

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

7.1.1 IDENTIFICATION OF THE ACTION

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

7.1.2 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 Conclusions⁶⁰.

The last Commission Communication provides for CISE⁶¹ 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 missions⁶². 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).

⁶⁰ 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

⁶¹ Commission Communication of 8th July 2014, COM (2014)451 final.

⁶² Maritime surveillance encompass seven sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence.

- 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 process⁶³ in order to facilitate the definition of a technical reference architecture for public services by end 2017⁶⁴ (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.
- 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.

7.1.3 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 common specifications 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 of CISE towards a set of operational and full-fledged interoperability solutions by end 2020.

7.1.4 SCOPE

Over 300 national authorities belonging to the seven functions (see note n°4) 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 as well as to set up man-to-machine interfaces.

7.1.5 PROBLEM STATEMENT

Due to the organisational complexity and the diversity of legacy systems at national level 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.

⁶³ ICT standardisation Regulation (EU) No 1025/2012

⁶⁴ Commission Communication of 8th July 2014, COM (2014)451 final

7.1.6 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 of EU interoperability solutions (re-usable building blocks).</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, ...).</p> <p>Improved interoperability between maritime authorities and systems will also allow an increased interaction between administrations, citizens and businesses.</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> |

7.1.7 RELATED EU ACTIONS / POLICIES

| Action / Policy | Description of relation |
|---|---|
| 1. Integrated Maritime Policy | <p>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>CISE is designed to contribute to maintain 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 spatial planning and maritime security. From that perspective, EMODnet, FLUX and other sectorial European level systems (as underlined below) are envisaged to become an intrinsic part of the European Integrated Maritime Surveillance via CISE.</p> |
| 2. Maritime sectorial policies | <p>The seven user communities to be interconnected through the CISE and their functions are: 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. Further specific examples with respect to these functions are given below.</p> |
| 2.1 Maritime transport safety and security | <p>The maritime transport sector has developed traffic safety, security and environmental monitoring systems, based on EU legislation (Directive 2002/59 on vessel traffic monitoring and information system, Directive 2010/65 on reporting formalities for ships arriving and departing from ports of the MS, Directive 2009/16 on Port State Control and Directive 2005/35 on ship source pollution). Where these systems are not yet connected to non-transport related surveillance systems, CISE will enable such interconnection. The 2011 transport white paper (COM(2011)144) specifically refers to the contribution of the maritime transport monitoring and data exchange system SafeSeaNet to the CISE development.</p> |
| 2.2. Fisheries | <p>The fisheries sector has developed its specific monitoring systems (FLUX) based on EU legislation (Regulation 1224/2009)). CISE is working on developing interoperability solutions to enable enhanced information exchange between these systems and the range of other maritime surveillance systems, across-sectors and borders.</p> |
| 2.3. Customs | <p>The customs sector is developing a monitoring system (eCUSTOMS) based on EU legislation (European Customs</p> |

| Action / Policy | Description of relation |
|--|---|
| | Code). CISE is working on developing interoperability solutions to enable enhanced information exchange between these systems and the range of other maritime surveillance systems, across-sectors and borders. |
| 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. |
| 3.1. EU Maritime Security Strategy | The establishment of the Maritime CISE is also mentioned as a building block of the Maritime Security Strategy adopted jointly by the Commission and by the EEAS in June 2014. Enhancing information exchange between maritime surveillance authorities, particularly through the development of CISE, is one of the five main work strands identified under the Action Plan set up for the implementation of the EU Maritime Security Strategy. |
| 3.2. European Agenda for Security | The Agenda supports better information exchange, increased operational cooperation and mutual trust, drawing on the full range of EU policies and tools to support the Member States in ensuring security. By supporting an enhanced cross-sectoral and cross border information exchange, CISE is fully contributing to the Agenda's objectives. |
| 3.3. European Migration Policy | Regulation n°1052/2013 has established a European Border Surveillance System which interlinks national border control authorities. In the same way as the Maritime transport systems mentioned above, EUROSUR may be interconnected with other legacy systems through CISE where systems are still incompatible and act as data provider and consumer. CISE will therefore enable to complement the data currently shared among border control authorities with additional data owned by other authorities. CISE is referred to as the 8th and final step of the Border Surveillance System EUROSUR (COM(2008)68final), stating that it will go beyond border related aspects, thus covering all maritime related activities. |
| 3.4. Common Security and Defence Policy (CSDP) | CISE is one of the main tangible domains of civil/military cooperation at EU level, as beneficial to the tasks of both types of authorities. CSDP operations - being of humanitarian or security nature - benefit from enhanced data exchanges improving the maritime situational awareness. The CISE is therefore acknowledged as an important tool for EU Maritime Security Operations and as an essential building block of the EU Maritime Security Strategy (EUMSS) which provides the political framework for maritime CSDP operations. CISE is specifically mentioned in the Commission Communication of July 2013 |

