

FISHERIES



UN/CEFACT meeting

Flux project Introduction

DG Mare D4

17/10/2013

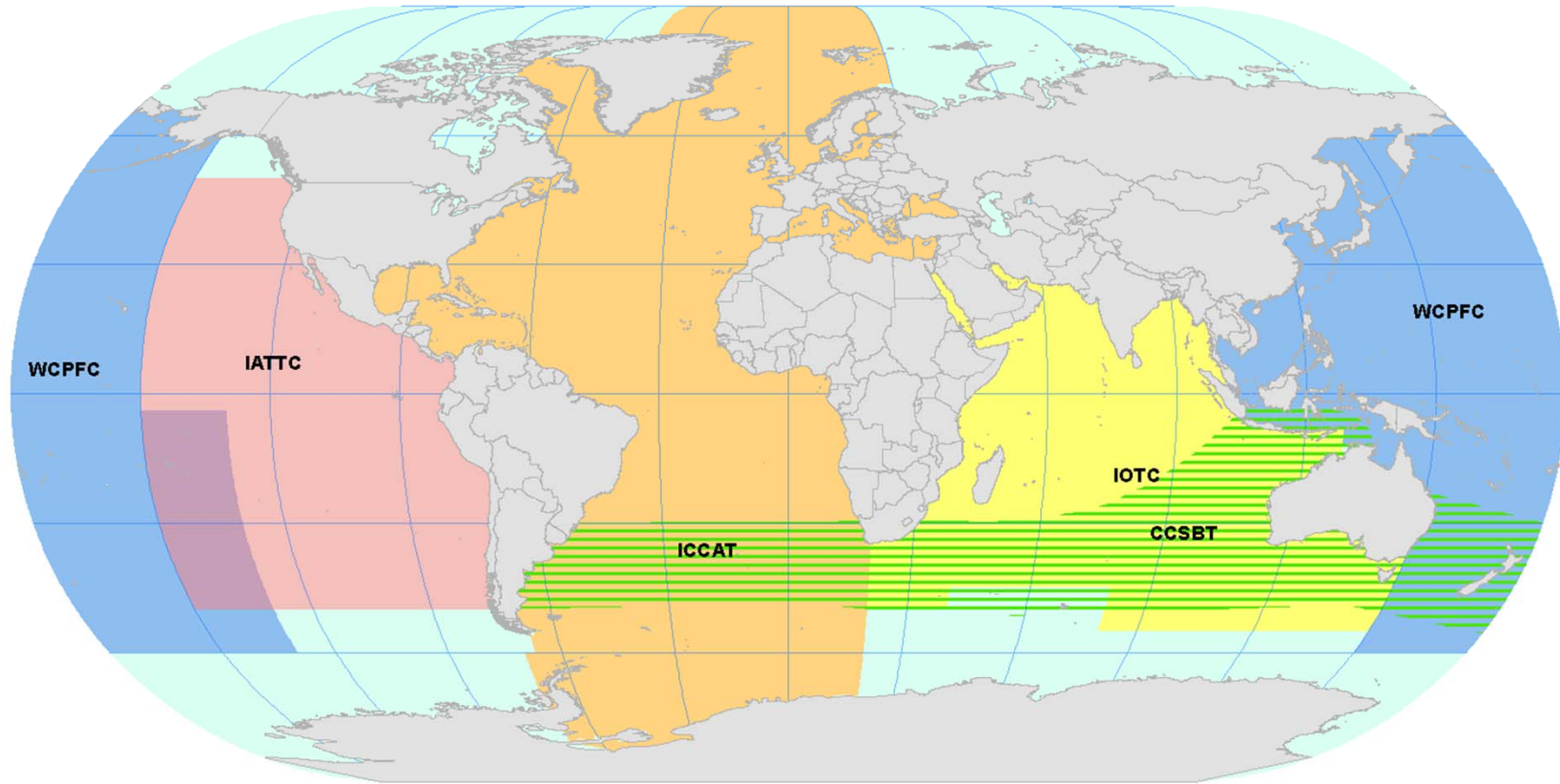


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and Fisheries

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Example of EU fisheries – international arrangements

RFMOs for Highly Migratory Fish Stocks (Tuna and Tuna-like)



- CCSBT - Commission for the Conservation of Southern Bluefin Tuna
- IATTC - Inter-American Tropical Tuna Commission
- ICCAT - International Commission for the Conservation of Atlantic Tuna
- IOTC - Indian Ocean Tuna Commission
- WCPFC - Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Source Geographical Data: DG MARE B2, ESTAT GISCO
Cartography: DG MARE B2 GIS and Data Analysis Team - 28/06/2011

