WORKSHOP:
How to set up an adaptor

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CISE-ALERT

11-12 September 2024

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HOW TO SET UP AN ADAPTOR

L'océan en référence

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This project has received funding from the European Maritime, Fisheries and Aquaculture Fund (EMFAF. This document reflects only the author's view and European Climate, Infrastructure and Environment Executive Agency (CINEA) and European Commission cannot be held responsible for any use that may be made of the information it contains.

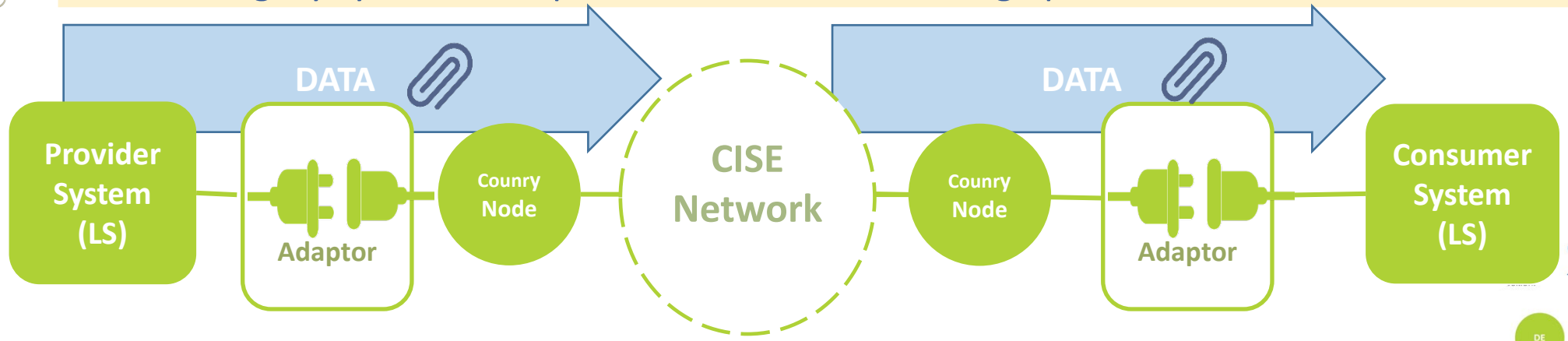
Summary

For trials to be conducted:

- Specific steps to join CISE
- **fully functional** national node
- Implementation of **Operational Services** in MS authorities systems
- Development and tests of **adaptors**

How to develop an adaptor

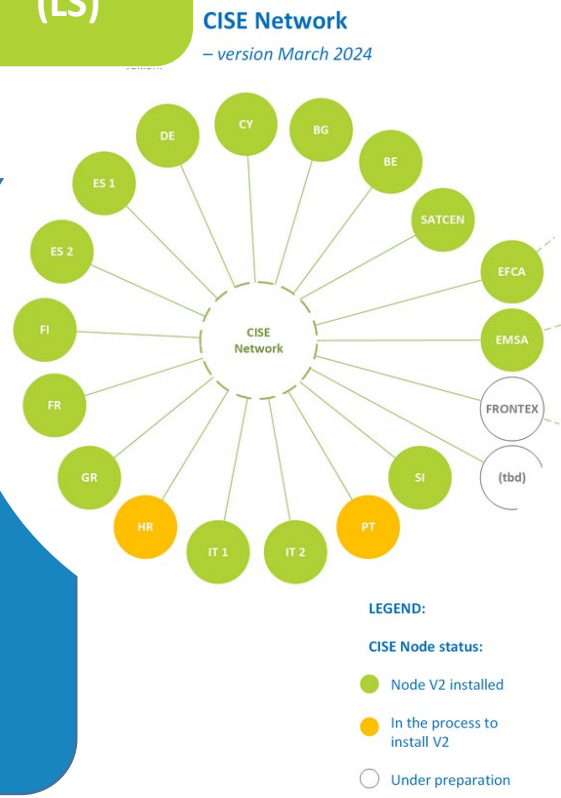
Nodes, Legacy systems, adaptors, services and exchange protocols



CONFIGURATION OF ADAPTORS WITH CISE SERVICES

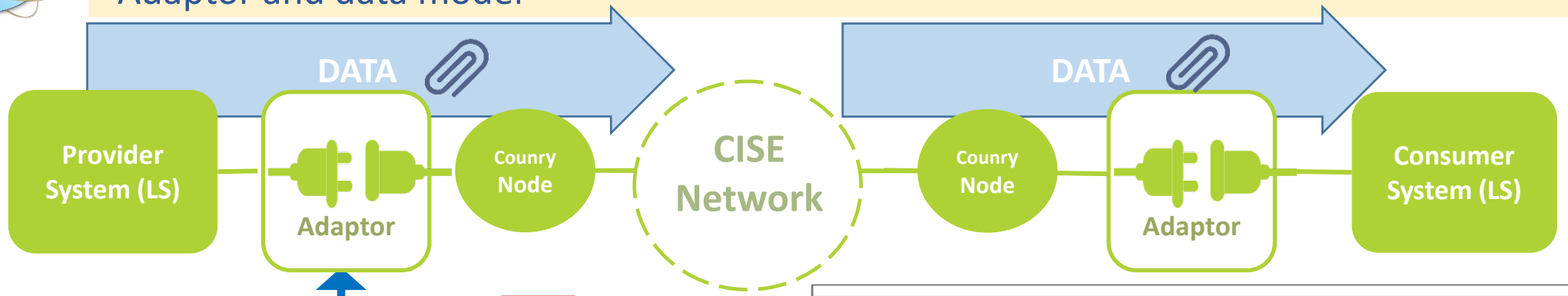
- Implementation /configuration of « services » in the adaptor:
  - categories + entities defined in **CISE data model and Catalogue**
  - **exchange protocol** (push/pull/subscribe)

