Maritime

CISE

Common Information
Sharing Environment

European Commission

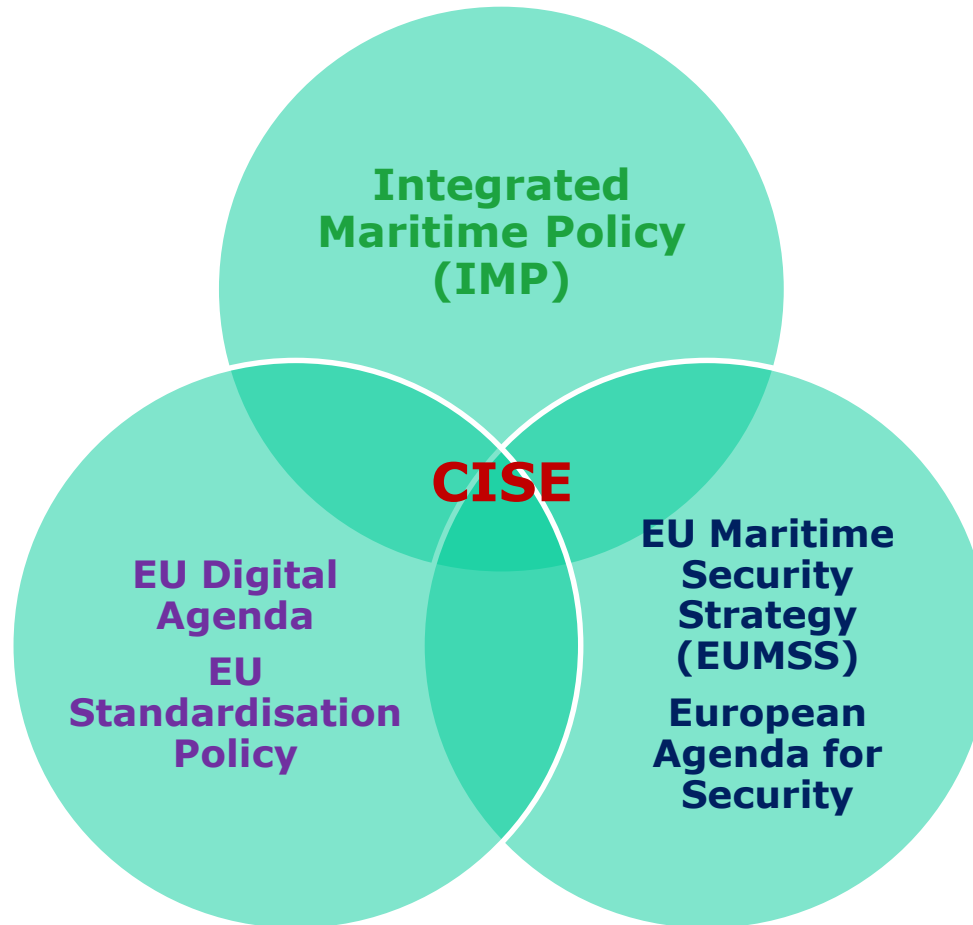# The link to the Digital Agenda for Europe

April 2015
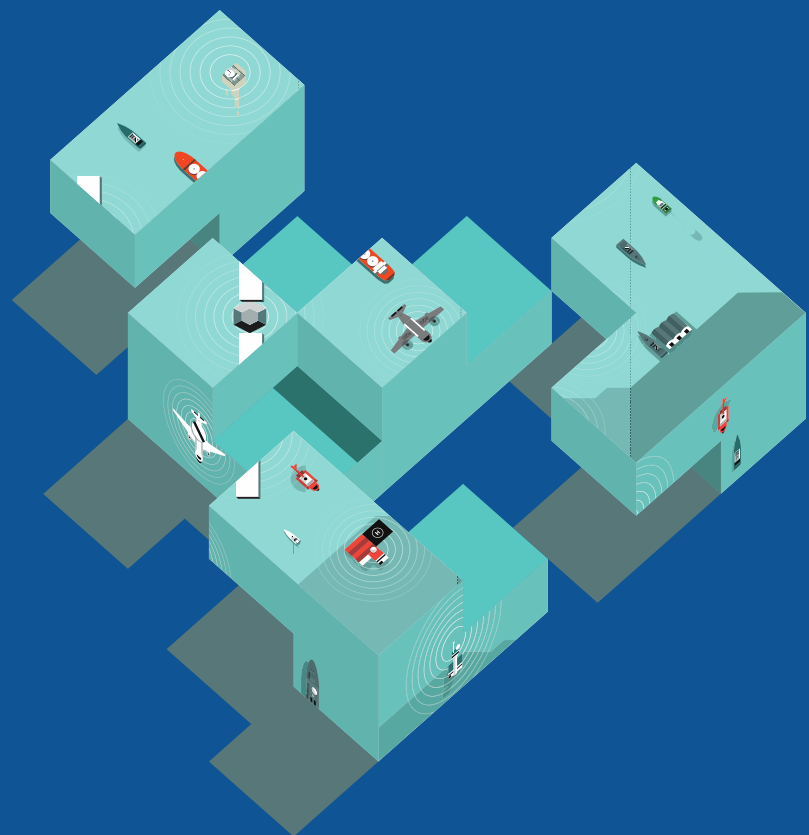
PURPOSE

Bring attention to **CISE project from the Digital Agenda perspective**

WHY?

