



EUCISE2020

**Brussel Standardization Workshop
21 June 2018**





Agenda

- ❑ EUCISE2020 Project;
- ❑ EUCISE2020 standardization goals;
- ❑ Approach for standardization:
 - ✓ EUCISE2020 components for standardization
 - ✓ Standardization Process lead by Leonardo;
 - ✓ Deliverables and Time schedule
 - ✓ Standardizing EUCISE2020 Services: Core & Common

EUCISE2020 Project



EUCISE 2020



EUCISE 2020 Consortium

37 Partners from 15 EU States. Agenzia Spaziale Italiana (ASI) is the Technical Coordinator for the Project.

LOT 1: An 18-month contract for the final design, development, integration, verification and preoperational validation of Research and Development services for the implementation of an interregional network supporting cross-sector and cross-border information exchange between the partners of the above-mentioned EUCISE2020 Project

Contracting Authorities

Marina Militare Italiana — Ufficio generale del centro di responsabilità amministrativa (MARIUGCRA)

EUCISE2020 Management

- EUCISE 2020 Project is held by a Temporary Grouping of Companies named R.T.I., formed by:
 - ❑ Leonardo - Finmeccanica - Società per azioni (LDO);
 - ❑ Engineering Ingegneria Informatica S.p.A. (EII);
 - ❑ GMV AEROSPACE AND DEFENCE, S.A.U (GMV);
 - ❑ Inovaworks II Command and Control, Lda (INW);
 - ❑ Satways Ltd (STW).

- Objective of EUCISE2020 is to enhance the awareness of the maritime public authorities by improving their ability to monitor, detect, identify, track and understand occurrences at sea.



EUCISE2020: Description of supply

The information exchange platform, based on a SOA (Service Oriented Architecture) architecture, must guarantee the following services:

1. Core services, infrastructural services that provide the common tools to ensure the connection between the partners of the EUCISE2020 Project, through the EUCISE2020 network; these services manage the transfer of data between the partners of the EUCISE2020 project and guarantee the availability of the relevant data to the EUCISE2020 services.
2. Common services, application services that provide the potential for data exchange in the EUCISE 2020 network; these services manage the entities of the EUCISE2020 data model.
3. Advanced Services, application services that compose and orchestrate the services that realize the value-added features of the EUCISE2020 network



EUCISE2020 Standardization

- ❑ New technical standards for the components of CISE, including the protocol stack, the semantic and data model specifications, the Core and Common Services;
- ❑ New operational standards for the operational components of CISE, including the harmonized procedure for shared maritime situational awareness representation implementation, the alerts sharing protocols, etc.
- ❑ New regulatory procedures for the implementation of a “responsibility to share” information sharing policies within the existing regulatory framework at national and sectorial level.



Creating ISG



Standardization Process lead by Leonardo

- ❑ Leonardo Company will chair the standardization process;
- ❑ The ISG Chairman is appointed for 2 years. He/she is the official communication channel with ETSI on all matters pertaining to the conduct of the ISG;
- ❑ The Chairman is vigilant to ensure that the work of the ISG complies with ETSI rules and that the dynamics of the ongoing discussions are positive for all participants;
- ❑ Only the Chairman can call a formal vote to resolve a dispute in the ISG.



Activation of an ISG

(1/3)

- ❑ **Step 0** – Creation of a supporting group of at least 4 ETSI members, i.e. founding members, plus additional non-ETSI contributing members as they wish.

- ❑ **Step 1** – Documents to be initially drafted by the founding members:

Membership agreement participant agreement with the following contents:

- ✓ Standard legal part (which can be adjusted on the basis of the supporting group needs)
- ✓ Scope the of work
- ✓ Work planning
- ✓ Non ETSI-members can contribute to the technical aspects.



Activation of an ISG

(2/3)

Step 2 – Review of the agreements with ETSI (technical and legal personnel) prior formal submission;

Step 3 – Formal submission

Proposal of ISG to the ETSI Board prepared by ETSI staff and ISG founding members. Email by founding members to the Director of ETSI confirming support to the ISG.

Step 4 – Approval of ISG proposal by ETSI Director in consultation with the ETSI Board.

