

Maritime Spatial Data Service

Why standards help to increase the quality of the operational services

Gianluca Luraschi
gianluca.luraschi@emsa.europa.eu

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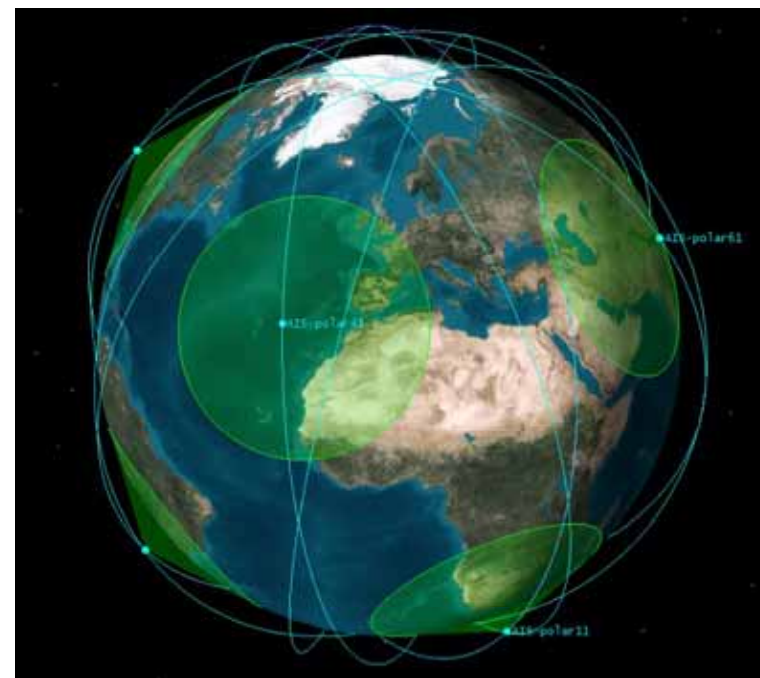


Introduction to European Maritime Safety Agency (EMSA)

CleanSeaNet (CSN) - > Maritime Earth Observation System

What are the challenges to create a near real time operational Maritime Spatial Data Service? How to address the challenges

Q&A



Background:

Post *Erika* (2002: EMSA established, set-up started 2003)

Legal basis:

- Regulation 1406/2002/EC
- Regulatory Agency of the European Community
- Own legal identity
- Technical and operational support to EC and MS
- Approximate 200 staff
- Annual budget about 60 MEURO



Legal framework is provided by Directive 2005/35/EC on ship sourced pollution

European system for detecting oil slicks

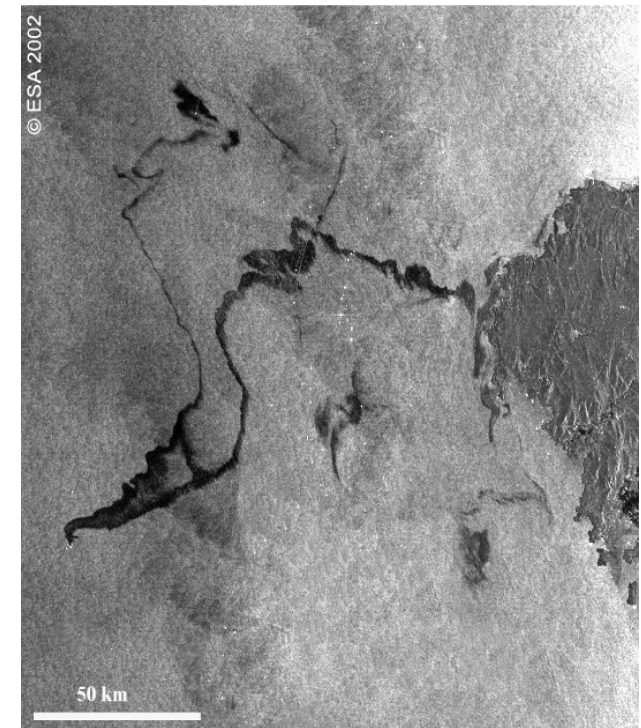
- System that interoperate with national/regional response chain (aerial/naval surveillance)
- Identification of potential polluters and provide analysis capabilities

