

CISE - DEVELOPMENT OF THE INFORMATION SHARING ENVIRONMENT FOR THE SURVEILLANCE OF THE EU MARITIME DOMAIN (2016.13) – FUNDING SUSPENDED

IDENTIFICATION OF THE ACTION

Type of Activity	Reusable generic tools
Service in charge	DG MARE D1
Associated Services	JRC/IPSC G4 – DIGIT B4 – DG MOVE D1 & D2 & D4 – DG HOME B4 & C1 – DG CNECT H4 – DG TAXUD A1, A3 & A5 – GROW F3 & H3 – ECHO B1 – ENV D2 – JUST B3

EXECUTIVE SUMMARY

The development of a Common Information Sharing Environment for the EU maritime domain was launched in 2009 (Commission Communication (2009)538 final) and is supported by several Council Conclusions¹.

The last Commission Communication provides for CISE² to be a "*voluntary collaborative process in the European Union seeking to further enhance and promote relevant information sharing between authorities involved in maritime surveillance. Its ultimate aim is to increase the efficiency, quality, responsiveness and coordination of surveillance operations in the EU maritime domain and to promote innovation, for the prosperity and security of the EU and its citizens*".

The cornerstone of maritime CISE is that, through an improved interoperability, information collected by a maritime authority for a specific purpose can prove to be useful to other maritime authorities performing different missions³. The gap analysis carried out in 2012 has shown that only 30% of the data currently collected and relevant to other authorities is actually shared with those authorities.

The ISA2 programme is expected to support a set of actions undertaken by the Commission to support and exploit the results of the current pre-operational phase, as well as the actions needed to reach relevant operational solutions. These actions could inter alia cover the following areas:

- Identify relevant IT interoperability endeavours/solutions for information sharing in third countries/ maritime regions to assess potential improvements of CISE solutions
- Explore CISE IT and operational governance solutions, taking into account current solutions and lessons learnt from existing EU information-exchange solutions (e.g. IMI, EESI, EURES, CCN/CSI).
- Whenever needed and depending on the shortcomings/gaps identified during the testing phase, further develop the CISE data model, service model, gateway, registry of authorities and services to deliver fully functional solutions/ building blocks matching CISE high-level requirements
- Assess the contribution of CISE to the EU standardisation process⁴ in order to facilitate the definition of a technical reference architecture for public services by end 2017⁵ (in line with the European Interoperability Reference Architecture)

¹ http://ec.europa.eu/maritimeaffairs/pdf/external_relations_council_conclusions_17112009_en.pdf
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/genaff/122177.pdf
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/genaff/115166.pdf
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/gena/104617.pdf

² Commission Communication of 8th July 2014, COM (2014)451 final.

³ Maritime surveillance encompass seven sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence.

⁴ ICT standardisation Regulation (EU) No 1025/2012

⁵ Commission Communication of 8th July 2014, COM (2014)451 final

- Promote the CISE final interoperability solutions among national authorities and support the conclusion of agreements on data sharing.
- Promote the adoption, reuse and continuous improvement of existing and future reusable building blocks and solutions such as the CEF DSIs and results of existing ISA actions and future ISA² actions.

OBJECTIVES

The overarching objective of CISE is to enhance awareness of what is happening at sea and thus ensure safer, more secure and cleaner seas. In line with the ISA objectives, this requires to set up and implement a multilayer interoperability enabling trusted cross-sector and cross border data exchange between national public administrations. The ISA² programme is expected to bring into maturity and further develop CISE towards a set of operational and full-fledged interoperability solutions by end 2020.

SCOPE

Over 300 national authorities belonging to the seven functions (see note n°3) are covered by CISE, either as data providers and end-users (i.e. data consumers). The project entails the establishment of common specifications and generic reusable tools to achieve interoperability between systems and authorities.

The project does not aim to build up a new maritime surveillance system, to create new information sources or to set up new man-to-machine interfaces.

ACTION PRIORITY

Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
<p><i>Does the proposal directly contribute to implementing the European Interoperability Strategy, the European Interoperability Framework, or other EU policies with interoperability requirements, or needed cross-border or cross-sector interoperability initiatives? If yes, please indicate the EU initiative / policy and the nature of contribution.</i></p>	<p>Yes, the action contributes to the following EU policies:</p> <p>1. Integrated Maritime Policy. The Common Information Sharing Environment for the EU maritime domain (CISE) has been supporting the development of the Integrated Maritime Policy (IMP) since its inception by being the flagship initiative of the Integrated Maritime Surveillance pillar.</p> <p>Promoting interoperability across sectors and borders, CISE contributes to maintaining safe, secure and clean seas, the fundamentals of Blue Growth. CISE is in particular linked to the Blue Growth cross-sectoral policies instruments such as marine data and knowledge, maritime</p>

	<p>spatial planning and maritime security.</p> <p>2. Maritime sectorial policies. The seven user communities to be interconnected through an enhanced interoperability (CISE): maritime transport safety and security, marine environment preparedness and response to pollution, fisheries control, border control, general law enforcement, customs and defence. Cross-border and cross-sectoral data exchange generates knowledge and enables sound decision making and better implementation of EU legislation in the above policy areas.</p> <p>3. Security related policies. Through enabling enhanced information exchange for the surveillance of the maritime domain through an improved interoperability amongst systems and authorities, CISE supports an important number of security-related policies developed at the EU level such as EU Maritime Security Strategy, European Agenda for Security, European Migration Policy, Common Security and Defence Policy (CSDP).</p> <p>4. Digital Agenda for Europe. CISE is directly relevant to the Digital Agenda, especially as it develops in line and contributes to following pillars:</p> <p>I. Digital Single Market (DSM), CISE contributes to the objectives of the DSM, in particular to the development of digital networks and services, and the enhancement of industrial competitiveness through promoting solutions which match the pace of technology and support improvement of data exchange.</p> <p>II. Enhancing interoperability and standards: CISE is developing technical, semantic and organisational interoperability EU solutions aiming to improve the cross-border and cross-sectoral interlink between national maritime authorities, based on common specifications and standards;</p> <p>V. Research and innovation: CISE fosters investment in R&D technologies for maritime surveillance and security</p>
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	<p>VII. ICT-enabled benefits for EU society: CISE will allow for the optimization of data exploitation to support maritime surveillance, ultimately leading to safer, more secure and better environmental protection of the maritime domain.</p> <p>5. ISA2 actions. CISE is hence developing in strong connection with a number of ISA2 actions such as the Semantic interoperability, European interoperability architecture, Trusted Exchange Platform, etc.</p> <p>7. The Connecting Europe Facility (CEF). The CEF building blocks are a set of highly reusable tools and services that have been mainly developed and piloted by the Member States in different large scale pilots. As CISE is approaching its implementation phase, the linkage with the CEF is being fully explored. Particularly, CISE pre-operational validation project ('EUCISE 2020') is assessing the possible reuse of CEF building blocks.</p> <p>8. European eGovernment Action Plan. CISE is in line with the objectives of the eGaverment Action plan aiming to help national and European policy instruments to work together, supporting the transition of eGovernment into a new generation of open, flexible and collaborative seamless services at local, regional, national and European level.</p> <p>9. EU Standardisation WP. CISE is part of the EU work programme for standardisation and closely follows the developments within the industrial standardisation domain, since the development of interoperability solutions may only benefit from the standardisation of certain components. In addition, CISE is in the process of being included in the 2017 Rolling Plan for ICT Standardisation.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative solution is available?</i></p>	<p>Alternative solutions have been developed at the EU level trough systems such as SafeSeeNet and EUROSUR. They enable a good level of interoperability through a number of services developed and exchanged among concerned authorities. However, they do not cover the entire spectrum of sectors</p>