| Action / Policy | Description of relation |
|--|--|
| | "Towards a more competitive and efficient defence and security sector" (COM(2013) 542 final) ^[1] and in a Parliament report on the maritime dimension of the Common Security and Defence Policy (2012/2318(INI)) ^[2] . |
| 4. Digital Agenda for Europe | CISE is directly relevant to the Digital Agenda, especially as it develops in line and contributes to following pillars: I. Digital single market: see below. 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 investment in R&D technologies for maritime surveillance and security 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. |
| 4.1. Communication on "A Digital Single Market Strategy for Europe", COM(2015)192 (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. |
| 4.2. Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) | As INSPIRE also addresses the spatial harmonisation of data related to basic hydrographical including marine areas as well as oceanographic features and sea regions, CISE takes into account the relevant data exchange solutions put in place under the INSPIRE directive. |
| 4.3. ISA Action 1.1 – Promoting semantic interoperability amongst the European Union Member States | That ISA action defined a methodology for defining semantic assets, which is reused in the CISE project to define use cases, information services and the associated data formats and semantics. The approach of the CISE project will be based as appropriate on the governance, process and methodology proposed by that ISA action. Under that ISA action a pilot has been carried out to demonstrate the potential interest of Linked Data technologies. It is envisaged to further explore collaboration with ISA 1.1 on |

^[1] http://ec.europa.eu/internal_market/publicprocurement/docs/defence/130724_communication_en.pdf

^[2] <http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2012/2318%28INI%29&l=en>

| Action / Policy | Description of relation |
|---|--|
| | <p>the definition of useful core vocabularies for the maritime domain, and on the set up of a platform to disseminate the CISE common data model ("Data Dictionary").</p> <p>Under this ISA action, the cooperation Project (CoopP) defined a data and service models for CISE. These semantic interoperability models are being tested and refined as from 2015 in the framework of the pre-operational validation project EUCISE 2020.</p> |
| <p>4.4. ISA Action 2.1 – Elaboration of a common vision for an European Interoperability Architecture (EIA)</p> | <p>The European Interoperability Architecture developed by action 2.1 will be taken into consideration when developing the CISE platform. Mechanisms have been put in place to ensure alignment of CISE work with the results of this action.</p> |
| <p>4.5. ISA action 2.14 – Assessment of Trans-European Systems (TESs) supporting EU Policies</p> | <p>CISE should ultimately improve interoperability between the systems of 7 different sectors, in which specific sectorial solutions have already been put in place to exchange information. In that context the rationalization of existing trans-European systems between public administrations is seen as an opportunity and a necessary basis for CISE structured development. CISE shall seek alignment with corporate recommendations to interconnect administrations, and in any case shall ensure convergence with such recommendations or corporate solutions.</p> |
| <p>4.6. European eGovernment Action Plan 2016-2020</p> | <p>CISE is in line with the objectives of the eGovernment 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 eGovernment services at local, regional, national and European level.</p> <p>The European Commission's <u>eGovernment Action Plan 2011-2015</u> supports the provision of a new generation of eGovernment services.</p> <p>This is also valid for the upcoming follow up plan “new EU eGovernment Action Plan 2016-2020”</p> |
| <p>5. Connecting Europe Facility (CEF)</p> | <p>The Connecting Europe Facility develops and implement reusable building blocks (essential digital services) that will play a vital role in enhancing interoperability between public authorities allowing for conducive flow of data across borders and sectors. 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.</p> |

| Action / Policy | Description of relation |
|--|---|
| | As CISE is approaching its implementation phase, the linkages with the CEF are being fully explored. Particularly, CISE pre-operational validation project ('EUCISE 2020') is assessing the possible reuse of CEF building blocks, at software as well as specifications level. |
| 5.1. CIPA solution - Common Infrastructure for Public Administrations Sustainability | CIPA e-Delivery aims at creating a document exchange network. Access to this network is enabled through gateways and a standard protocol. CIPA e-Delivery provides components for a secure and reliable exchange. The CISE architecture definition shall be carried out also taking into consideration the possibility to reuse the CIPA solution (eTrustEx platform and CIPA gateway). |
| 6. ICT standardisation Regulation (EU) No 1025/2012 | CISE is part of the 2015 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. |

7.1.8 REUSE OF SOLUTIONS DEVELOPED BY ISA, ISA² OR OTHER EU / NATIONAL INITIATIVES

The development of the CISE project has aimed from the beginning to reduce development and operational costs and ensure better sustainability of maritime surveillance activities.