Activation of an ISG

(3/3)

Leonardo: carla.miccinesi@leonardocompany.com

MISE: emanuele.nastri@mise.gov.it

BMW: ulrich.sandl@bmwi.bund.de

FICORA: klaus.nieminen@ficora.fi

Demokritos: Anastasios Kourtis kourtis@iit.demokritos.gr

Without the commitment of at least 4 ETSI members, the ISG proposal cannot be submitted to the Board

An ISG:

- ✓ can create 2 types of deliverables: GS (Group Specification) and GR (Group Report, informative) but not EU norms;
- ✓ It is also open to organizations that are not ETSI members (they only have to pay a fee per meeting usually);
- ✓ cannot create European standards;
- ✓ may deviate from ETSI Technical Working Procedures (the rules are part of the "agreements").



Standardization goals



Standardization goals

- ❑ The main objectives of ISG CISE SM is to develop the technical specifications to enable multiple organisations to develop an interoperable software to be used in a Common Information Sharing Environment for exchanging data and services;
- ❑ The CISE SM, through the standardization of Common and Core Services, enables User Communities, Member States, Public Authorities or EU Agencies to facilitate information exchange;
- ❑ The work of ISG CISE SM will be done in a phased manner:

The initial phase will be purely informative and result in an ISG CISE SM Group Report (GR). It will be followed by a second normative phase resulting in several ISG CISE SM Group Specifications (GS).

Terms of Reference (ToR) for ETSI ISG “European Common Information Sharing Environment Service Model” (CISE SM)

Phase 1 (informative):

- ✓ Organizing a kick off meeting with the team and discuss about the standardization model;
- ✓ Identify a reference architecture which might be used for the development of Core and Common Services;

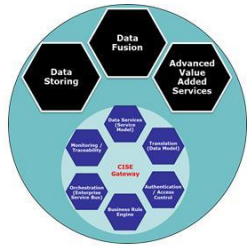
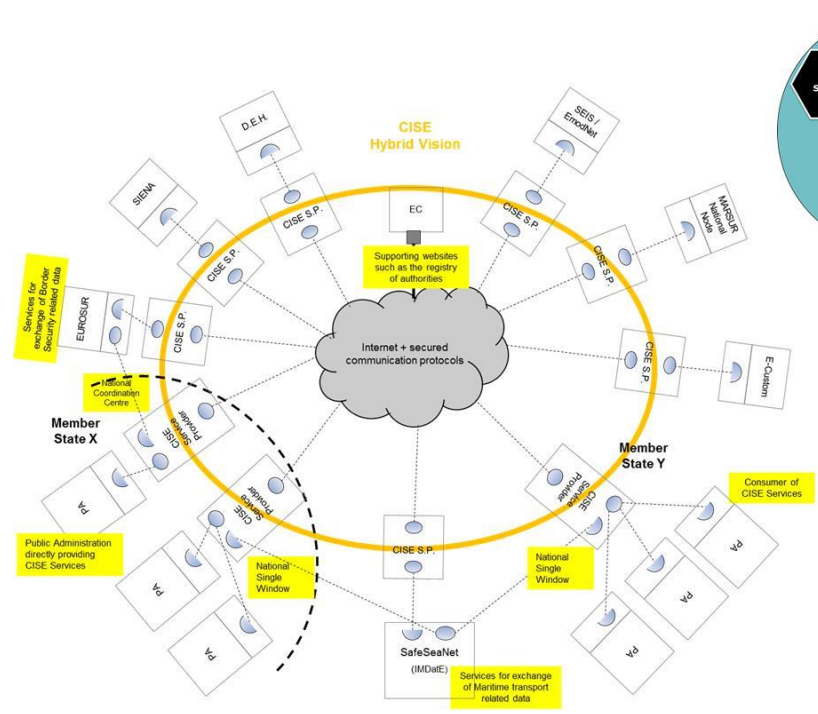
Phase 2 (normative):

Group Specifications developed within the ISG CISE SM will be public and subject to ETSI IPR policy, especially concerning timely declaration.

Do note:

To maintain a tight focus, the ISG CISE SM will at the end of the first and of the second year make a review of its work and a proposal to ETSI on how to evolve the ISG CISE SM’s future activities: terminate the ISG, or transfer the work and continue the activity in a (existing or new) ETSI Technical Body or other standards body, or continue the ISG CISE SM for an additional period with (potentially revised) Terms of Reference.