–CleanSeaNet (CSN) versions

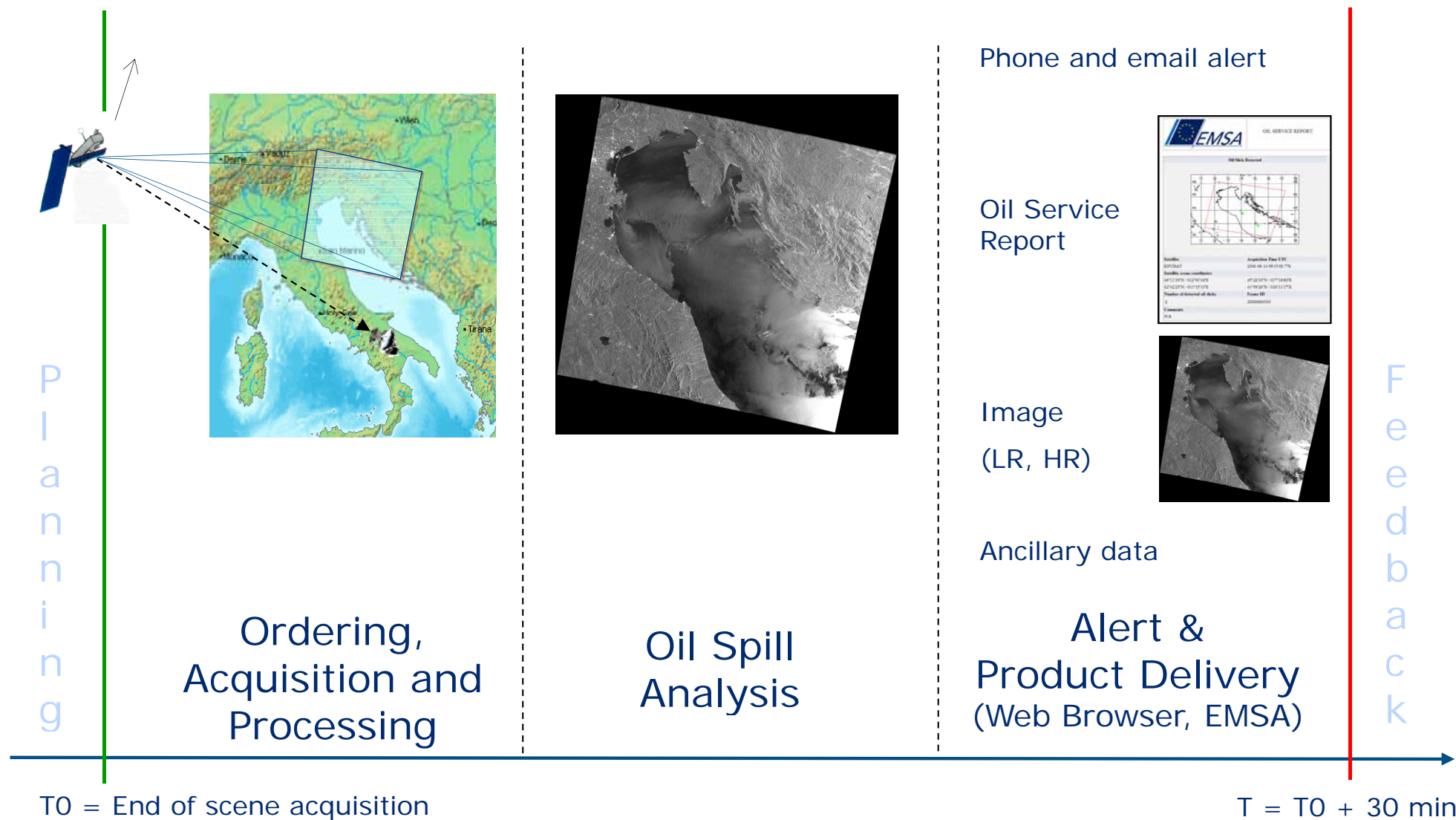
- CSN v1.0 operational Apr. 2007
- CSN v2.0 operational Feb. 2011