	and authorities. These interoperability solutions remain too sector specific and cannot be reuse for cross sector exchange. Nevertheless CISE interoperability solution took into account all the existing standards in the maritime domain to ensure a maximum compatibility with the existing systems.
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Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the sectors concerned

Question	Answer
<i>Will the proposal, once completed be useful, from the interoperability point of view, and utilised in two (2) or more EU policy areas? If yes, which are those?</i>	CISE should ultimately improve interoperability between the systems of 7 different sectors in each MS, in which specific sectorial solutions have already been put in place to exchange information. Civil-military exchanges are prioritised. The action is therefore developing interoperability solutions which can be used across sectors. This will not affect exchanges within sectors which will continue to use their specific sectoral solutions/ systems
<i>For proposals or their parts already in operational phase: have they been utilised in two (2) or more EU policy areas? Which are they?</i>	n/a

Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
<i>Will the proposal, once completed be useful, from the interoperability point of view, and used by public administrations of three (3) or more EU Members States?</i>	Once completed the action will provide tailored solutions which could support an enhanced flow of information between member states, with a specific focus on civilian –military exchanges (hence supporting maritime security). In that context the inclusion of

	<p>existing trans-European systems between public administrations is seen as an opportunity and a necessary basis for CISE structured development.</p> <p>The level of commitment has been tested in several projects and in particular in the ongoing EUCISE 2020 POV project which involves authorities' representatives from around 15 MS. The commitment of MS will be further enhanced through dedicated implementation projects and future work for developing CISE</p>
<p><i>For proposals or their parts already in operational phase: have they been utilised by public administrations of three (3) or more EU Members States?</i></p>	n/a

Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>There is a relative urgency in the implementation of the action as the Maritime CISE should become operational by 2020⁶</p> <p>The –EU Maritime Security Strategy (EUMSS) adopted by the European Council in June 2014, and its Action Plan , adopted by the Council in December 2014, reinforce the recommendation to implement the CISE as a meta-project by 2020⁷.</p>
<p><i>Does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?</i></p>	<p>In the EUMSS Action Plan, one of the actions is to “Develop measures to ensure the interoperability between sectoral information exchange systems at national and EU level (based upon the principles of collaboration and cooperation and by establishing protocols, authorizations and protections), in line with the European Interoperability Reference Architecture developed under the ISA programme of the Digital Agenda of Europe.”</p> <p>ISA² scope and financial capacity fits therefore perfectly the purpose of CISE to improve interoperability cross</p>

⁶ Commission Communication of 8th July 2014, COM (2014)451 final

⁷ European Union Maritime Security Strategy (EUMSS) - Action Plan, 17002/14, 16 December 2014

	sector and cross border. Nevertheless, CISE development and implementation is also financed through the European Maritime and Fishery Fund.
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Reusability of action outputs

The re-usability of the action, measured by the extent to which its results can be re-used

Name of reusable solution	Data model
Description	The CISE data model provides a common European cross-sector format to share data across countries and sectors. It represents the most useful data for all maritime surveillance authorities, as identified and validated by a representative group of national experts representing all relevant maritime surveillance sectors at EU and national level (Cooperation project, 2013).
Reference	
Target release date / Status	An initial version has been released in 2015 . This version will be now tested, fine-tuned an enriched by the CISE pre-operational validation project by end 2017. Release of version 2: 2018.
Critical part of target user base	The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node. The minimum number of participants to allow for significant results at the EU level should be 20. The CISE pre-operational validation project involves 16 Member States. The data model will be tested by authorities from 15 MS in a first step.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution	Service model
Description	The CISE service model defines the specifications of the services offered by an information provider, including the behaviour of the service and the input and output data expected by/from the service to ensure the expected behaviour

	For each data entity defined the CISE data model (i.e., each information type: Vessel, Cargo, Person, etc.), the CISE Service Model defines a service and specific operations that support the exchange of that specific data entity using the four known communication patterns.
Reference	
Target release date / Status	An initial version has been released in 2014. This version will be tested, fine-tuned and enriched by the CISE pre-operational validation project by end 2017. Release of version 2: 2018.
Critical part of target user base	The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node. The minimum number of participants to allow for significant results at the EU level should be 20. The CISE pre-operational validation project involves 16 Member States. The service model will be tested by authorities from 15 MS in a first step.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution	Governance model
Description	The CISE governance model defines a framework to structure and describe the governance elements and relationships including candidate organisational structures, processes, roles and responsibilities for the governance and management of an operational CISE environment:
Reference	
Target release date / Status	Initial version released in 2014. This version will be tested, fine-tuned and enriched by the CISE pre-operational validation project by end 2017. Release of version 2: 2018.
Critical part of target user base	The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node. The minimum number of participants to allow for significant results at the EU level should be 20.