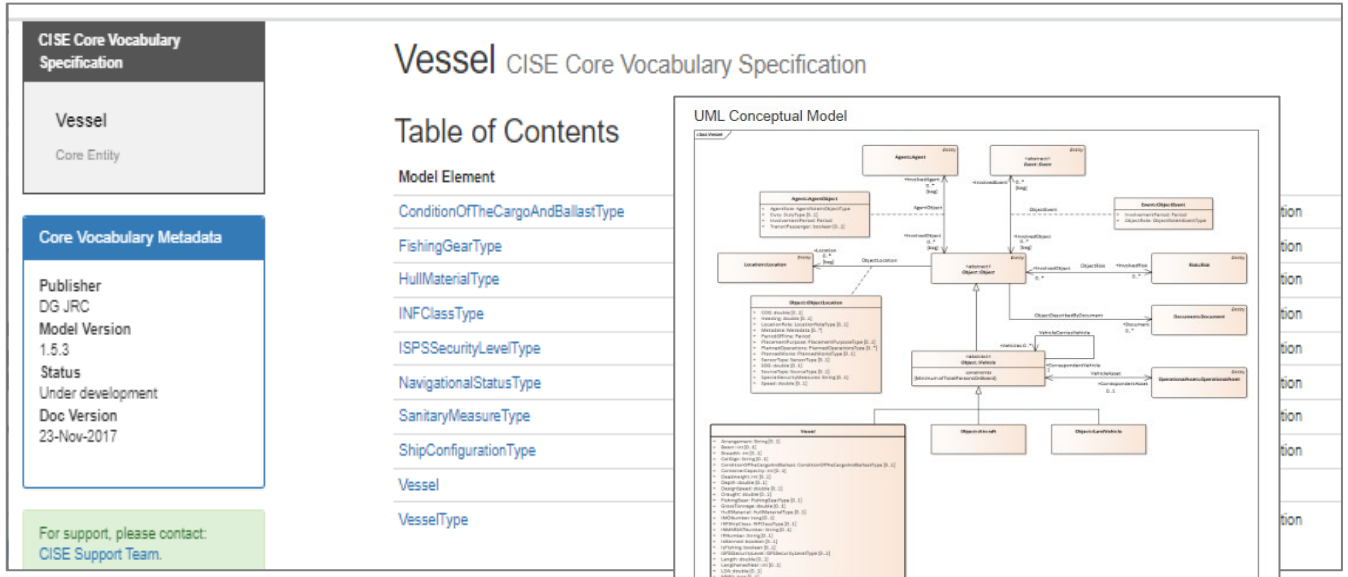
- **Compatible Data model entities + exchange protocols required** (push/pull/subscribe) for both provider and consumer adaptors