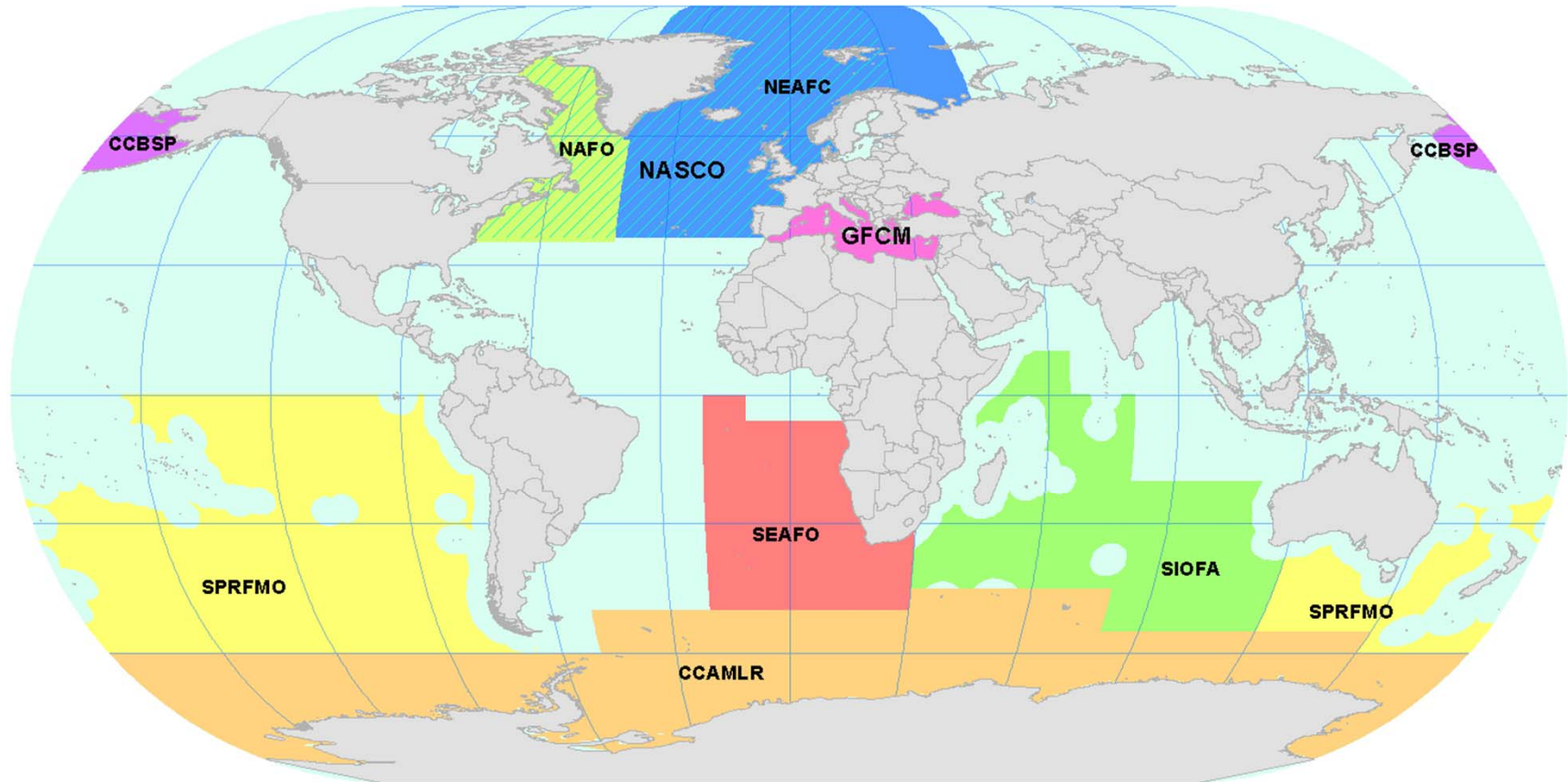
Projection System: Eckert III - Scale approx. 1:88,000,000
The boundaries shown on this map are for illustrative purposes only.

Map reference: RFMO Tuna A3 110628



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RFMOs (non-Tuna)



- CCAMLR - Commission for the Conservation of Antarctic Marine Living Resources
- CCBS - Convention on the Conservation and Management of the Pollock Resources in the Central Bering Sea
- GFCM - General Fisheries Commission for the Mediterranean
- NAFO - Northwest Atlantic Fisheries Organization
- NASCO - North Atlantic Salmon Conservation Organization
- NEAFC - North-East Atlantic Fisheries Commission
- SEAFO - South-East Atlantic Fisheries Organisation
- SIOFA - South Indian Ocean Fisheries Agreement
- SPRFMO - South Pacific Regional Fisheries Management Organisation

Source Geographical Data: DG MARE B2, ESTAT GISCO
Cartography: DG MARE B2 GIS and Data Analysis Team - 28/06/2011

Projection System: Eckert III - Scale approx. 1:88,000,000
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Map reference: RFMO Tuna A3 20110628