	The CISE pre-operational validation project involves 16 Member States. The governance model will be tested by authorities from 15 MS in a first step.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution	Security model
Description	The CISE security model defines a framework for CISE security and describes the elements and concepts which apply at different layers of CISE security, ranging from security governance and management to service, data and infrastructure security.
Reference	
Target release date / Status	Initial version released in 2014 . This version will be tested, fine-tuned an enriched by the CISE pre-operational validation project by end 2017. Release of version 2: 2018.
Critical part of target user base	The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node. The minimum number of participants to allow for significant results at the EU level should be 20. The CISE pre-operational validation project involves 16 Member States. The governance model will be tested by authorities from 15 MS in a first step.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	Registry of authorities and services
Description	This registry is a software tool that will provide information about the authorities, their systems and the information they make available within CISE. Once fully implemented, the registry will support the governance, development and the operating phases of CISE fulfilling the operational (e.g., search for information, operational contacts, automatic service discovery) and the technical needs of the participants (e.g., technical IT support

	contacts).
Reference	
Target release date / Status	<p>First specifications available end 2015</p> <p>First implementation by the CISE pre-operational validation project by end 2017.</p> <p>Release of version 2 of the registry software: 2018</p> <p>Release of version 3 of the registry software: before 2020</p>
Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The registry will be tested by authorities from 15 MS in a first step.</p>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution	CISE gateways
Description	Interface among legacy systems enabling the exchange of information between participant, using the data and service model. The Gateway is also connected to the Registry to allow automatic discovery of services.
Reference	
Target release date / Status	<p>First specifications available: end 2015</p> <p>Development of version 1 and testing by the CISE pre-operational validation project by end 2017</p> <p>Release of version 2: 2018</p> <p>Release of version 3: before 2020</p>
Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The gateway will be tested by authorities from 15 MS in a first step.</p>

For solutions already in operational phase - actual reuse level (as compared to the defined critical part)

Level of reuse by the proposal

Question	Answer
Does the proposal intend to make use of any ISA ² , ISA or other relevant interoperability solution(s)? Which ones?	CISE programme in general and the CISE pre-operational validation project ('EUCISE 2020') in particular, consider the possible reuse of the solutions developed by CEF and the e-SENS building blocks: e-Delivery, e-Signature, e-ID, e-Document, etc In addition, the process of developing and implementing CISE will require further investigations to find suitable re-usable components (e.g. assessing solutions in the Joinup Catalogue of interoperability solutions)
For proposals or their parts already in operational phase: has the action reused existing interoperability solutions? If yes, which ones?	n/a

Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	<ol style="list-style-type: none"> 1. Integrated Maritime Policy. 2. Communication on "A Digital Single Market Strategy for Europe" COM(2015)192 (DSM) 3. European eGovernment Action Plan 2016-2020 4. ICT standardisation Regulation (EU) No 1025/2012 <p>The level of contribution is described at points 1.1.5.1.</p>

PROBLEM STATEMENT

Due to the organisational complexity and the diversity of legacy systems at national level and across the EU, the automatic exchange of data among national authorities remains limited in the field of maritime surveillance. Today, only a fraction of data is or can be exchanged, mostly in the same sector and seldom cross-border. The development of common semantic, technical and organisational interoperability specifications/solutions allowing seamless data exchange among legacy systems is a key-enabler to enhance cross-border and cross-sector data sharing.

EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

Beneficiaries	Anticipated benefits
EU institutions and agencies	<p>Enrichment of available data enabling a better implementation and enforcement of EU legislation in the fields of maritime safety and security, border control and fisheries control, customs and environment.</p> <p>Development and implementation of EU re-usable interoperability solutions enabling seamless data flows across sectors and borders.</p> <p>Improved interoperability between maritime authorities and systems will also allow an increased interaction and cooperation between administrations, citizens and businesses across Europe.</p>
National authorities in the EU/EEA with a remit at sea	<p>Enhanced interoperability in this domain which will enable better cross-border and cross-sectorial interaction among national authorities as well as an improved civil-military cooperation. (Ref. Impact Assessment SWD(2014)225 final)</p> <p>Enhanced maritime situational awareness enabling more effective and efficient surveillance, thus improving the overall safety, security and environmental protection of the EU maritime domain.</p> <p>Reduction of data collection cost and better use of surveillance assets (radars, satellites, patrol vessels, aircrafts) allowing savings and/or the reallocation of resources.</p>
Citizens in the EU/EEA	<p>Safer, more secure and environmentally protected seas enabling the EU/EEA citizens to take full advantage of the social, economic and leisure potential of the seas.</p>
European industry	<p>The development of common interoperability specifications and standards opens up new markets opportunities in the field of legacy systems interconnection as well as in the provision of digital information services to support maritime surveillance (e.g. weather and oceanic data, data mining tools, etc.).</p> <p>Improved interoperability between maritime authorities and systems will also allow an increased interaction and beneficial cooperation at industry level.</p> <p>Stimulate the research for the development of innovative technologies / solutions to increase interoperability and cover operational needs (e.g. for environment of federation of systems, cross-border and classified environment, collaboration activities, etc.)</p> <p>Development and implementation of improved information/ business models or web-</p>

	<p>services in this field.</p> <p>Solutions for interchangeability of different data formats, for standard compatibility, for data stream correlation, for user definable, customizable and transferable workspace, with intuitive use.</p>
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EXPECTED MAJOR OUTPUTS

Output name	CISE Handbook
Description	<p>The CISE handbook delivers concrete guidance to national authorities on how to participate in Maritime CISE in order to exchange data in a secure and reliable way.</p> <p>It will be drafted and continuously reviewed by a dedicated expert group using transparent collaborative tools. The site will be open to public (not the collaborative editing).</p>
Reference	https://ec.europa.eu/cise (not active yet)
Target release date / Status	<p>A first draft version of the website is planned to be ready end of 2016 ,</p> <p>The Handbook will be further drafted and updated with the results of the different actions related to CISE.</p>

ORGANISATIONAL APPROACH

Expected stakeholders and their representatives

Stakeholders	Representatives
EU level: Commission DGs and Agencies	DG MARE, JRC, MOVE, HOME, TAXUD, ENV, DIGIT, ECHO, JUST EMSA, FRONTEX, CFCA, EUROPOL, EEA, MAOC, EDA, EUSC
Member States	<p>National authorities carrying out maritime surveillance tasks in the seven sectors identified above. The number of national authorities to be involved in CISE amounts to over 300.</p> <p>National authorities are represented at EU level in the steering and management of the CISE development in two ways:</p> <ul style="list-style-type: none"> - The technical advisory group (TAG) involves technical and operational experts representing the seven maritime surveillance sectors, together with EU agencies representatives - The Member States experts sub-group on the integration of maritime surveillance (MSEsG) is composed of one representative per Member-States speaking on behalf of all national maritime authorities of the said state.
Industry	Industrial developers in the area of maritime surveillance

Identified user groups

The stakeholders presented above will also be the possible users of the results of this action.