How to develop an adaptor

Adaptor and data model



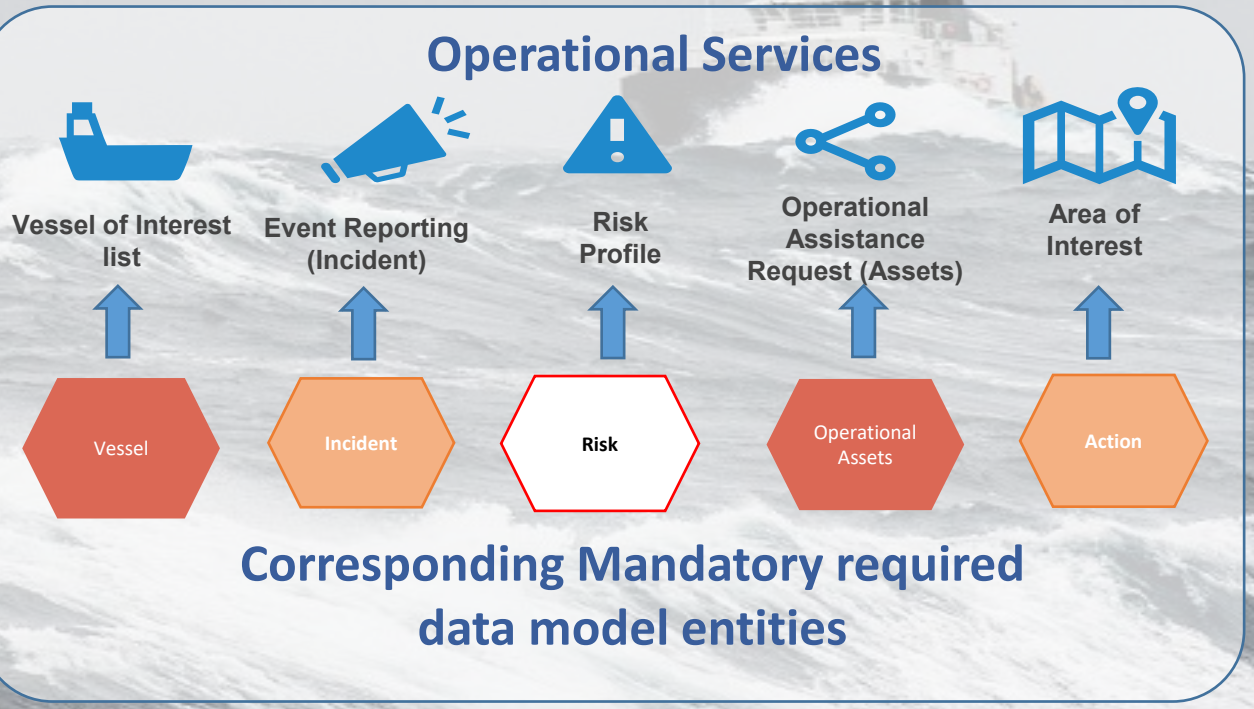


Operational Services

CISE “Operational Services” define how to use CISE services in a specific operational scenario.

They are defined by workflows that comprise one or more CISE services/data model entities. Ex: 2 or more organisations exchanging information about vessels of interest.

- Dedicated to Maritime surveillance OPERATIONAL authorities and situations
- Implemented in MS systems
- Combine different services
- 1 corresponding mandatory entity from data model



Shom: French Hydrographic Service

Reference data provider

Understand
Description
Forecast
Dissemination

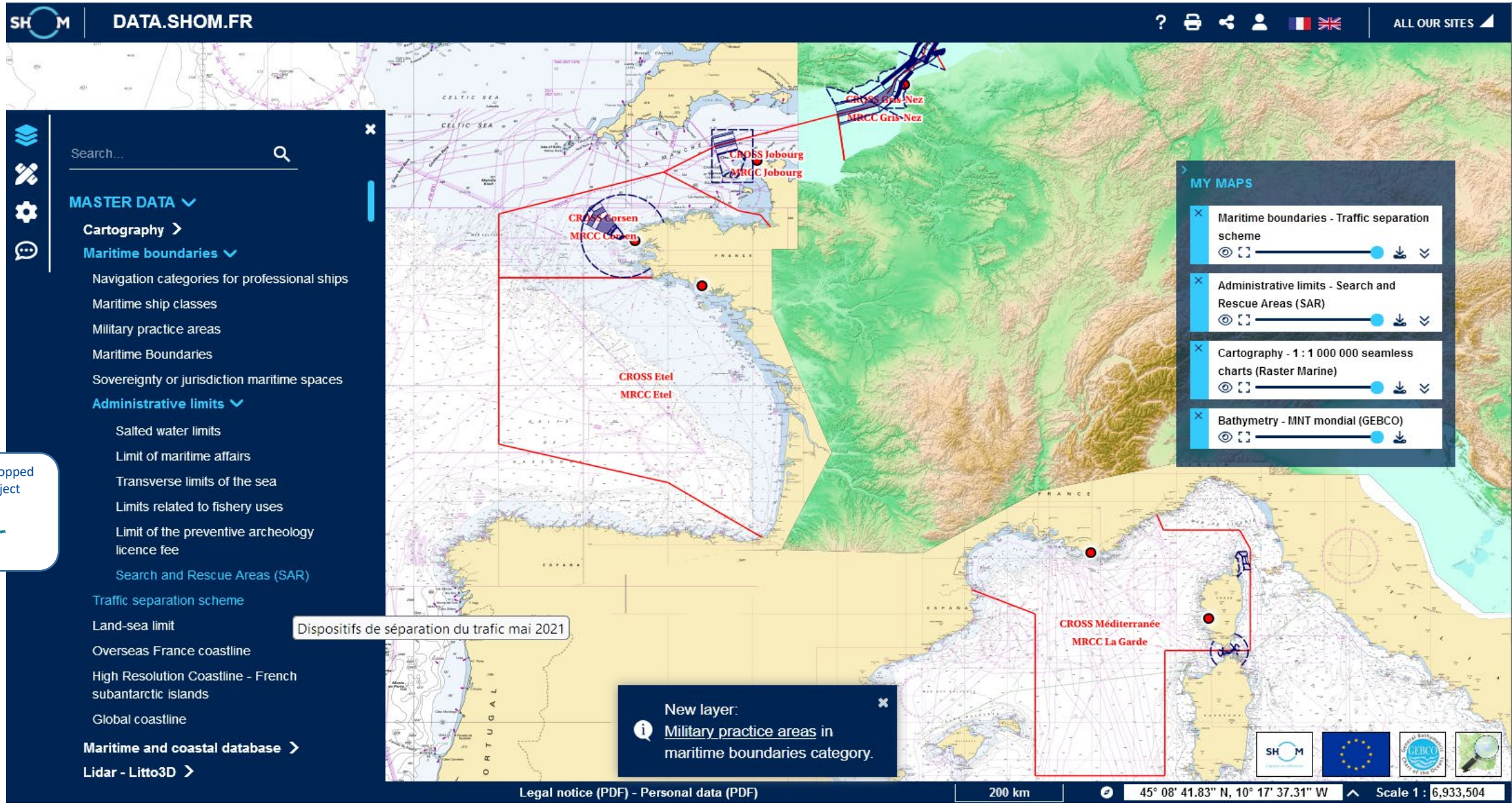
Marine
Physical
Environment

Missions

- Meet surface navigation needs
- Support armed forces
- Support public policies

Role in CISE: data provider only

Adaptor 1 – WMS Adaptor developed by JRC (2022)