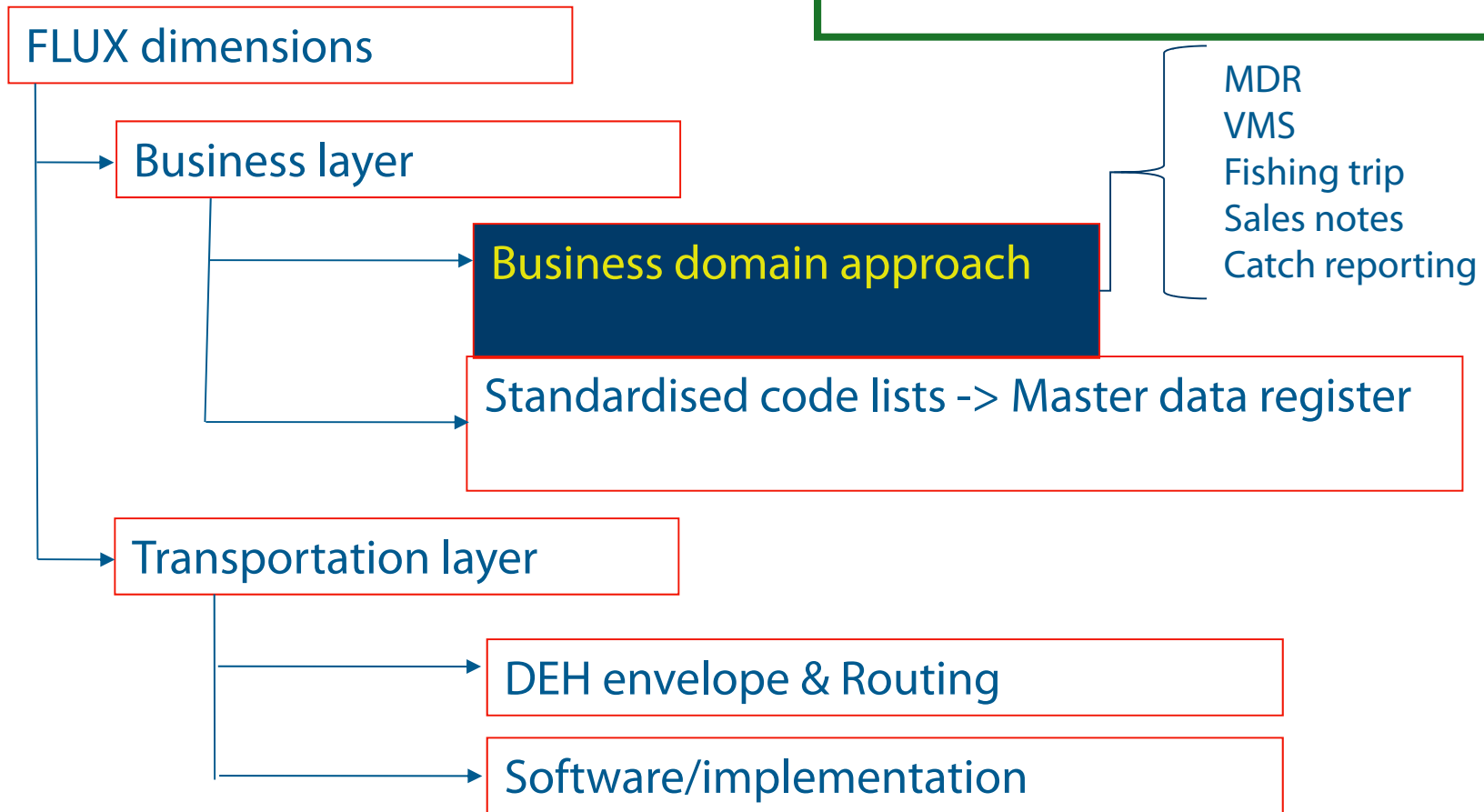


The issue, part 1

- **Fishing vessels can fish all over the world**
- **Fishing is controlled by many organisations:**
 - National authorities
 - Fishing partnership agreements
 - Regional Fishing Management Organisations
- **Monitoring is largely based on logbook data**
- **Paper logbook is gradually replaced by Electronic Reporting Systems**
- **Different and incompatible ERS systems for EU and Norway**
- **Every new ERS version requires high costs for fishermen and flag state**