Communication plan

The communication plan on CISE is threefold:

- Internal communication within COM and EU agencies

The inter-service Group on Integrated Maritime Surveillance involves all European Commission services concerned by integrated maritime surveillance. It meets on average 3 times per year.

- Communication with MS

Communication with MS is based on three different groups:

- The Friends of Presidency group in the Council with foreign affairs attachés (4 meetings/year)
- The Member States experts sub-group on the integration of maritime surveillance (MSEsG) with representatives from national maritime administrations(3 meetings/year)
- The technical advisory group (TAG) with technical and operational experts from national authorities and EU agencies (3 meetings/year)

- Communication with the general public

A set of communication tools was developed in 2014. General communication on CISE is made during events/seminars on maritime issues, including the European maritime day held each year.

Governance approach

Management of the action will be done jointly by DG MARE D1 and the Joint Research Centre, under the provisions of the Administrative Arrangement (AA) n°SI2.691869 from 3rd December 2014 between the two Commission services or any amendment/extension thereof. Six persons (3 from DG MARE and 3 from the JRC) will be responsible for the implementation of the action.

Additionally, DG MARE is assisted in developing this action by DG DIGIT under the provisions of the Memorandum of Understanding (MoU), n° DIGIT - 00364-00, from 16 August 2012 and its amendments.

There are already established bodies/groups ensuring stakeholders' involvement and coordination at all levels:

(a) the seven user communities, including the EU Agencies, participate to the Technical Advisory Group (TAG) bringing in the necessary expertise from their sectoral policy and related actions,

(b) an Interservice group consisting of representatives of all associated DGs ensures coordination at Commission level

and

(c) the Member States Experts sub-group (MSEsG) which is the principal actor for the implementation of the CISE Roadmap will be kept updated regularly on the development of the project.

TECHNICAL APPROACH AND CURRENT STATUS

Actions carried out previously since the launch of CISE in 2009 until 2014 have focused on the following primary preparatory areas:

- Landscaping of existing governmental information-exchange systems in the maritime field
- Analysis of data gaps and needs
- Definition of CISE high-level requirements and architectural options
- Development of CISE data and service model

CISE has entered in 2015 a pre-operational testing phase of its interoperability solutions which will be carried out by the FP7 funded and MS-led project 'EUCISE 2020' until end 2017. This project is closely supported by the COM. This testing phase will pave the way towards the establishment of full-fledged interoperability solutions by end 2020.

The ISA² programme is expected to support a set of actions undertaken by the COM to support and exploit the results of this pre-operational phase, as well as the actions needed to reach relevant operational solutions. These actions could inter alia cover the following areas:

- Identify relevant IT interoperability endeavours/solutions for information sharing in third countries/ maritime regions to assess potential improvements of CISE solutions
- Explore CISE IT and operational governance solutions, taking into account current solutions and lessons learnt from existing EU information-exchange solutions (e.g. IMI, EESI, EURES, CCN/CSI).
- Whenever needed and depending on the shortcomings/gaps identified during the testing phase, further develop the CISE data model, service model, gateway, registry of authorities and services to deliver fully functional solutions/ building blocks matching CISE high-level requirements
- Assess the contribution of CISE to the EU standardisation process⁸ in order to facilitate the definition of a technical reference architecture for public services by end 2017⁹ (in line with the European Interoperability Reference Architecture)
- Promote the CISE final interoperability solutions among national authorities and support the conclusion of agreements on data sharing. Support the transition to the production phase, including the integration of the solution at Member States' level
- Promote the adoption, reuse and continuous improvement of existing and future reusable building blocks and solutions such as the CEF DSIs and results of existing ISA and future ISA² actions.

⁸ ICT standardisation Regulation (EU) No 1025/2012

⁹ Commission Communication of 8th July 2014, COM (2014)451 final

COSTS AND MILESTONES

Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Large scale pre-operational testing 'EUCISE 2020'	17 000	13 000 HOME- FP7 4 000 MS	Q4/2014	Q3/2017
Execution	Follow-up and technical support to 'EUCISE 2020', set up of the registry of authorities and services, web tool for the CISE handbook, secretariat of the TAG, maintenance of data and service model	2 340	MARE, delegated to JRC	Q4/2014	Q4/2017
Execution	Identify relevant IT interoperability endeavours/achievements enabling information sharing in third countries/ maritime regions to assess their potential to support CISE development.	200	ISA ²	Q4/2016	Q4/2017
Execution	Assess and promote CISE interoperability solutions (e.g. Data & Service Models) within the EU standardisation framework.	200	ISA ²	Q3/2017	Q4/2018
Execution	Explore and define models for CISE IT and operational governance	250	ISA ²	Q1/2018	Q4/2019
Execution	Support the transition from the Pre-operational to the operational phase of CISE	400	ISA ²	Q1/2018	Q4/2019

	interoperability building blocks/ solutions.				
Operational	Support implementation/ adoption of CISE (re-usable) building blocks/ solutions.	400	ISA ²	Q1/2019	Q4/2020
	Total	1450	ISA ²		

Breakdown of ISA funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	100	
2017	Execution	0	
2018	Execution	0	
2019	Execution	0	
2020	Execution	0	

ANNEX AND REFERENCES

Description	Reference link
EU Maritime Security Strategy and its Action Plan	http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1395676070971&uri=CELEX:52014JC0009 http://ec.europa.eu/maritimeaffairs/policy/maritime-security/doc/20141216-action-plan_en.pdf
Commission Communication: Next steps within the Common Information Sharing Environment for the EU maritime domain	http://ec.europa.eu/maritimeaffairs/policy/integrated_maritime_surveillance/documents/com_2014_451_en.pdf
Commission Staff working document Impact Assessment accompanying the Communication (above)	http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52014SC0225

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IDENTIFICATION OF THE ACTION

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Service in charge	DG MARE D1
Associated Services	JRC/IPSC G4 – DIGIT B4 – DG MOVE D1 & D2 & D4 – DG HOME B4 & C1 – DG CNECT H4 – DG TAXUD A1, A3 & A5 – GROW F3 & H3 – ECHO B1 – ENV D2 – JUST B3

EXECUTIVE SUMMARY

The development of a Common Information Sharing Environment for the EU maritime domain was launched in 2009 (Commission Communication (2009)538 final) and is supported by several Council Conclusions¹⁰.

The last Commission Communication provides for CISE¹¹ to be a "*voluntary collaborative process in the European Union seeking to further enhance and promote relevant information sharing between authorities involved in maritime surveillance. Its ultimate aim is to increase the efficiency, quality, responsiveness and coordination of surveillance operations in the EU maritime domain and to promote innovation, for the prosperity and security of the EU and its citizens*".