WMS CISE Adaptor developped with JRC during EU Project

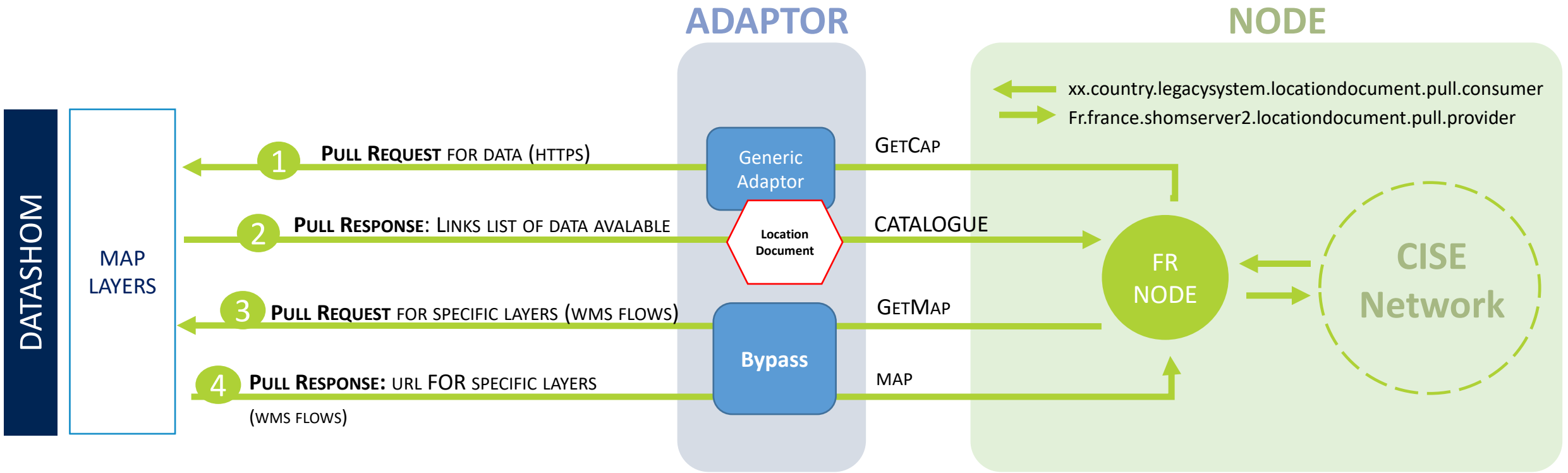
Interreg Mediterranean

MEDOSMOSIS

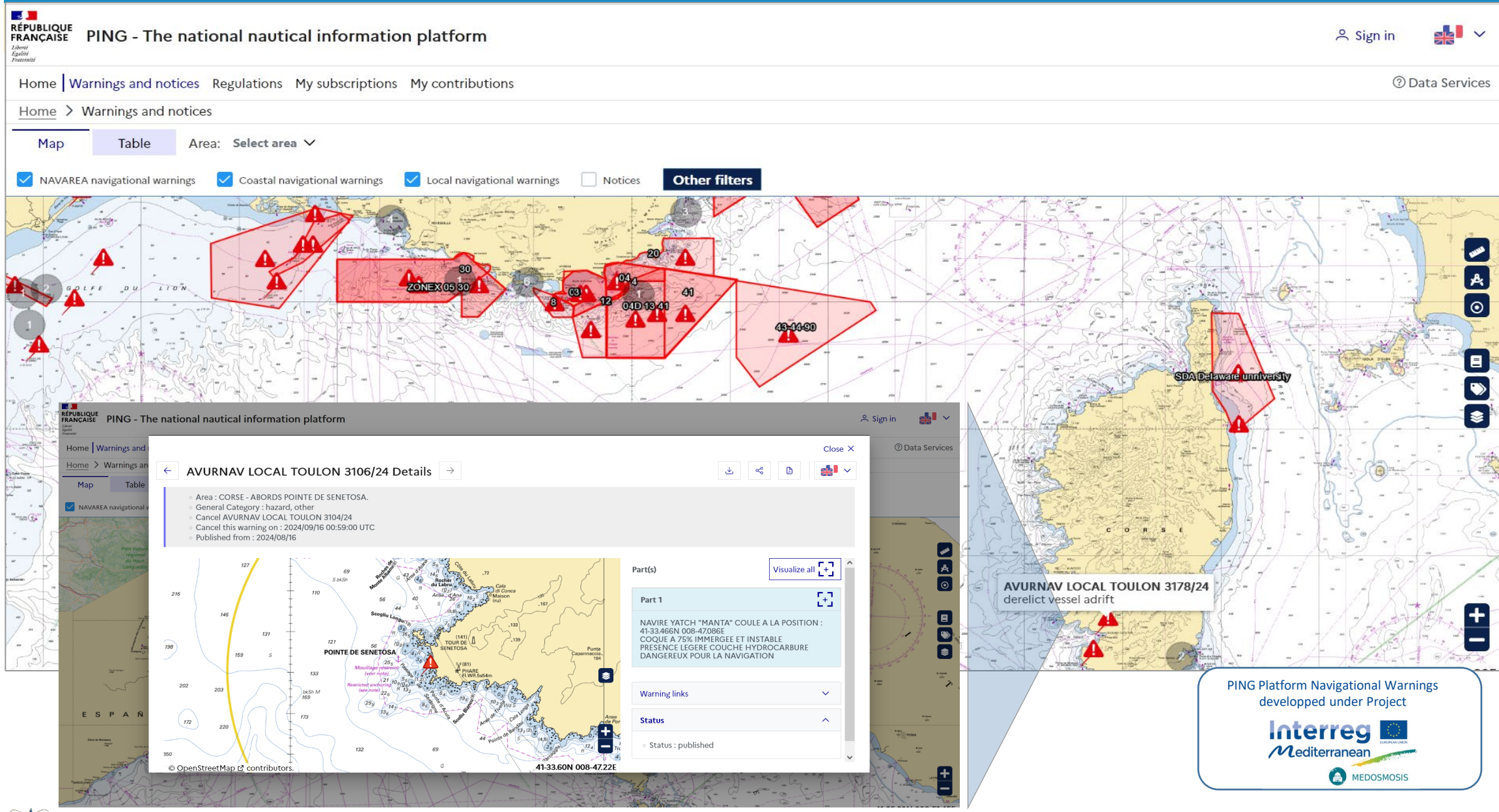
Adaptor 1: WMS adaptor

Protocol and Data model entity. Shom: data provider only => Pull protocol

WHAT ?		HOW?	SERVICE ID in NODE Interface
LS	Info/ Data?	Process	Code/country/LS Name.Protocol.Role



Adaptor 2: Nav Warnings



PING Platform Navigational Warnings developped under Project

Interreg Mediterranean MEDOSMOSIS

Cofinancé par l'Union européenne

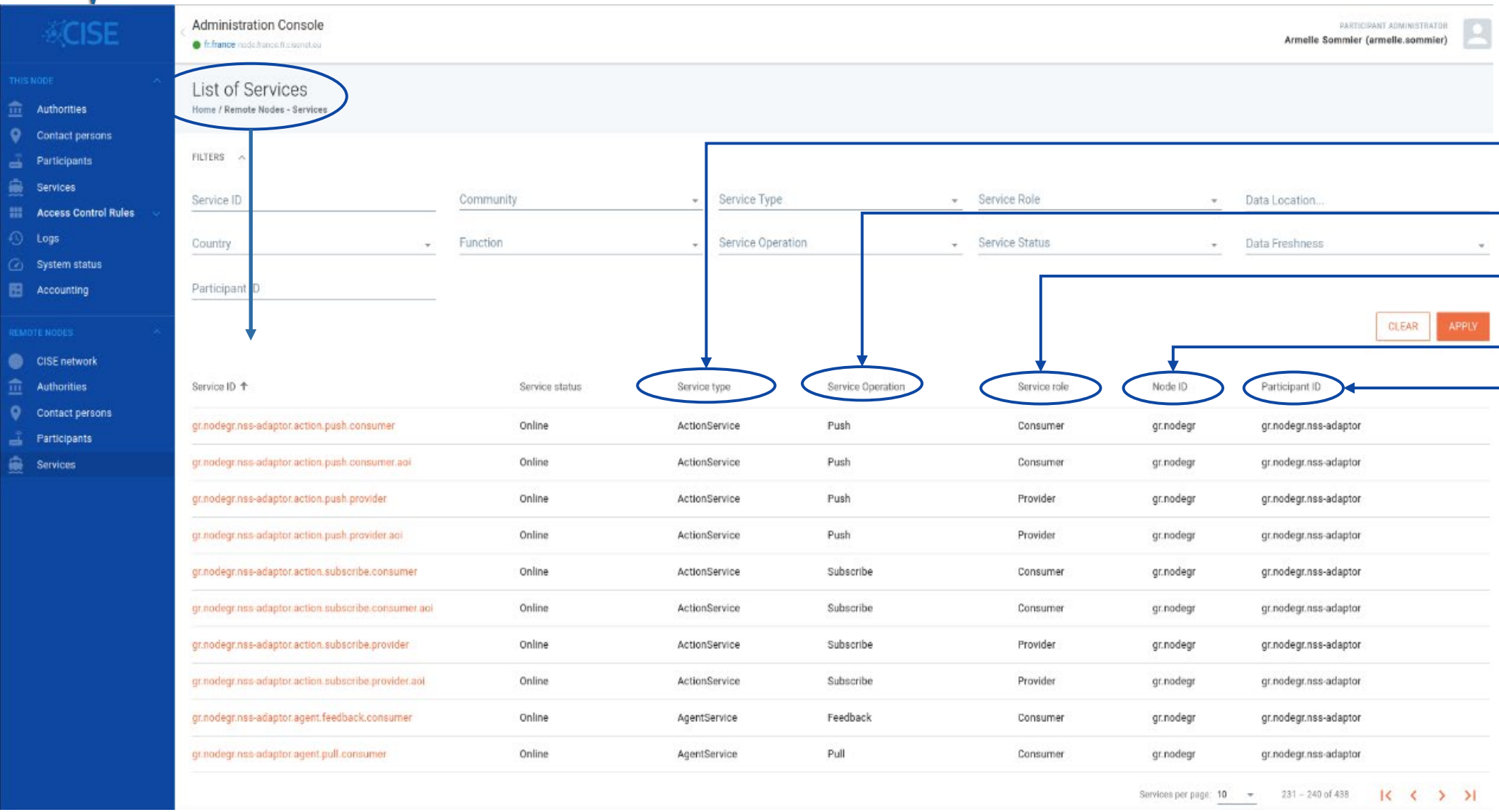
Adaptor 2: Nav Warnings

Development Steps

1	What ? For who? Why?	Navigational Warnings for authorities to contribute enhance Maritime Situational awareness authorities
2	Understand CISE	Access to CISE Interface + Study of CISE DATA MODEL
3	Service identification:	Data model Risk entity
4	Validation of protocol	Pull / Provider to respond to a request from an authority
5	Development phase	Outsource. Example provided by EMSA in java.
6	Test at national level	EMSA simulator
7	Test with other EU country	BG and GR : operational Risk Service in Pull Protocol (FR partners implementation ongoing)
8	Improvements	Addition of type of information as per data model (not all fields required)