A single language for all data exchanges

The FLUX project



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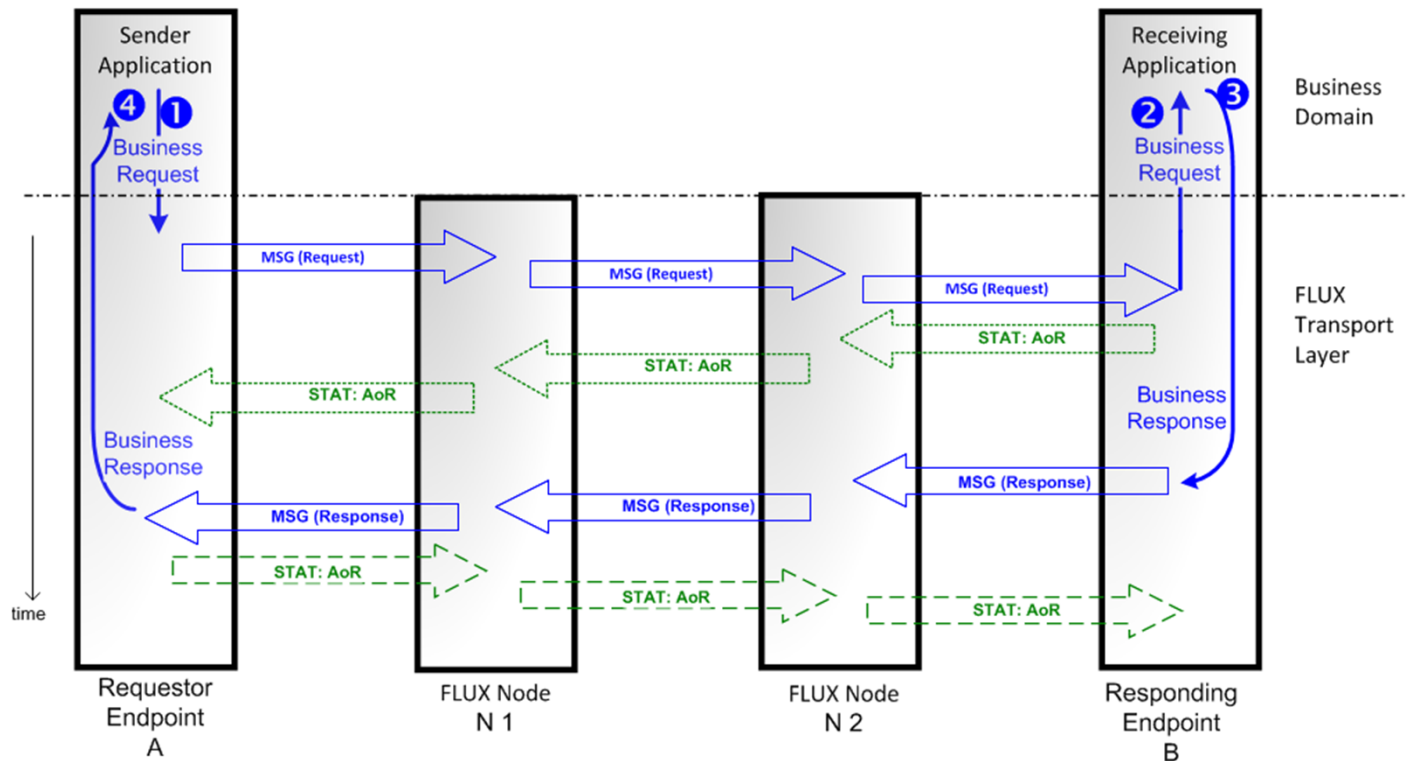


1. The Transportation layer

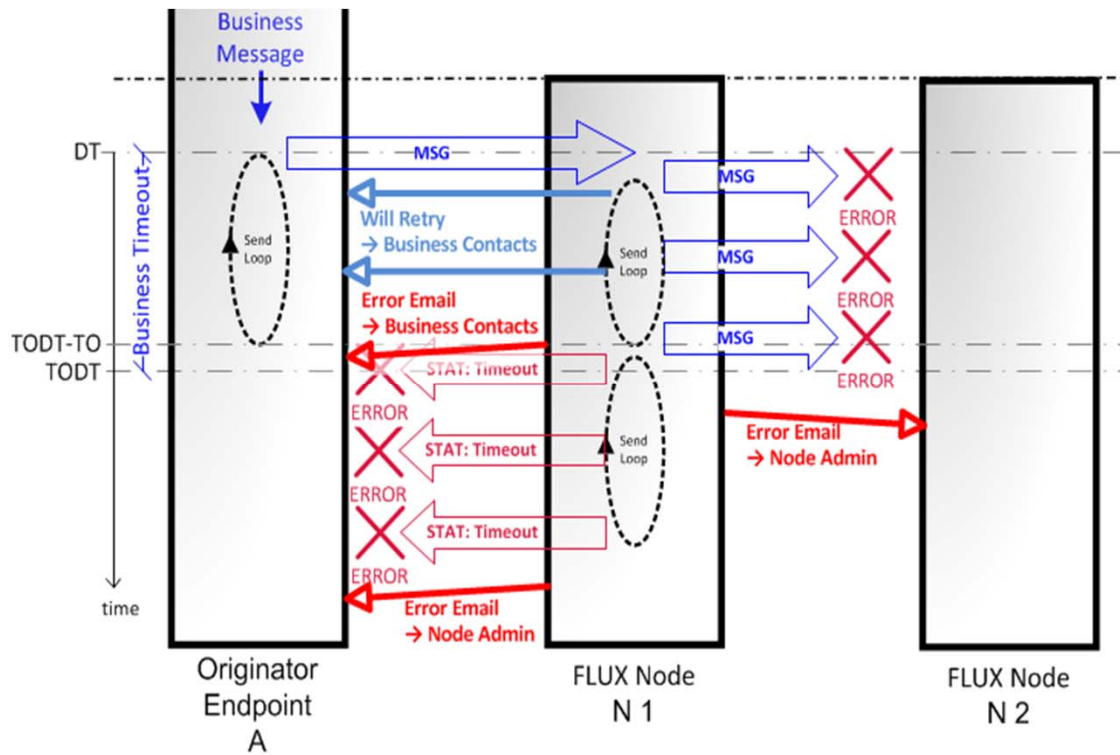


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Routing and guaranty of the delivery