CISE builds-up on the European Digital Agenda high-level ICT interoperability ambitions

CISE policy framework

Integrated Maritime Policy (IMP)

CISE

EU Digital Agenda

EU Standardisation Policy

EU Maritime Security Strategy (EUMSS)

European Agenda for Security

European Digital Agenda

- **main pillar of the Europe 2020 Strategy**

- **exploits the potential of ICTs in order to foster innovation, economic growth and progress**

http://ec.europa.eu/digital-agenda/en/

European Digital Agenda – main pillars -

- *Pillar I - **Achieving the Digital Single Market***
- *Pillar II **- Enhancing interoperability and standards***
- *Pillar III - **Strengthening online trust and security***
- *Pillar IV - Digital literacy, skills and inclusion*
- *Pillar V - **Investing in research and innovation***
- *Pillar VI - Ultra fast Internet access for all*
- *Pillar VII – **ICT-enabled benefits for EU society***

http://ec.europa.eu/digital-agenda/en/

Digital Agenda instruments

ISA programme – development of **I**nteroperability **s**olutions for European Public **A**dministrations.

CEF (Connecting Europe Facility) programme
Implementation of Digital Service Infrastructures (DSIs) + reusability.

The European Interoperability Framework - delivery of European public services by fostering cross-border and cross-sectoral interoperability.
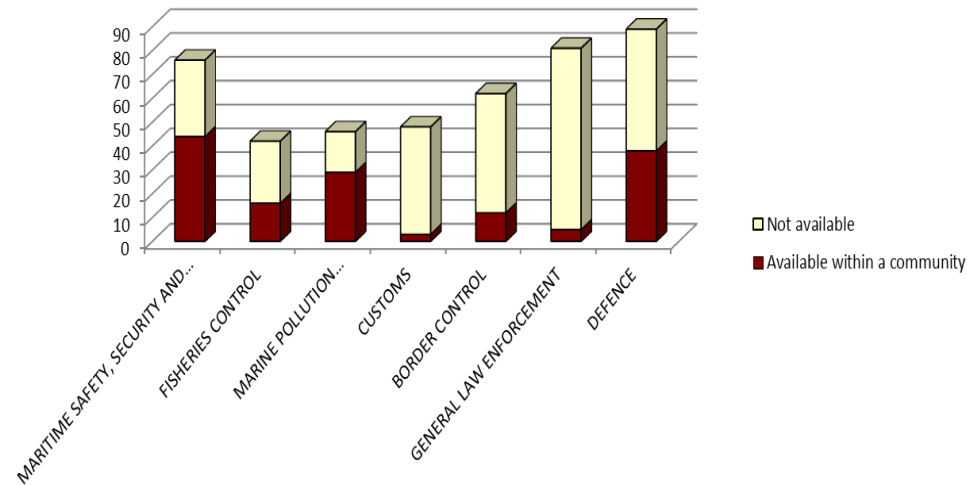
e-Government Action Plan 2011-2015 - *key policy instrument (COM(2010)743)*

Challenges to maritime data INTEROPERABILITY across sectors and borders

Information fragmentations

Sector specific data

Different security policies

Implications:

- **Data silos & limited cooperation**

- **Under-efficiency and under-effectiveness**

- **Financial burden**

CISE will allow for interoperability amongst EU and national systems

(*) systems established by EU legislation

Eurosur*

SSN*

NSW*

CSN*

SEIS*

EMODnet

Others …

CISE

EU common maritime data model

E-Customs*

IMDate

Marsur

CECIS*

Flux*

SIENA*

Challenges:
-   Create a single model that allows for exchange of data across all sectors
-   Standardise CISE data model ➡ EU maritime data model
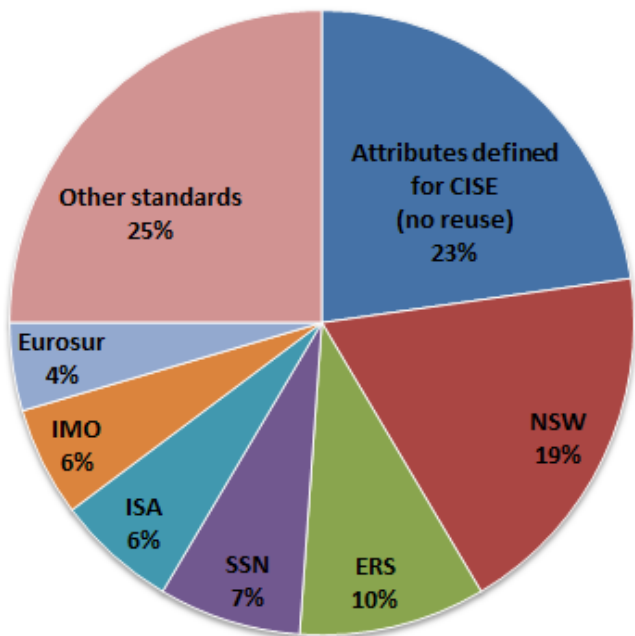
CISE link to Digital Agenda