The cornerstone of maritime CISE is that, through an improved interoperability, information collected by a maritime authority for a specific purpose can prove to be useful to other maritime authorities performing different missions¹². The gap analysis carried out in 2012 has shown that only 30% of the data currently collected and relevant to other authorities is actually shared with those authorities.

The ISA2 programme is expected to support a set of actions undertaken by the Commission to support and exploit the results of the current pre-operational phase, as well as the actions needed to reach relevant operational solutions. These actions could inter alia cover the following areas:

- Identify relevant IT interoperability endeavours/solutions for information sharing in third countries/ maritime regions to assess potential improvements of CISE solutions
- Explore CISE IT and operational governance solutions, taking into account current solutions and lessons learnt from existing EU information-exchange solutions (e.g. IMI, EESI, EURES, CCN/CSI).
- Whenever needed and depending on the shortcomings/gaps identified during the testing phase, further develop the CISE data model, service model, gateway, registry of authorities and services to deliver fully functional solutions/ building blocks matching CISE high-level requirements
- Assess the contribution of CISE to the EU standardisation process¹³ in order to facilitate the definition of a technical reference architecture for public services by end 2017¹⁴ (in line with the European Interoperability Reference Architecture)

¹⁰ http://ec.europa.eu/maritimeaffairs/pdf/external_relations_council_conclusions_17112009_en.pdf
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/genaff/122177.pdf
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/genaff/115166.pdf
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/gena/104617.pdf

¹¹ Commission Communication of 8th July 2014, COM (2014)451 final.

¹² Maritime surveillance encompass seven sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence.

¹³ ICT standardisation Regulation (EU) No 1025/2012

- Promote the CISE final interoperability solutions among national authorities and support the conclusion of agreements on data sharing.
- Promote the adoption, reuse and continuous improvement of existing and future reusable building blocks and solutions such as the CEF DSIs and results of existing ISA actions and future ISA² actions.

OBJECTIVES

The overarching objective of CISE is to enhance awareness of what is happening at sea and thus ensure safer, more secure and cleaner seas. In line with the ISA objectives, this requires to set up and implement a multilayer interoperability enabling trusted cross-sector and cross border data exchange between national public administrations. The ISA² programme is expected to bring into maturity and further develop CISE towards a set of operational and full-fledged interoperability solutions by end 2020.

SCOPE

Over 300 national authorities belonging to the seven functions (see note n°3) are covered by CISE, either as data providers and end-users (i.e. data consumers). The project entails the establishment of common specifications and generic reusable tools to achieve interoperability between systems and authorities.

The project does not aim to build up a new maritime surveillance system, to create new information sources or to set up new man-to-machine interfaces.

ACTION PRIORITY

Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
<p><i>Does the proposal directly contribute to implementing the European Interoperability Strategy, the European Interoperability Framework, or other EU policies with interoperability requirements, or needed cross-border or cross-sector interoperability initiatives? If yes, please indicate the EU initiative / policy and the nature of contribution.</i></p>	<p>Yes, the action contributes to the following EU policies:</p> <p>1. Integrated Maritime Policy. The Common Information Sharing Environment for the EU maritime domain (CISE) has been supporting the development of the Integrated Maritime Policy (IMP) since its inception by being the flagship initiative of the Integrated Maritime Surveillance pillar.</p> <p>Promoting interoperability across sectors and borders, CISE contributes to maintaining safe, secure and clean seas, the fundamentals of Blue Growth. CISE is in particular linked to the Blue</p>

¹⁴ Commission Communication of 8th July 2014, COM (2014)451 final

	<p>Growth cross-sectoral policies instruments such as marine data and knowledge, maritime spatial planning and maritime security.</p> <p>2. Maritime sectorial policies. The seven user communities to be interconnected through an enhanced interoperability (CISE): maritime transport safety and security, marine environment preparedness and response to pollution, fisheries control, border control, general law enforcement, customs and defence. Cross-border and cross-sectoral data exchange generates knowledge and enables sound decision making and better implementation of EU legislation in the above policy areas.</p> <p>3. Security related policies. Through enabling enhanced information exchange for the surveillance of the maritime domain through an improved interoperability amongst systems and authorities, CISE supports an important number of security-related policies developed at the EU level such as EU Maritime Security Strategy, European Agenda for Security, European Migration Policy, Common Security and Defence Policy (CSDP).</p> <p>4. Digital Agenda for Europe. CISE is directly relevant to the Digital Agenda, especially as it develops in line and contributes to following pillars:</p> <ul style="list-style-type: none">I. Digital Single Market (DSM), CISE contributes to the objectives of the DSM, in particular to the development of digital networks and services, and the enhancement of industrial competitiveness through promoting solutions which match the pace of technology and support improvement of data exchange.II. Enhancing interoperability and standards: CISE is developing technical, semantic and organisational interoperability EU solutions aiming to improve the cross-border and cross-sectoral interlink between national maritime authorities, based on common specifications and standards;V. Research and innovation: CISE fosters
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	<p>investment in R&D technologies for maritime surveillance and security</p> <p>VII. ICT-enabled benefits for EU society: CISE will allow for the optimization of data exploitation to support maritime surveillance, ultimately leading to safer, more secure and better environmental protection of the maritime domain.</p> <p>5. ISA2 actions. CISE is hence developing in strong connection with a number of ISA2 actions such as the Semantic interoperability, European interoperability architecture, Trusted Exchange Platform, etc.</p> <p>7. The Connecting Europe Facility (CEF). The CEF building blocks are a set of highly reusable tools and services that have been mainly developed and piloted by the Member States in different large scale pilots. As CISE is approaching its implementation phase, the linkage with the CEF is being fully explored. Particularly, CISE pre-operational validation project ('EUCISE 2020') is assessing the possible reuse of CEF building blocks.</p> <p>8. European eGovernment Action Plan. CISE is in line with the objectives of the e Government Action plan aiming to help national and European policy instruments to work together, supporting the transition of eGovernment into a new generation of open, flexible and collaborative seamless services at local, regional, national and European level.</p> <p>9. EU Standardisation WP. CISE is part of the EU work programme for standardisation and closely follows the developments within the industrial standardisation domain, since the development of interoperability solutions may only benefit from the standardisation of certain components. In addition, CISE is in the process of being included in the 2017 Rolling Plan for ICT Standardisation.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative solution is available?</i></p>	<p>Alternative solutions have been developed at the EU level through systems such as SafeSeeNet and EUROSUR. They enable a good level of interoperability through a number of services developed and exchanged</p>

	among concerned authorities. However, they do not cover the entire spectrum of sectors and authorities. These interoperability solutions remain too sector specific and cannot be reuse for cross sector exchange. Nevertheless CISE interoperability solution took into account all the existing standards in the maritime domain to ensure a maximum compatibility with the existing systems.
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Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the sectors concerned