ISG Standardization work phase 1 - Informative (1/2)



- The CISE SM components (based on the EUCISE2020 concept) are able to:
- Translate the request of information coming from PAs in a common vocabulary;
 - Ensure the exchange of messages within the CISE Community based on a Service Oriented Architecture paradigm;
 - Manage access rights on information Exchange based on a roles/rules based approach;
 - Implement a collaborative environment;
 - Optionally, implement advanced functions to enhance the information available at PAs level.

ISG Standardization work phase 2 - Informative (2/2)

The network topology of EUCISE 2020 is based on the CISE hybrid vision concept. Each Member State and Community can adopt one of the following paradigms:

- ❑ Single-way approach: All Public Authorities of a Member State are connected to the EUCISE 2020 Network through a single access point.
- ❑ Multiple-way approach: Public Authorities of a Member State are connected to the EUCISE 2020 Network through different access points (at least two).

With the implementation of a Common Information Sharing Environment (CISE) the interoperability of the platforms shown in slide 15, is granted through:

- Harmonised front-end interfaces;
- Implementation of Infrastructural Core Services for the enforcement of a multi-level data access and distribution policy;
- Suitable information protection measures for the exchange of sensitive information under the directives of the respective Member States;
- Open, selective and tailored web-based access to Sectorial and National Users, delivering standardized cross-sector Information Services made available by the interested information hubs powered by existing national information infrastructures;
- Information sharing with the existing sectorial networks and with the relevant EU Agencies and Stakeholders.

ISG Standardization work phase 2 - Normative

(1/2)

1. ISG CISE SM Founding Members and ISG CISE SM Participants are reminded that acting contrary to ETSI IPR policy and/or delaying timely declaration of IPR can only delay the successful completion of the specification(s), undermining a critical success factor for the ISG.

2. Planned deliverables and delivery dates

- ISG CISE SM intends to meet quarterly (physical and/or electronic meetings) as needed to draft, discuss, review and approve the deliverables to be developed;
- ISG CISE SM plans to develop an ISG CISE SM Group Report (informative) and several ISG CISE SM Group Specifications (normative);
- A detailed plan will be made in the first meeting when Work Items will be discussed;
- According to the ISG CISE SM time plan, the intent is to finalize an ISG CISE SM Group Report (GR) and a set of ISG CISE SM Group Specifications (GS) within one (2) year after the first meeting.

ISG Standardization work phase 2 - Normative

(2/2)

Schedule and Deliverables:

1. (T0+03) Group Report describing the overall architecture;
2. (T0+05) Group Specification for Common and Core Services (preliminary);
3. (T0+05) Group Specification of languages, processes and domains for service modelling;
4. (T0+07) Group Specification: First set of Service models;
5. (T0+09) Group Specification: Second set of Service models;
6. (T0+12) Group Specification: Third set of Service models;
7. (T0+12) ISG ISE SM Review of Work and proposal to ETSI for next period;
8. (T0+18) Review of suitability of the Group Specifications and data models based on evidence gathered from EUCISE2020 software implementations;
9. (T0+22) If needed: Create and publish Version 2 of the Group Specifications based on the previous Review;
10. (T0+24) ISG CISE SM Review of Work and (if needed) proposal to ETSI for next period.