Error handling



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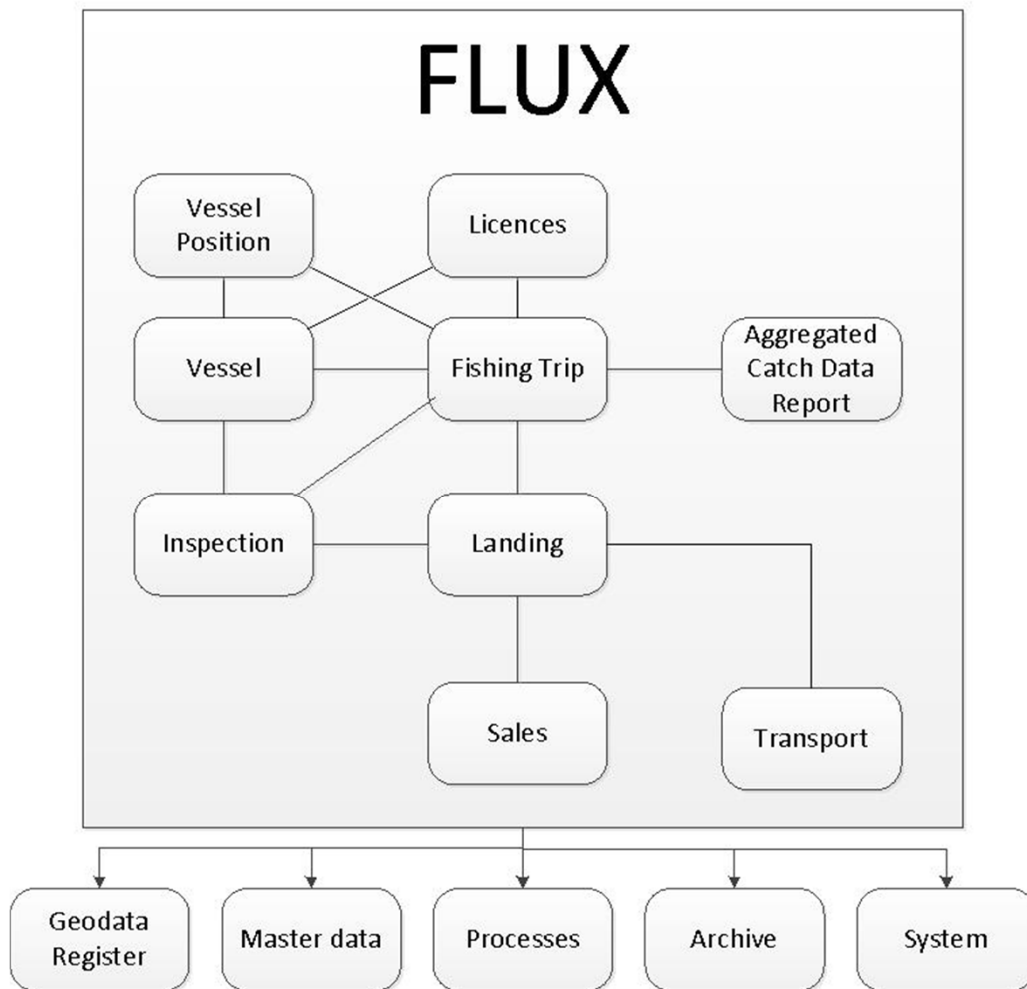


2. The Business layer



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Business domains



P1000 - 1; General principles

P1000 - 2; Vessel domain

P1000 - 3; Fishing trip domain

P1000 - 4; Landing domain

P1000 - 5; Sales note domain

P1000 - 6; Transport domain

P1000 - 7; VMS domain

P1000 - 8; Inspection domain

P1000 - 9; Licence domain

P1000 - 10; Master data register domain

P1000 - 11; System domain

P1000 - 12; Aggregated Catch Data Report

State of Play

- **Presented to UN/CEFACT Harmonization Group**

- P1000 - 1; General principles

- P1000 - 7; Vessel Position domain

- P1000 - 12; Aggregated Catch Data Report domain

- **Basis for working groups to continue**

- P1000 - 10; Master data register domain

- P1000 - 3; Fishing trip domain

- P1000 - 2; Vessel domain

Working groups

- **P1000 - 2; Vessel domain in cooperation with FAO**
- **P1000 - 3; Fishing trip domain: MS and Norway**
- **P1000 - 4; Landing domain: MS**

- **P1000 - 8; Inspection domain, on basis of project EFCA and MS**
- **P1000 - 9; Licence domain; in cooperation with Norway**

- **Blue fin and tropical tuna: working group of MS, proposal to ICATT**

Focus:

- **Provisional XSD for General principles, Vessel Position and ACDR**
- **Reason:**
 - Required to clarify lot of issues for all working groups
 - Testing/rolling out of software