Question	Answer
<i>Will the proposal, once completed be useful, from the interoperability point of view, and utilised in two (2) or more EU policy areas? If yes, which are those?</i>	CISE should ultimately improve interoperability between the systems of 7 different sectors in each MS, in which specific sectorial solutions have already been put in place to exchange information. Civil-military exchanges are prioritised. The action is therefore developing interoperability solutions which can be used across sectors. This will not affect exchanges within sectors which will continue to use their specific sectoral solutions/ systems
<i>For proposals or their parts already in operational phase: have they been utilised in two (2) or more EU policy areas? Which are they?</i>	n/a

Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
<i>Will the proposal, once completed be useful, from the interoperability point of view, and used by public</i>	Once completed the action will provide tailored solutions which could support an

<p><i>administrations of three (3) or more EU Members States?</i></p>	<p>enhanced flow of information between member states, with a specific focus on civilian –military exchanges (hence supporting maritime security). In that context the inclusion of existing trans-European systems between public administrations is seen as an opportunity and a necessary basis for CISE structured development.</p> <p>The level of commitment has been tested in several projects and in particular in the ongoing EUCISE 2020 POV project which involves authorities' representatives from around 15 MS. The commitment of MS will be further enhanced through dedicated implementation projects and future work for developing CISE</p>
<p><i>For proposals or their parts already in operational phase: have they been utilised by public administrations of three (3) or more EU Members States?</i></p>	<p>n/a</p>

Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>There is a relative urgency in the implementation of the action as the Maritime CISE should become operational by 2020¹⁵</p> <p>The –EU Maritime Security Strategy (EUMSS) adopted by the European Council in June 2014, and its Action Plan, adopted by the Council in December 2014, reinforce the recommendation to implement the CISE as a meta-project by 2020¹⁶.</p>
<p><i>Does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?</i></p>	<p>In the EUMSS Action Plan, one of the actions is to “Develop measures to ensure the interoperability between sectoral</p>

¹⁵ Commission Communication of 8th July 2014, COM (2014)451 final

¹⁶ European Union Maritime Security Strategy (EUMSS) - Action Plan, 17002/14, 16 December 2014

	<p>information exchange systems at national and EU level (based upon the principles of collaboration and cooperation and by establishing protocols, authorizations and protections), in line with the European Interoperability Reference Architecture developed under the ISA programme of the Digital Agenda of Europe.”</p> <p>ISA² <i>scope and financial capacity</i> fits therefore perfectly the purpose of CISE to improve interoperability cross sector and cross border. Nevertheless, CISE development and implementation is also financed through the European Maritime and Fishery Fund.</p>
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Reusability of action outputs

The re-usability of the action, measured by the extent to which its results can be re-used

Name of reusable solution	Data model
Description	<p>The CISE data model provides a common European cross-sector format to share data across countries and sectors. It represents the most useful data for all maritime surveillance authorities, as identified and validated by a representative group of national experts representing all relevant maritime surveillance sectors at EU and national level (Cooperation project, 2013).</p>
Reference	
Target release date / Status	<p>An initial version has been released in 2015 . This version will be now tested, fine-tuned an enriched by the CISE pre-operational validation project by end 2017.</p> <p>Release of version 2: 2018.</p>
Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The data model will be tested by authorities from 15 MS in a first step.</p>
For solutions already in operational phase - actual reuse level (as	n/a

compared to the defined critical part)	
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Name of reusable solution	Service model
Description	<p>The CISE service model defines the specifications of the services offered by an information provider, including the behaviour of the service and the input and output data expected by/from the service to ensure the expected behaviour</p> <p>For each data entity defined the CISE data model (i.e., each information type: Vessel, Cargo, Person, etc.), the CISE Service Model defines a service and specific operations that support the exchange of that specific data entity using the four known communication patterns.</p>
Reference	
Target release date / Status	<p>An initial version has been released in 2014. This version will be tested, fine-tuned and enriched by the CISE pre-operational validation project by end 2017.</p> <p>Release of version 2: 2018.</p>
Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node. The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The service model will be tested by authorities from 15 MS in a first step.</p>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution	Governance model
Description	The CISE governance model defines a framework to structure and describe the governance elements and relationships including candidate organisational structures, processes, roles and responsibilities for the governance and management of an operational CISE environment
Reference	
Target release date / Status	Initial version released in 2014. This version will be tested, fine-tuned and enriched by the CISE pre-operational validation

	<p>project by end 2017.</p> <p>Release of version 2: 2018.</p>
Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The governance model will be tested by authorities from 15 MS in a first step.</p>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution	Security model
Description	The CISE security model defines a framework for CISE security and describes the elements and concepts which apply at different layers of CISE security, ranging from security governance and management to service, data and infrastructure security.
Reference	
Target release date / Status	<p>Initial version released in 2014 . This version will be tested, fine-tuned an enriched by the CISE pre-operational validation project by end 2017.</p> <p>Release of version 2: 2018.</p>
Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The governance model will be tested by authorities from 15 MS in a first step.</p>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	Registry of authorities and services
Description	<p>This registry is a software tool that will provide information about the authorities, their systems and the information they make available within CISE.</p> <p>Once fully implemented, the registry will support the governance, development and the operating phases of CISE fulfilling the operational (e.g., search for information, operational contacts, automatic service discovery) and the technical needs of the participants (e.g., technical IT support contacts).</p>
Reference	
Target release date / Status	<p>First specifications available end 2015</p> <p>First implementation by the CISE pre-operational validation project by end 2017.</p> <p>Release of version 2 of the registry software: 2018</p> <p>Release of version 3 of the registry software: before 2020</p>
Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The registry will be tested by authorities from 15 MS in a first step.</p>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution	CISE gateways
Description	<p>Interface among legacy systems enabling the exchange of information between participant, using the data and service model. The Gateway is also connected to the Registry to allow automatic discovery of services.</p>
Reference	
Target release date / Status	<p>First specifications available: end 2015</p> <p>Development of version 1 and testing by the CISE pre-operational validation project by end 2017</p> <p>Release of version 2: 2018</p> <p>Release of version 3: before 2020</p>