Understanding CISE

Access and understand exchanges with Node interface



Data Model Entity (Service)

Exchange Protocols: Push, Pull, Subscribe

Role in exchange: Consumer or Provider

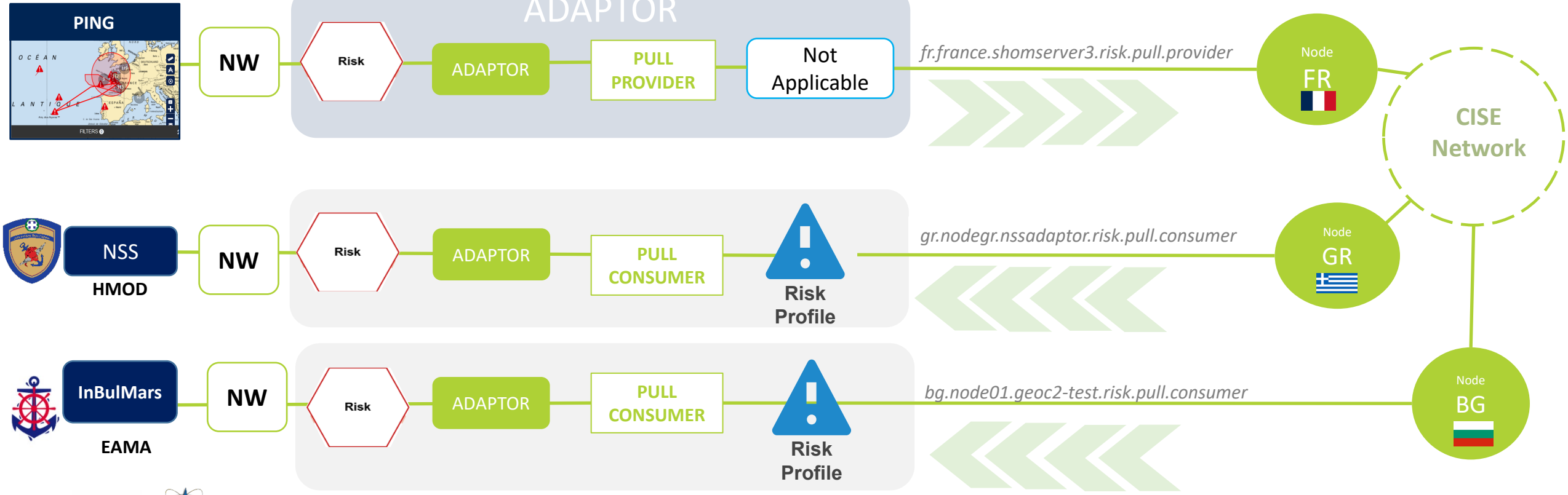
Country Node

Stakeholder System (LS)

Adaptor 2: Nav Warnings

Data model entity & Protocol

WHAT ?		HOW ?			SERVICE ID IN CISE NODE INTERFACE ?
System ?	Info/ Data ?	Service(s) ?	Protocol & Role ?	Operational Service ?	⇨Service name in CISE Interface: Code/country/LS Name.Protocol.Role



Configuration of adaptator with a Risk object

xml example:

Extract from **Training Booklet** produced by HMOD:

```
▼<Risk xmlns:ns2="http://www.cise.eu/servicemodel/v1/authority/" xmlns:ns3="http://www.cise.eu/servicemodel/v1/service/"
 xmlns:ns4="http://www.cise.eu/servicemodel/v1/message/" xmlns:ns5="http://www.cise.eu/datamodel/v1/entity/location/"
 xmlns:ns6="http://www.cise.eu/datamodel/v1/entity/document/" xmlns:ns7="http://www.cise.eu/datamodel/v1/entity/organization/"
 xmlns:ns8="http://www.cise.eu/datamodel/v1/entity/incident/">
  ▼<Identifier>
    ▼<GeneratedBy>
       <AlternativeName>SATWAYS</AlternativeName>
       <IdentificationNumber>SATWAYS</IdentificationNumber>
       <LegalName>SATWAYS</LegalName>
       <OrganizationClassification>Governmental</OrganizationClassification>
       <OrganizationPurpose>MarineEnvironment</OrganizationPurpose>
       <OrganizationPurpose>MaritimeSafetyAndSecurity</OrganizationPurpose>
       <OrganizationRole>NonSpecified</OrganizationRole>
     </GeneratedBy>
     <GeneratedIn>2024-03-06T07:52:29.358Z</GeneratedIn>
     <UUID>d57aa869-6df1-445e-997d-a0a2ef8abaf1</UUID>
   </Identifier>
  ▼<Metadata>
     <Description/>
   </Metadata>
   <RiskLevel>High</RiskLevel>
   <RiskProbability>Frequent</RiskProbability>
   <RiskSeverity>Catastrophic</RiskSeverity>
   <RiskType>Accident</RiskType>
  ▼<LocationRel>
    ▼<Location>
      ▼<Geometry>
         <Altitude>0.0</Altitude>
         <Latitude>37.818191984242375</Latitude>
         <Longitude>25.77529907226563</Longitude>
         <WKT>POINT (25.77529907226563 37.818191984242375)</WKT>
       </Geometry>
     </Location>
   </LocationRel>
```