CISE - interoperability framework enabling cross-sectoral data exchange and cooperation amongst about **400 public administrations (NOT a SYSTEM)**

- set of agreed specifications and solutions to enable semantic, technical, organisational and legal interoperability - **standardisation**
- set of supporting tools (architecture, registries, gateways)

An EU maritime data model built on existing specifications

Reuse of existing standards

Pie chart: Attributes defined for CISE (no reuse) 23%, NSW 19%, ERS 10%, SSN 7%, ISA 6%, IMO 6%, Eurosur 4%, Other standards 25%

- Examples of reused standards of existing systems: National Single Window (port formalities), EUROSUR, SafeSeaNet, Flux, e-Customs, Marsur, ERS, IMO (FAL, GISIS, ISPS, IMDG), UNECE recommendation 20 and 21, IVEF, OASIS CAP, ISO standards (28005, 8601, 3166-1, 15836…), ISA Core Vocabularies, TSO, W3C Ontology, ANSI (NISOZ3985), IETF, …

- Additional translation mechanisms to enable compatibility between systems

- Advantage: **ensure a high level of interoperability**

CISE Interoperability Agreement

Architectural Building Blocks

Hybrid Vision

Governance model	Authorities at sea basin level	
	Single authority at Member State level (manages the service Catalogue)	
	Authorities at User Community level	
Service delivery model	EU led initiatives	
	Multiple authorities at Member State level	
	Single authority at Member State level	
	Single authority at Member State level and Sea Basin level	
Integrated maritime awareness pictures model	Public authorities	
	User Communities	
	Member States	
	Member States and Sea Basins	
Specifications	Data classification levels & Access profiles	
	Information exchange model	
	Catalogue of datasets and information services	
Specifications	Messaging protocol	
	Correlation and fusion rules	
	Service discovery specification	
Reference implement.	Gateway (for data exchange)	
	Node (includes the gateway)	
	Service discovery coordinator	
Services	Catalogue of CISE (technical) services	

Organisational — Semantic — Technical

Legend:
- EU-wide CISE interoperability agreement
- Voluntary action
- Member State Decision
- EU-wide CISE interoperability agreement (voluntary to use)

CISE supporting the Digital Agenda

Pillar I- **Contribution to the DSM Strategy**

- Seamless and secured flow of information across borders
- Sustainable industry opportunities

Pillar II – **Interoperability and standards**

- Interlink legacy systems through an enhanced interoperability framework in the maritime domain
- Set of EU maritime standards and common specifications – technological and operational interoperability

Pillar III - **Strengthening online trust and security:**

- strengthening the security and classification aspects of data exchange in the maritime domain.

CISE supporting the Digital Agenda

Pillar V – **Research and innovation**

• Foster investment in ICT research and innovation for interoperable ideas and technologies for maritime surveillance

Pillar VII – **ICT-enabled benefits for EU society**

• Optimum use of information to enhance the safety, security and environment protection of the EU maritime domain

• enabling enhanced cross-sectoral and cross-border cooperation and sound policy making in the EU maritime domain

Concrete actions under the Digital Agenda

ISA Programme

- Landscaping of existing IT systems (2011)
- Definition of common semantic specifications (2013)
- Further consolidation of CISE building blocks (2014/2015)

CEF programme

- Reuse e-SENS building blocks to facilitate solutions for EUCISE 2020

CISE Communication (2014)451 of 8th July 2014

"A technical reference architecture for CISE should be defined by 2017 …within the framework of the Digital Agenda for Europe".

Possible concrete actions under the Digital Agenda (future)

- ISA to support the migration of the EUCISE 2020 solution towards a full-fledged EU interoperability solution (additional research, development and testing)

- ISA (CEF) to enable that specifications set up by EUCISE 2020, including the CISE data model, be developed on the basis of existing sectorial standards

- Publication of the CISE standards on the European Federated Interoperability Repository

- CEF to facilitate the final CISE solution to become a DSI (CISE complies with DSIs criteria)

Conclusions CISE – Digital Agenda

- Promotes ICT **interoperability** across all spectrum of information and systems in the EU maritime domain

- Proposes a set of ICT **agreed specifications/ standards** building-up on **existing ICT solutions and achievements**

- Constructs **reusable building blocks**

- Enable cross-sectoral data exchange and cooperation amongst about **400 public authorities**

- **CISE interoperability framework is not a system!**

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