Critical part of target user base	<p>The total number of authorities involved in the Maritime Surveillance is more than 300. It represents the maximum number of participant and system connected to CISE, as several authorities can also access CISE behind a single node.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 20.</p> <p>The CISE pre-operational validation project involves 16 Member States. The gateway will be tested by authorities from 15 MS in a first step.</p>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Level of reuse by the proposal

Question	Answer
Does the proposal intend to make use of any ISA ² , ISA or other relevant interoperability solution(s)? Which ones?	<p>CISE programme in general and the CISE pre-operational validation project ('EUCISE 2020') in particular, consider the possible reuse of the solutions developed by CEF and the e-SENS building blocks: e-Delivery, e-Signature, e-ID, e-Document, etc</p> <p>In addition, the process of developing and implementing CISE will require further investigations to find suitable re-usable components (e.g. assessing solutions in the Joinup Catalogue of interoperability solutions)</p>
For proposals or their parts already in operational phase: has the action reused existing interoperability solutions? If yes, which ones?	n/a

Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	<ol style="list-style-type: none"> 1. Integrated Maritime Policy. 2. Communication on "A Digital Single Market Strategy for Europe" COM(2015)192 (DSM) 3. European eGovernment Action Plan 2016-

	<p>2020</p> <p>4. ICT standardisation Regulation (EU) No 1025/2012</p> <p>The level of contribution is described at points 1.1.5.1.</p>
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PROBLEM STATEMENT

Due to the organisational complexity and the diversity of legacy systems at national level and across the EU, the automatic exchange of data among national authorities remains limited in the field of maritime surveillance. Today, only a fraction of data is or can be exchanged, mostly in the same sector and seldom cross-border. The development of common semantic, technical and organisational interoperability specifications/solutions allowing seamless data exchange among legacy systems is a key-enabler to enhance cross-border and cross-sector data sharing.

EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

Beneficiaries	Anticipated benefits
EU institutions and agencies	<p>Enrichment of available data enabling a better implementation and enforcement of EU legislation in the fields of maritime safety and security, border control and fisheries control, customs and environment.</p> <p>Development and implementation of EU re-usable interoperability solutions enabling seamless data flows across sectors and borders.</p> <p>Improved interoperability between maritime authorities and systems will also allow an increased interaction and cooperation between administrations, citizens and businesses across Europe.</p>
National authorities in the EU/EEA with a remit at sea	<p>Enhanced interoperability in this domain which will enable better cross-border and cross-sectorial interaction among national authorities as well as an improved civil-military cooperation. (Ref. Impact Assessment SWD(2014)225 final)</p> <p>Enhanced maritime situational awareness enabling more effective and efficient surveillance, thus improving the overall safety, security and environmental protection of the EU maritime domain.</p> <p>Reduction of data collection cost and better use of surveillance assets (radars, satellites, patrol vessels, aircrafts) allowing savings and/or the reallocation of resources.</p>
Citizens in the EU/EEA	<p>Safer, more secure and environmentally protected seas enabling the EU/EEA citizens to take full advantage of the social, economic and leisure potential of the seas.</p>
European industry	<p>The development of common interoperability specifications and standards opens up new markets opportunities in the field of legacy systems</p>

	<p>interconnection as well as in the provision of digital information services to support maritime surveillance (e.g. weather and oceanic data, data mining tools, etc.).</p> <p>Improved interoperability between maritime authorities and systems will also allow an increased interaction and beneficial cooperation at industry level.</p> <p>Stimulate the research for the development of innovative technologies / solutions to increase interoperability and cover operational needs (e.g. for environment of federation of systems, cross-border and classified environment, collaboration activities, etc.)</p> <p>Development and implementation of improved information/ business models or web-services in this field.</p> <p>Solutions for interchangeability of different data formats, for standard compatibility, for data stream correlation, for user definable, customizable and transferable workspace, with intuitive use.</p>
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EXPECTED MAJOR OUTPUTS

Output name	CISE Handbook
Description	<p>The CISE handbook delivers concrete guidance to national authorities on how to participate in Maritime CISE in order to exchange data in a secure and reliable way.</p> <p>It will be drafted and continuously reviewed by a dedicated expert group using transparent collaborative tools. The site will be open to public (not the collaborative editing).</p>
Reference	https://ec.europa.eu/cise (not active yet)
Target release date / Status	<p>A first draft version of the website is planned to be ready end of 2016 ,</p> <p>The Handbook will be further drafted and updated with the results of the different actions related to CISE.</p>

ORGANISATIONAL APPROACH

Expected stakeholders and their representatives

Stakeholders	Representatives
EU level: Commission DGs and Agencies	DG MARE, JRC, MOVE, HOME, TAXUD, ENV, DIGIT, ECHO, JUST EMSA, FRONTEX, CFCA, EUROPOL, EEA, MAOC, EDA, EUSC
Member States	<p>National authorities carrying out maritime surveillance tasks in the seven sectors identified above. The number of national authorities to be involved in CISE amounts to over 300.</p> <p>National authorities are represented at EU level in the steering and</p>

	<p>management of the CISE development in two ways:</p> <ul style="list-style-type: none"> - The technical advisory group (TAG) involves technical and operational experts representing the seven maritime surveillance sectors, together with EU agencies representatives - The Member States experts sub-group on the integration of maritime surveillance (MSEsG) is composed of one representative per Member-States speaking on behalf of all national maritime authorities of the said state.
Industry	Industrial developers in the area of maritime surveillance

Identified user groups

The stakeholders presented above will also be the possible users of the results of this action.

Communication plan

The communication plan on CISE is threefold:

- Internal communication within COM and EU agencies

The inter-service Group on Integrated Maritime Surveillance involves all European Commission services concerned by integrated maritime surveillance. It meets on average 3 times per year.

- Communication with MS

Communication with MS is based on three different groups:

- The Friends of Presidency group in the Council with foreign affairs attachés (4 meetings/year)
- The Member States experts sub-group on the integration of maritime surveillance (MSEsG) with representatives from national maritime administrations(3 meetings/year)
- The technical advisory group (TAG) with technical and operational experts from national authorities and EU agencies (3 meetings/year)

- Communication with the general public

A set of communication tools was developed in 2014. General communication on CISE is made during events/seminars on maritime issues, including the European maritime day held each year.

Governance approach

Management of the action will be done jointly by DG MARE D1 and the Joint Research Centre, under the provisions of the Administrative Arrangement (AA) n°SI2.691869 from 3rd December 2014 between the two Commission services or any amendment/extension thereof. Six persons (3 from DG MARE and 3 from the JRC) will be responsible for the implementation of the action.