CISE Risk Important Fields

- Identifier
  - GeneratedBy providing the IdentificationNumber
  - UUID
- RiskLevel
- RiskProbability
- RiskSeverity
- RiskType
- OccurencePeriod , UTC Start / End Date
- Location WKT Point Geometry

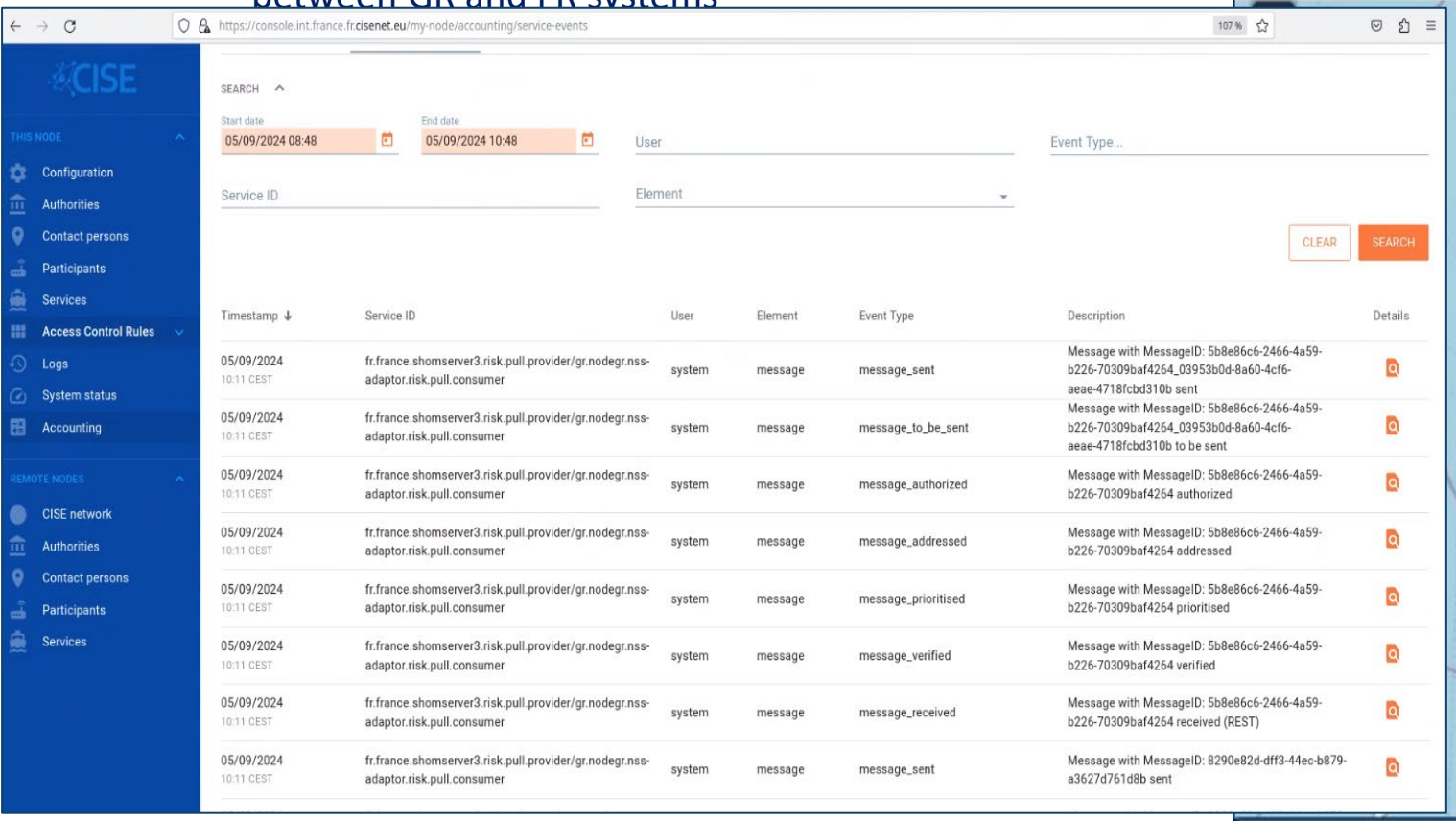
Configuration of adaptator with a Risk object