Standardizing EUCISE2020 Services



Areas of activity of ISG CISE SM

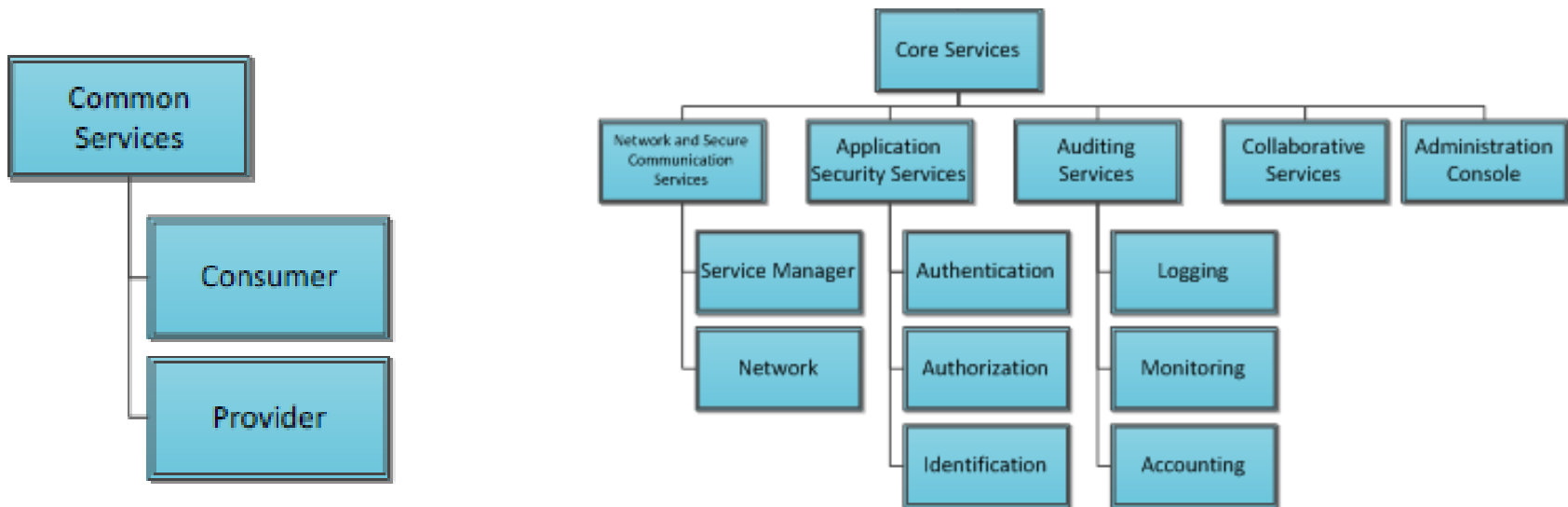
(1/2)

- ❑ Network and Secure Communication (communication between Adaptors, Gateway and Nodes – Core Services);
- ❑ Application Security (identification, authentication and authorization of the users across the network, managing access to secured resources maintained at a service provider – Core Services);
- ❑ Auditing (to perform analysis on events through logging, monitoring and accounting services – Core Services);
- ❑ Collaborative tools (multimedia and auxiliary tools provided to facilitate the communications and work among the users – Core Services);
- ❑ Provider component (The service provider component implement the web service and publishes its interface and access information to the service registry. Each provider must decide which services to expose, how to price the services, or (if no charges apply) how/whether to exploit them for other value – Common Services)
- ❑ Consumer component (The service consumer or web service client locates entries in the broker registry using various find operations and then binds to the service provider in order to invoke one of its web services. Whichever service the service-consumers need, they have to take it into the brokers, bind it with respective service and then use it. They can access multiple services if the service provides multiple services– Common Services).

Areas of activity of ISG CISE SM

(2/2)

The main goal of Core and Common Services standardization is to create a standard to allow data exchange among different Legacy Systems in a cooperative Network.





Common Services

(1/2)

The Common Services while using the defined message exchange patterns, allow the following business activities:

- Query – Query data about an entity/service.
- Query Response – Return data previously requested in a Query.
- Subscribe and unsubscribe – Subscribe and unsubscribe information about an entity/service.
- Notification – Notify about information either resulting from a previous subscription or to unknown destinations.

Feedback – Provide feedback on information already received or sent.

- Acknowledgement – Provide success or error messages upon delivery of a message during the transfer process.
- Discovery – Discover other services in the Common Information Sharing network that match the requested profile

Independently of the message exchange pattern used or the business operation, in the end the provided services will allow the exchange of information. The supported information model and their relationships is detailed in the Data Model.

The data model does not have an implicit relational paradigm: the relational paradigm and representation is achieved through relational entities which are encapsulated by the core entities. Typically, these relational entities aggregate the target entity and some relationship characterization info.



Common Services

(2/2)

- ❑ A Legacy System wanting to be integrated in Common Information Sharing Environment has to be interfaced through an Adaptor properly developed to the Common Services.
The Adaptor is the bridge between the Legacy System and the Common Services (available in the Gateway).
- ❑ The Common Services Interface defines the technical interface used by Adaptors to communicate with the common network and vice versa. This interface is materialized in a SOAP/REST Service called “CISE Message Service”. This service offers one operation called “send” that receives a Message type. This Message type is the parent entity of several others that represent the message exchange patterns.

For any further questions, please contact

lorenzo.iapoce@leonardocompany.com

THANK YOU FOR YOUR ATTENTION