Additionally, DG MARE is assisted in developing this action by DG DIGIT under the provisions of the Memorandum of Understanding (MoU), n° DIGIT - 00364-00, from 16 August 2012 and its amendments.

There are already established bodies/groups ensuring stakeholders' involvement and coordination at all levels:

(a) the seven user communities, including the EU Agencies, participate to the Technical Advisory Group (TAG) bringing in the necessary expertise from their sectoral policy and related actions,

(b) an Interservice group consisting of representatives of all associated DGs ensures coordination at Commission level

and

(c) the Member States Experts sub-group (MSESG) which is the principal actor for the implementation of the CISE Roadmap will be kept updated regularly on the development of the project.

TECHNICAL APPROACH AND CURRENT STATUS

Actions carried out previously since the launch of CISE in 2009 until 2014 have focused on the following primary preparatory areas:

- Landscaping of existing governmental information-exchange systems in the maritime field
- Analysis of data gaps and needs
- Definition of CISE high-level requirements and architectural options
- Development of CISE data and service model

CISE has entered in 2015 a pre-operational testing phase of its interoperability solutions which will be carried out by the FP7 funded and MS-led project 'EUCISE 2020' until end 2017. This project is closely supported by the COM. This testing phase will pave the way towards the establishment of full-fledged interoperability solutions by end 2020.

The ISA² programme is expected to support a set of actions undertaken by the COM to support and exploit the results of this pre-operational phase, as well as the actions needed to reach relevant operational solutions.

These actions could inter alia cover the following areas:

- Identify relevant IT interoperability endeavours/solutions for information sharing in third countries/ maritime regions to assess potential improvements of CISE solutions
- Explore CISE IT and operational governance solutions, taking into account current solutions and lessons learnt from existing EU information-exchange solutions (e.g. IMI, EESI, EURES, CCN/CSI).
- Whenever needed and depending on the shortcomings/gaps identified during the testing phase, further develop the CISE data model, service model, gateway, registry of authorities and services to deliver fully functional solutions/ building blocks matching CISE high-level requirements
- Assess the contribution of CISE to the EU standardisation process¹⁷ in order to facilitate the definition of a technical reference architecture for public services by end 2017¹⁸ (in line with the European Interoperability Reference Architecture)
- Promote the CISE final interoperability solutions among national authorities and support the conclusion of agreements on data sharing. Support the transition to the production phase, including the integration of the solution at Member States' level
- Promote the adoption, reuse and continuous improvement of existing and future reusable building blocks and solutions such as the CEF DSIs and results of existing ISA and future ISA² actions.

¹⁷ ICT standardisation Regulation (EU) No 1025/2012

¹⁸ Commission Communication of 8th July 2014, COM (2014)451 final

COSTS AND MILESTONES

Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Large scale pre-operational testing 'EUCISE 2020'	17 000	13 000 HOME- FP7 4 000 MS	Q4/2014	Q3/2017
Execution	Follow-up and technical support to 'EUCISE 2020', set up of the registry of authorities and services, web tool for the CISE handbook, secretariat of the TAG, maintenance of data and service model	2 340	MARE, delegated to JRC	Q4/2014	Q4/2017
Execution	Identify relevant IT interoperability endeavours/achievements enabling information sharing in third countries/ maritime regions to assess their potential to support CISE development.	200	ISA ²	Q4/2016	Q4/2017
Execution	Assess and promote CISE interoperability solutions (e.g. Data & Service Models) within the EU standardisation framework.	200	ISA ²	Q3/2017	Q4/2018
Execution	Explore and define models for CISE IT and operational governance	250	ISA ²	Q1/2018	Q4/2019
Execution	Support the transition from the Pre-operational to the operational phase of CISE interoperability building blocks/ solutions.	400	ISA ²	Q1/2018	Q4/2019
Operational	Support implementation/	400	ISA ²	Q1/2019	Q4/2020

	adoption of CISE (re-usable) building blocks/ solutions.				
	Total	1450	ISA ²		

Breakdown of ISA funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	100	
2017	Execution	0	
2018	Execution	0	
2019	Execution	0	
2020	Execution	0	

ANNEX AND REFERENCES

Description	Reference link
EU Maritime Security Strategy and its Action Plan	http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1395676070971&uri=CELEX:52014JC0009 http://ec.europa.eu/maritimeaffairs/policy/maritime-security/doc/20141216-action-plan_en.pdf
Commission Communication: Next steps within the Common Information Sharing Environment for the EU maritime domain	http://ec.europa.eu/maritimeaffairs/policy/integrated_maritime_surveillance/documents/com_2014_451_en.pdf
Commission Staff working document Impact Assessment accompanying the Communication (above)	http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52014SC0225
CoopP final report	http://www.raja.fi/facts/news_from_the_border_guard/1/0/the_final_report_of_the_cooperation_project_has_been_published_and_is_available_on_the_project_website_52764
Commission Communication: CISE Guiding principles	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0538:FIN:EN:PDF
Commission Communication: Draft Roadmap towards the CISE	http://ec.europa.eu/maritimeaffairs/pdf/maritime_policy_action/com_2010_584_en.pdf
Council conclusions Nov 2009	http://ec.europa.eu/maritimeaffairs/pdf/external_relations_council_conclusions_17112009_en.pdf
Council conclusions May 2011	http://www.consilium.europa.eu/uedocs/cms_data/docs/press_data/EN/genaff/122177.pdf

Description	Reference link
Council conclusions June 2010 (para 11)	http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/genaff/115166.pdf
Council conclusions Dec 2008 (para 5, page 45)	http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/gena/104617.pdf
European Parliament resolution on Integrated Maritime Policy (paras 31-36)	http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2010-0386+0+DOC+XML+V0//en
ECOSOC opinion, July 2010	http://www.eesc.europa.eu/?i=portal.en.ten-opinions.16088
Technical Advisory Group: Terms of reference, meeting minutes, progress reports	https://webgate.ec.europa.eu/maritimeforum/frontpage?tid_2=519
Council conclusions Jun 2013	http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/agricult/137604.pdf
Limassol Declaration, Oct 2012	http://www.cy2012.eu/index.php/el/file/TphGtH7COdr2nxXo9+AUZw==/
Parliament report on the maritime dimension of the Common Security and Defence Policy (2012/2318(INI)) - Committee on Foreign Affairs	http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2012/2318%28INI%29&l=en
Commission Communication: Towards a more competitive and efficient defence and security sector	http://ec.europa.eu/internal_market/publicprocurement/docs/defence/130724_communication_en.pdf