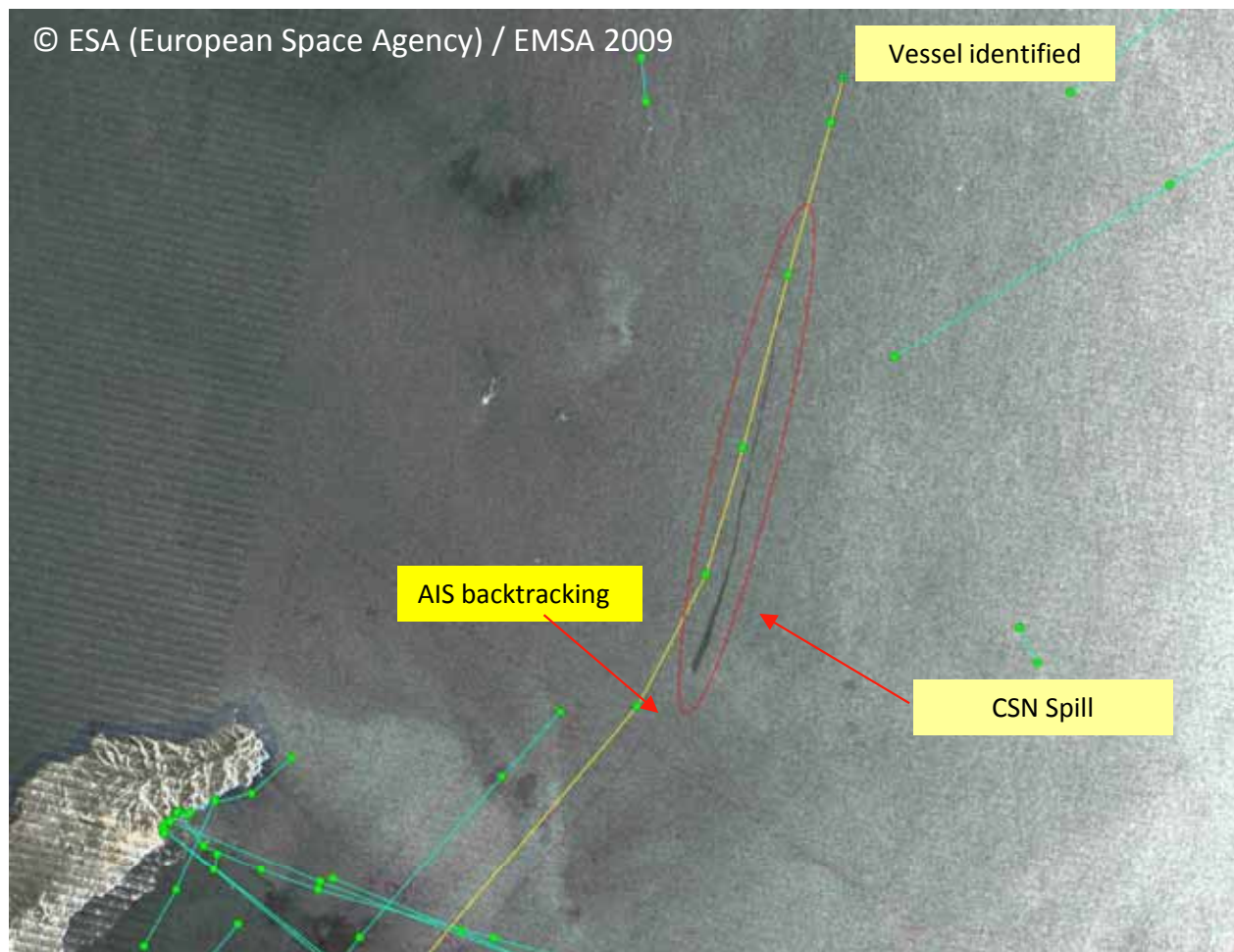
–Users

- 28 EU + EFTA Coastal States
- Approximately 500 users



Enterprise viewpoint – use case



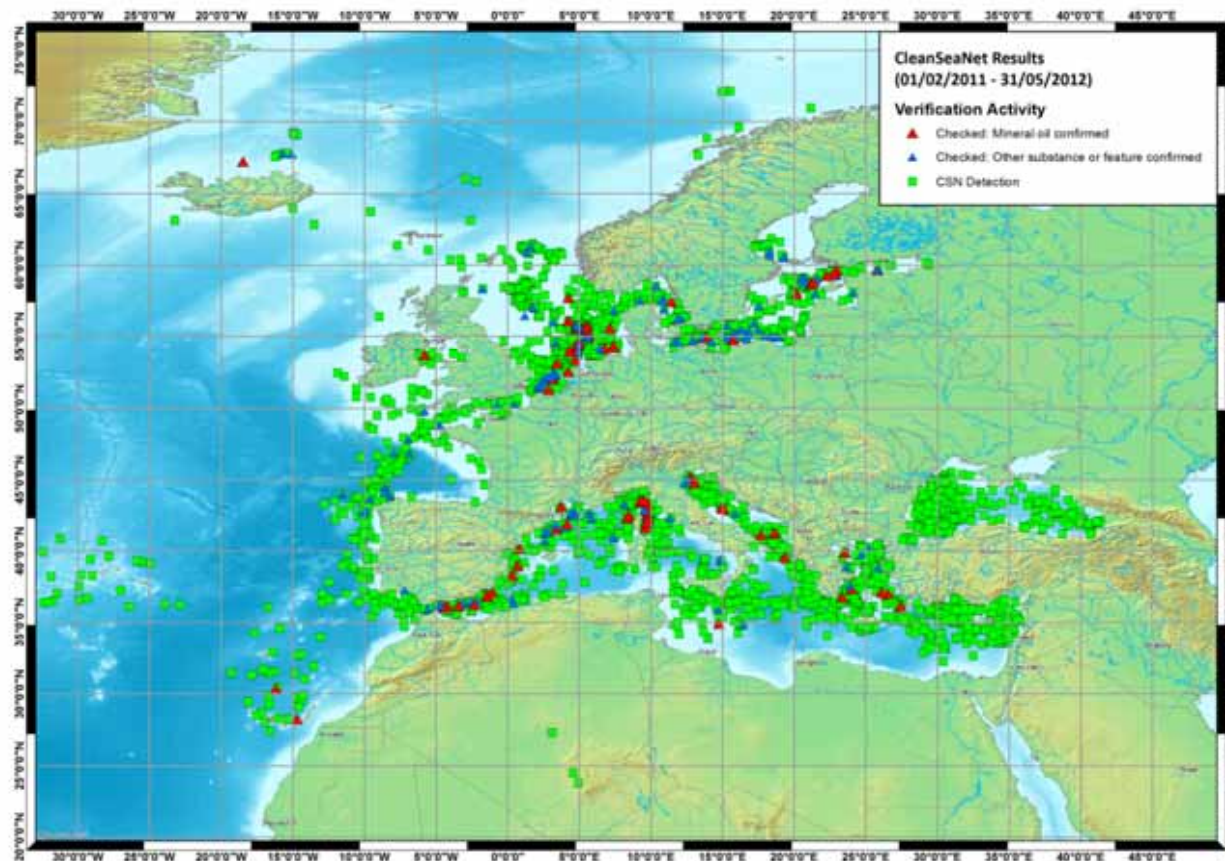


possible spill reported
by CSN and confirmed
by aircraft as being
mineral oil - 42 km long

polluter identified using
AIS information

ENVISAT image acquired over the Canary Islands on
15 September 2009 by the Azores ground station

