ✓ *CISE will not impose any organisational constraints*
Member States are free to choose their service providers and consumers.
- ✓ *CISE will be based on the work of the EUCISE 2020 project*
These specifications will be also based on the work of the EUCISE 2020Project.





Thank You
 For more information:

<https://webgate.ec.europa.eu/maritimeforum/en/cise>