Current xml illustration

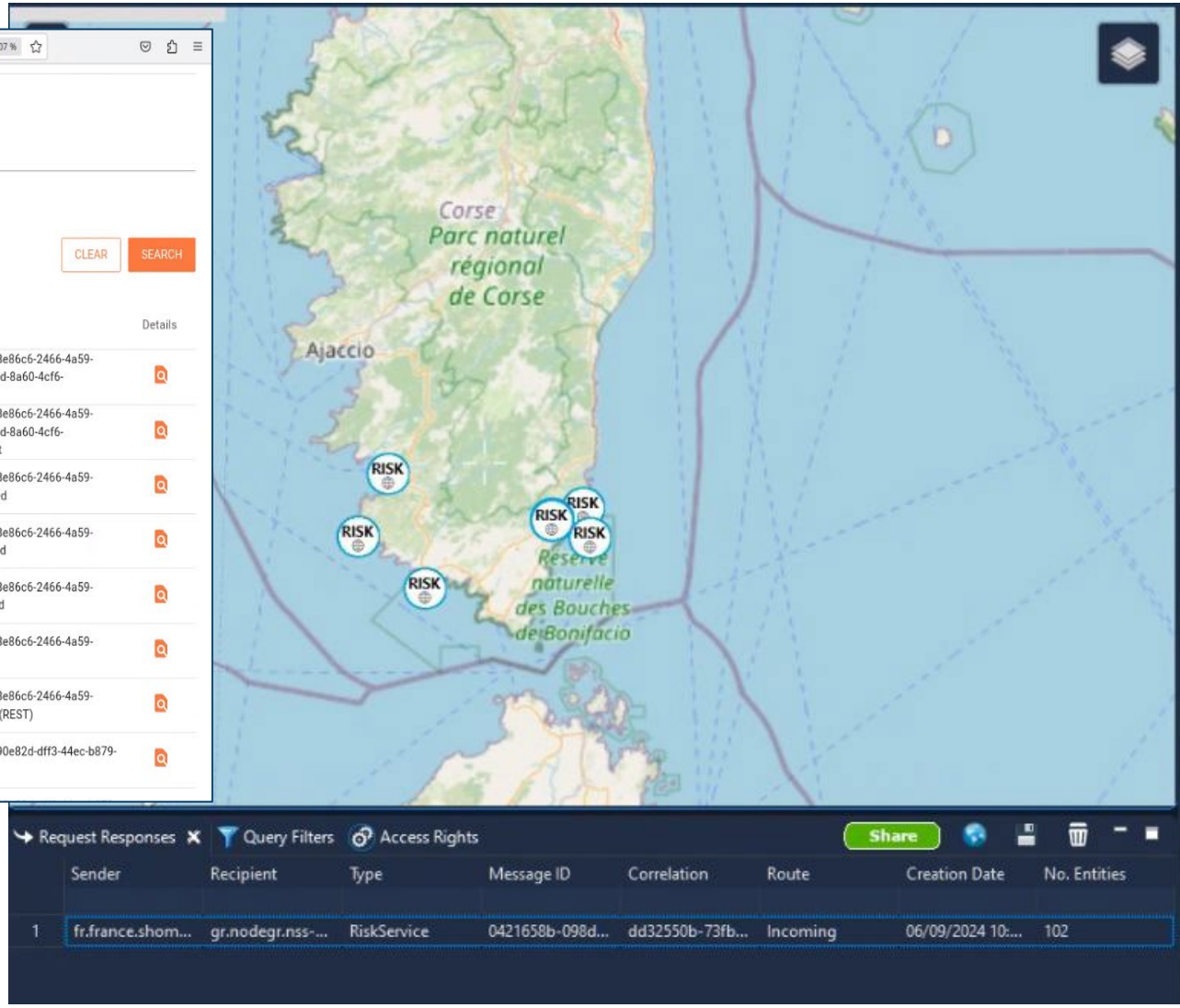
```
<Risk>
<Identifier>
<UUID>
nw_published_avurnav_toulon_v2_en.fid--6678a655_191be711143_-159e
</UUID>
</Identifier>
<Metadata>
<Abstract>generalarea</Abstract>
<Comments>PROVENCE</Comments>
<Language>eng</Language>
<PublicationDate>2024-09-04T00:00:00.000Z</PublicationDate>
</Metadata>
<OccurrencePeriod>
<Duration>P0Y1M0DT0H0M0S</Duration>
</OccurrencePeriod>
<RiskLevel>NonSpecified</RiskLevel>
<RiskProbability>NonSpecified</RiskProbability>
<RiskSeverity>NonSpecified</RiskSeverity>
<RiskType>Accident</RiskType>
<LocationRel>
<Location>
<Geometry>
<WKT>
POLYGON ((5.500016666775801 42.96668333351419, 5.633350000356742 43.03835000008024, 5.633350000356742 42.666683333136895,
5.500016666775801 42.666683333136895, 5.500016666775801 42.96668333351419))
</WKT>
</Geometry>
</Location>
</LocationRel>
</Risk>
```

Tests with project partners

Logs in CISE French node interface showing activity between GR and FR systems



Navigational Warnings from PING displayed in HMOD system (Sept 2024)



Feedback

Challenges:

- Node fully operational and connected is key
- Time and resources need to be allocated for full understanding of environment, data model and notion of Services
- Combined understanding of both field operational needs and technical requirements is mandatory.
- Implementation of same attributes necessary for full interoperability

Recommendations:

- **EMSA Tools:** CISE CATALOGUE, Wiki…
- CISE Alert Training booklet (by HMOD) available with illustrated examples for each step
- Refer to existing available xml examples
- Anticipation of evolution of data model to comply with standards in place or up-coming.

Ex: Navigational Warnings: S124 based on guidelines set in the joint IHO/IMO/WMO Manual on Maritime Safety Information (MSI) which will be at term used on ECDIS onboard vessels

CISE-ALERT

CISE's operationalization launch through A Long Endurance and Real live Test

Thank you !

L'océan en référence

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