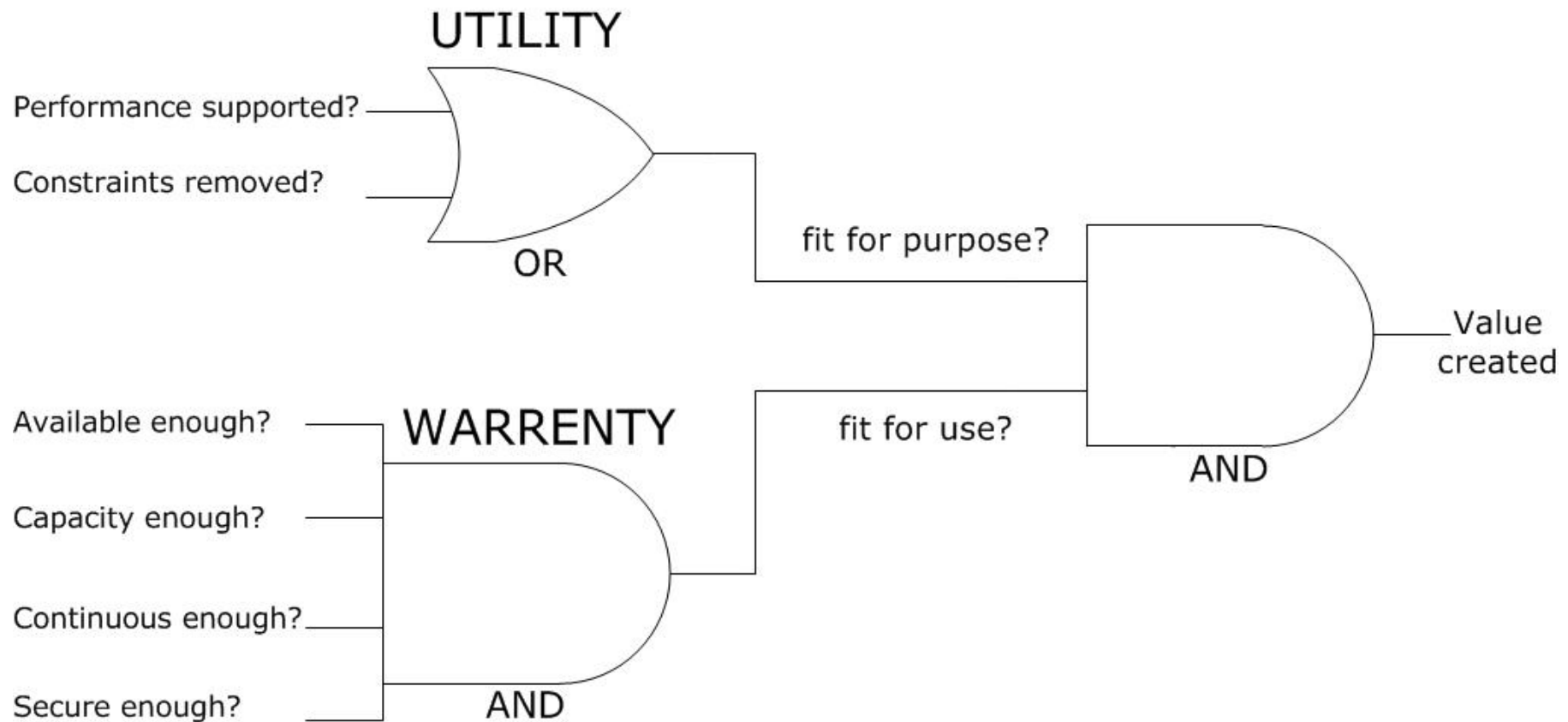
Oil Spill detection



7 satellite images per day
5 oil spills per day

What does service mean?

A SERVICE is a mean of delivering value to customers by facilitating outcomes customers without the ownership of specific costs and risks (ITIL)



For CSN, as many operational emergency services, **taking the right decision at the right time**, means to analyse all the relevant information when some predefined event is detected (e.g. an Oil Spill) and trigger a set of actions