The possible reuse of the following ISA solutions is currently assessed within the CISE pre-operational validation project ('EUCISE 2020'):

| ISA Solution | Description of relation |
|-------------------|--|
| S-TESTA | This network is considered to exchange sensitive data. |
| EU public license | The EU public license should be used to license the technical specifications and the software components developed by the industry within the EUCISE 2020 project. |

Should these solutions be set aside during the validation project, their reuse will be considered again to define the final operational CISE.

| ISA Solution | Description of relation |
|------------------------|--|
| SEMIC (ISA action 1.1) | CISE data model reused the definition of some of the Core Vocabularies (Public Organization, Person, Location) and will evolve taking into |

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| | consideration the new Core Vocabularies developed by SEMIC. |
| INSPIRE platform | CISE data model took into consideration INSPIRE vocabulary and standards. The Inspire Registry was also tested to be reused for CISE data dictionary. |
| CAMSS | CISE interoperability layer is based on existing standards of exchange. CAMSS is considered to assess standards to integrate in the future evolutions of CISE. |
| EIRA | The European Interoperability Architecture can be considered to organize and document solutions, including the integration of CISE to existing European sectorial systems. |
| e-Trustex | The solutions developed by e-Trustex on top of the CEF component e-Delivery are considered to be reused for CISE gateway component. |
| CIPA | The solutions developed by CIPA on top of the CEF component e-Delivery are considered to be reused for CISE gateway component. |

Furthermore, the CISE project 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)

7.1.9 EXPECTED RE-USABLE OUTPUTS (solutions and instruments)

| | |
|------------------------------|--|
| Output name | 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 | Initial version released in 2015 . This version will be tested, fine-tuned an enriched by the CISE pre-operational validation project by end 2017. Release of version 2: end 2017. |

| | |
|------------------------------|--|
| Output name | 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>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: end 2017.</p> |

| | |
|------------------------------|--|
| Output name | Governance model |
| Description | <p>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</p> |
| 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: end 2017.</p> |

| | |
|-------------|--|
| Output name | Security model |
| Description | <p>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.</p> |

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|------------------------------|---|
| 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: end 2017. |

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|------------------------------|---|
| Output name | 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) and the technical needs of the participants (e.g., technical IT support contacts). |
| Reference | |
| Target release date / Status | Final specifications: end 2015 Final version of the registry software: end 2016 |

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|------------------------------|---|
| Output name | CISE gateways |
| Description | Interface among legacy systems enabling the implementation of the CISE service model. |
| Reference | |
| Target release date / Status | Final specifications: end 2015 Testing: 2016 First version: end 2017 |

7.1.10 ORGANISATIONAL APPROACH

7.1.10.1 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 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. |
|---------------|--|

7.1.10.2 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.

7.1.10.3 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.

7.1.11 TECHNICAL APPROACH

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 process⁶⁵ in order to facilitate the definition of a technical reference architecture for public services by end 2017⁶⁶ (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.

⁶⁵ ICT standardisation Regulation (EU) No 1025/2012

⁶⁶ Commission Communication of 8th July 2014, COM (2014)451 final

- 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.

7.1.12 COSTS AND MILESTONES

7.1.12.1 Breakdown of anticipated costs and related milestones

Additional actions might later on be required to bridge the gap between the CISE pre-operational testing and the final interoperability solutions (including reusable building blocks). Some of these possible activities are briefly described under the section *Technical approach*. Complements might therefore be submitted during the revision of ISA² work programme later on.

| Phase: Inception Execution Operational | Description of milestones reached or to be reached | Anticipated Allocations (KEUR) | Budget line ISA ² / 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 the contribution of CISE interoperability solutions to the EU standardisation policies | 200 | ISA ² | Q3/2017 | Q4/2018 |
| Execution | Explore CISE IT and operational governance | 250 | ISA ² | Q1/2018 | Q4/2019 |

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

7.1.12.2 Breakdown of ISA² funding per budget year

| Budget Year | Phase | Anticipated allocations (in KEUR) | Executed budget (in KEUR) |
|-------------|-----------|-----------------------------------|---------------------------|
| 2016 | Execution | 100 | |
| 2017 | Execution | 300 | |
| 2018 | Execution | 500 | |
| 2019 | Execution | 350 | |
| 2020 | Execution | 200 | |

7.1.13 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 | http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52014SC0225 |

| Description | Reference link |
|---|---|
| Communication (above) | |
| 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/pressdata/EN/genaff/122177.pdf |
| 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 |