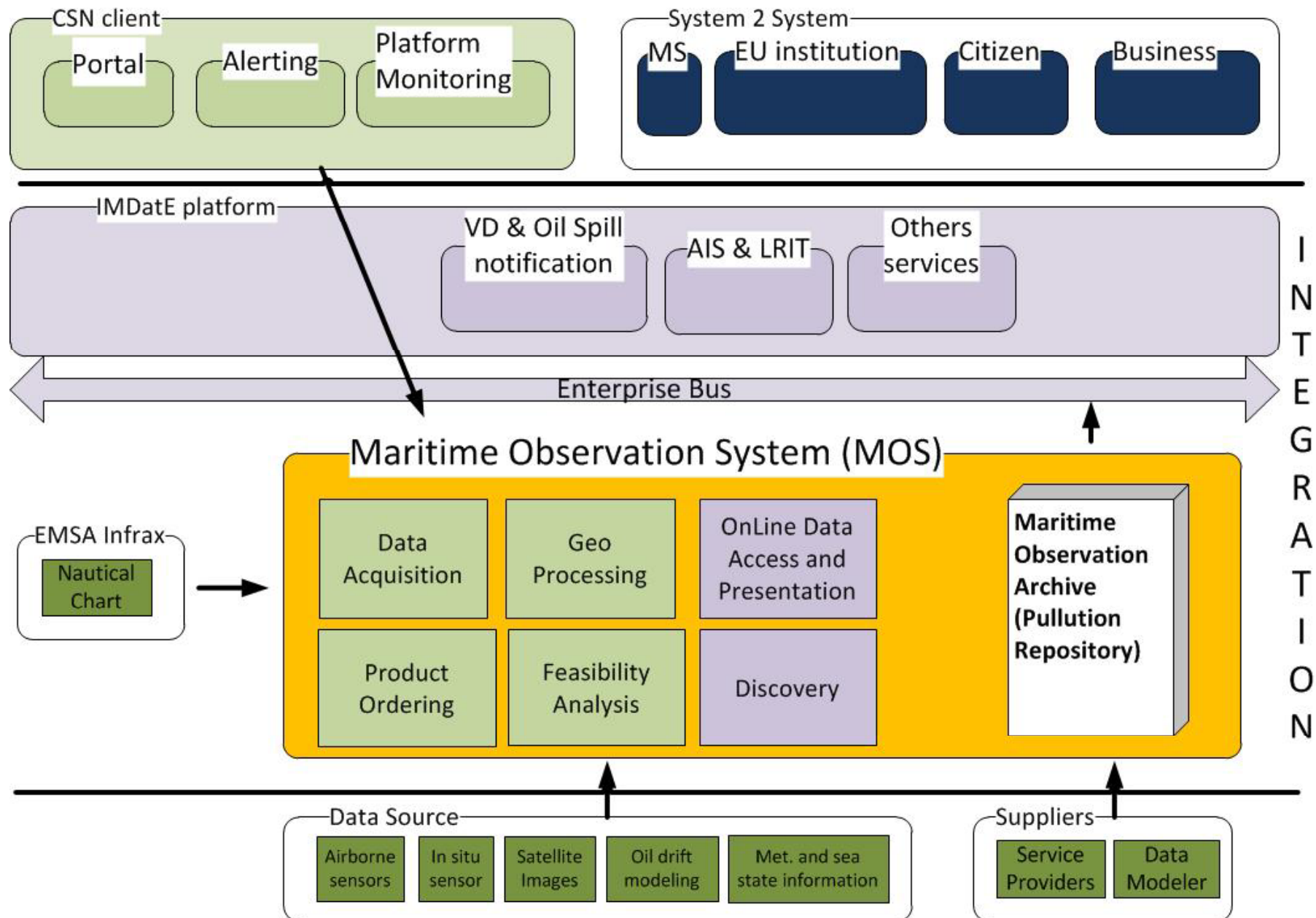
1. CSN acquires and process huge **variety** of data sources
2. CSN is a **near real time** service with demanding performance
3. CSN process a quite huge **volume** of data every day
4. CSN involves **many users** form different countries and organizations
5. CSN enables the exchange of information among its users (**technical and semantic interoperability**)
6. CSN is a Maritime Service which belongs to **different themes**: safety, environment, security

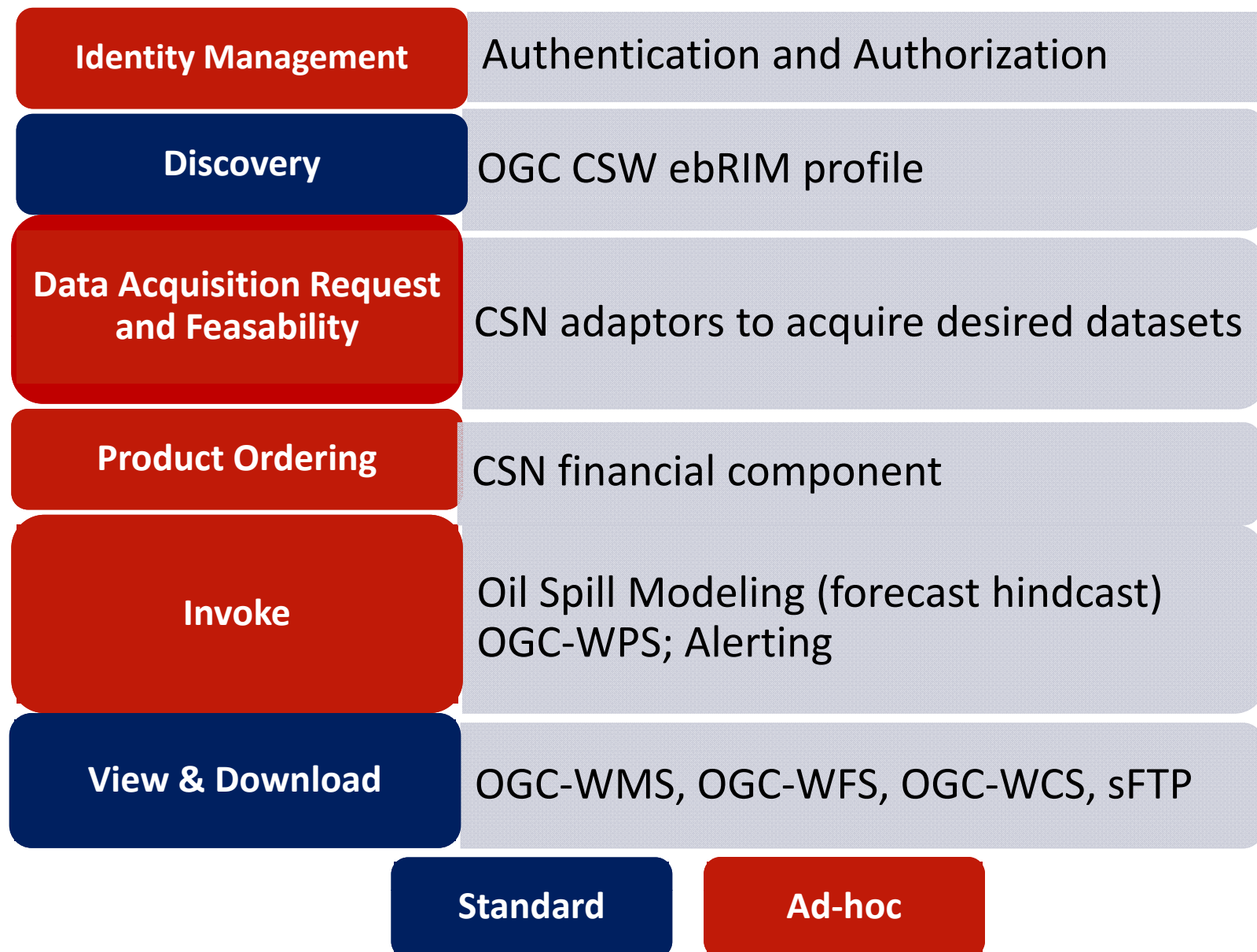
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INTEROPERABILITY based on standards as key driver for:

- Fit the EU policies requirements;
- Increase the RE-USABILITY of the EMSA maritime services avoiding to tailor the services or clients for each use case;
- Exchange CROSS-SECTOR information among EU Institutions and MS;
- Seamlessly acquire NEW DATASET;
- Streamline the continuous IMPROVEMENT of the standard services without having to bear the ownership of the costs;
- Increase the efficiency to MAINTAIN the standard services due to the fact that they are deployed in many environments less prone to fail than ad-hoc implementations;
- Avoid CONTRACTOR'S DEPENDENCY and promote competitiveness.

Maritime Earth Observation Service





CSN implements syntactic interoperability: The CSNDC information exchange mechanism is based on Geographic Markup Language (GML - ISO 19136)

Earth O bservation P roduct	• SAR and Optical Satellite Image
O il Spill W arning	• “Early” Warning
O il Spill N otification	• Oil spill data
Q uality N otification	• Image Displacement
SAR D ERived D ata	• Wind, Waves, Detected Vessels
Q uality R eport	• Quality indicators

Standard

Ad-hoc

- Very slow legal and standardization process “we cannot wait”
- Technological providers protect the business with proprietary solution
- Interdependencies among organizations for release management
- Heterogeneity LESS issues data format MORE issues with data quality (scale, accuracy, timing)
- New devices with specific requirements increase the complexity of the eco systems (mobile/tablet)
- Access and Right management
- Error Management always lower estimated
- Standard vs Performance



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