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FLUX General Principles



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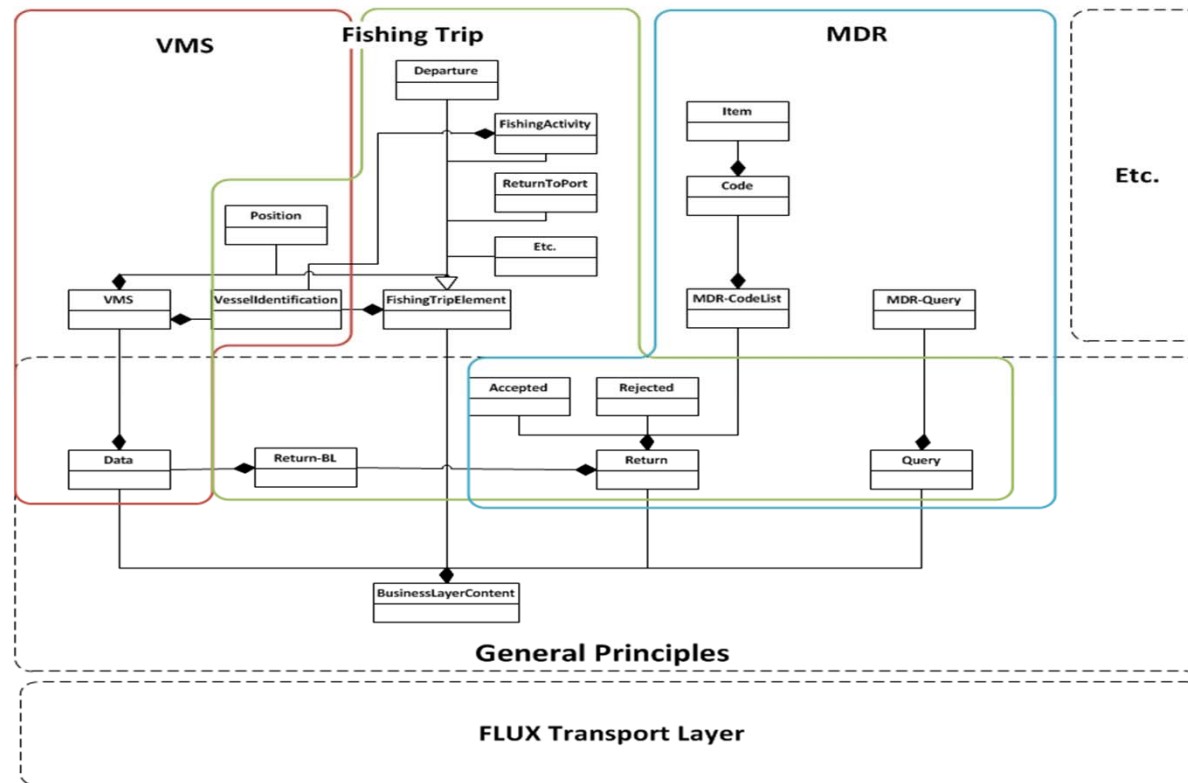
General Principles BRS

What is the purpose of the General Principles document?

- **Splitting the definition of the whole FLUX domain into Sub-domains.**
 - => generating multiple derived BRS per domain instead huge BRS document.
- **Defining the common behavior and data structure of all other sub-domains.**

General Principles Structure

Multiple Layers extending the others



General Principles Behaviour

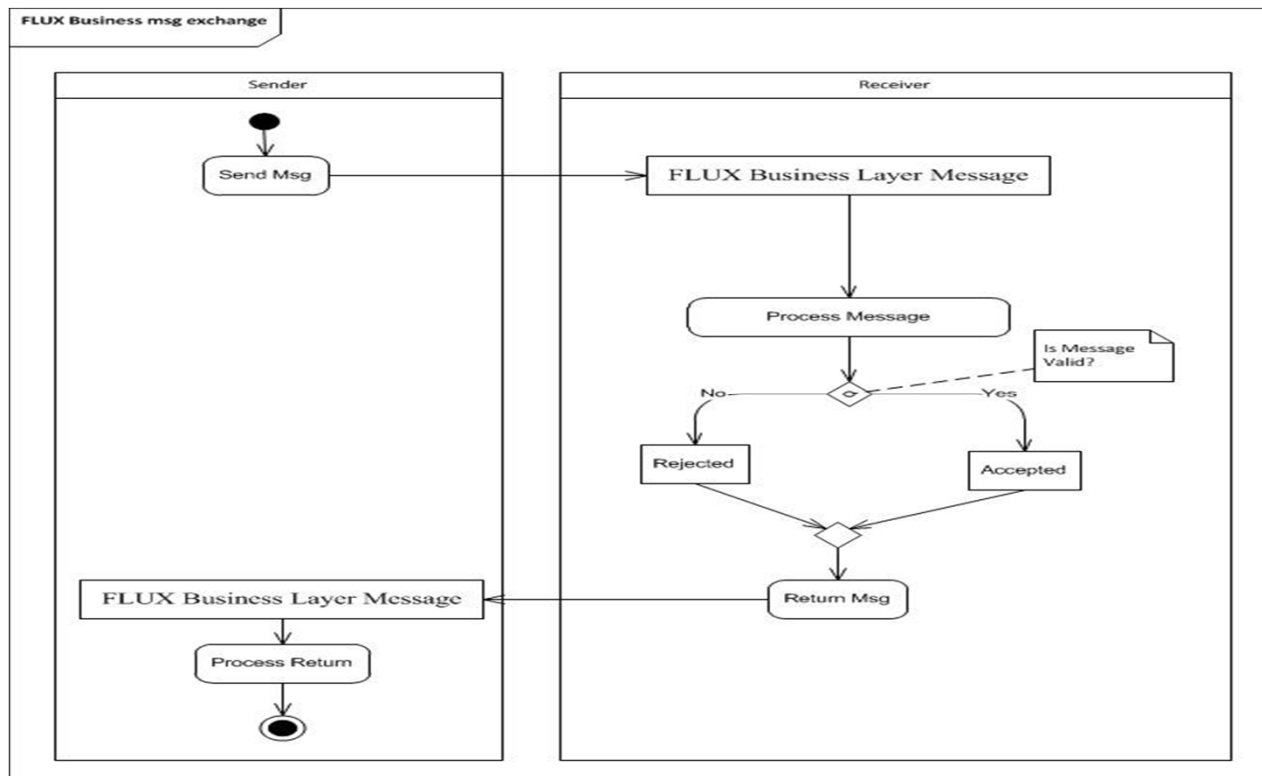
Common features defined in all sub-domains:

- Sending data to a partner.
- Need of response to every messages sent.
 - NB: Could be optional (I.e. Vessel Position domain)
- Questionning the receiver for returning the available data.

Sending data

Common FLUX message process:

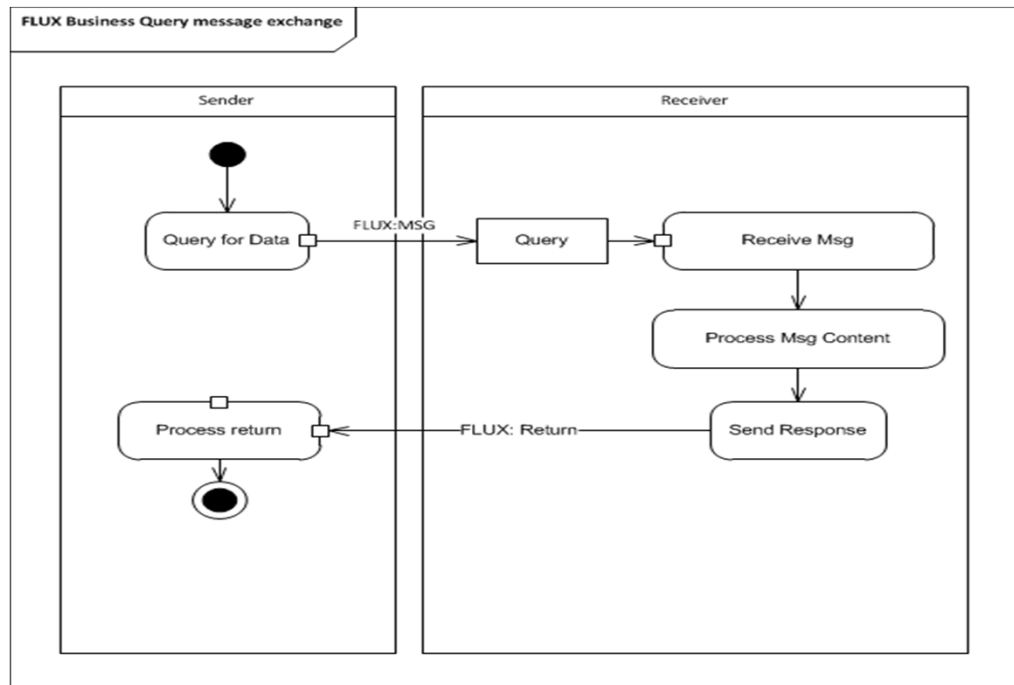
Every message sent gets a return



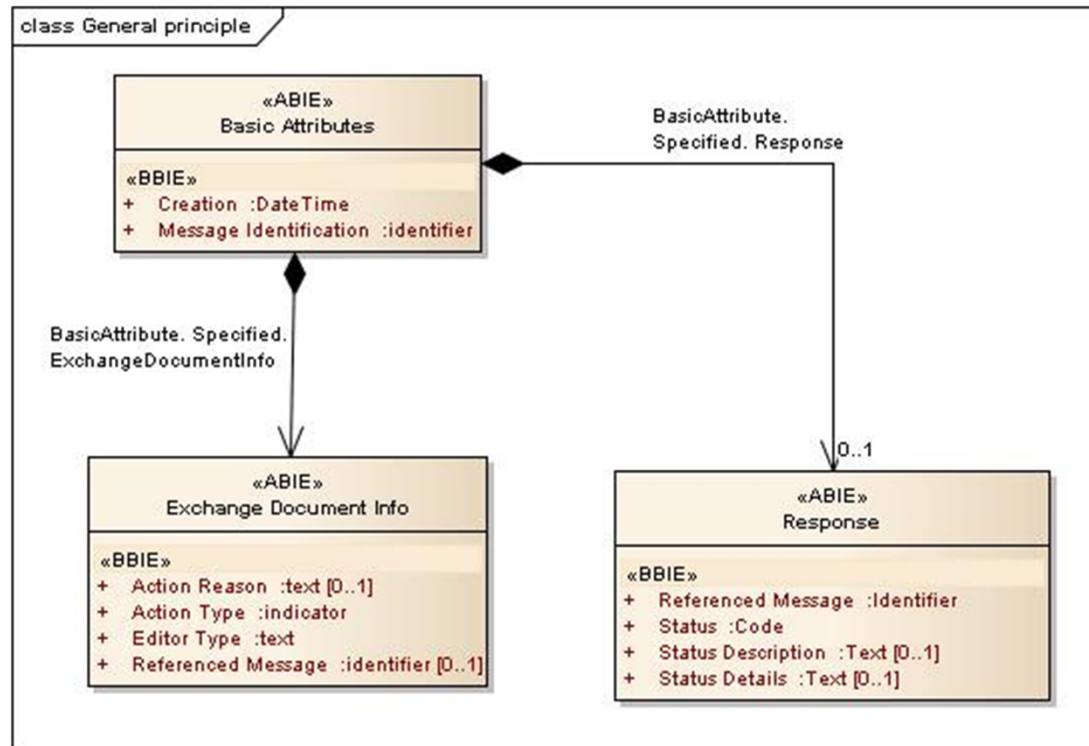
Querying for data

General Query message process :

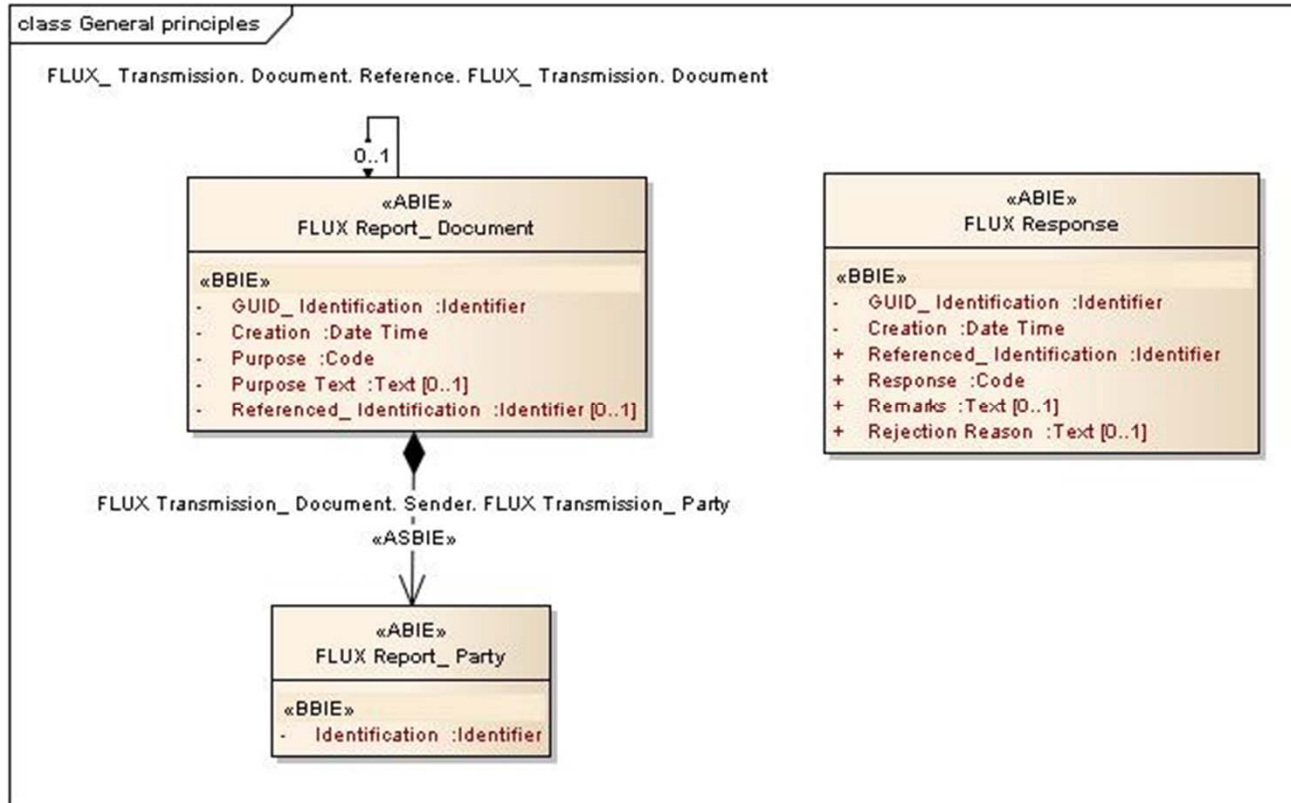
Based on the common FLUX message exchange mechanism



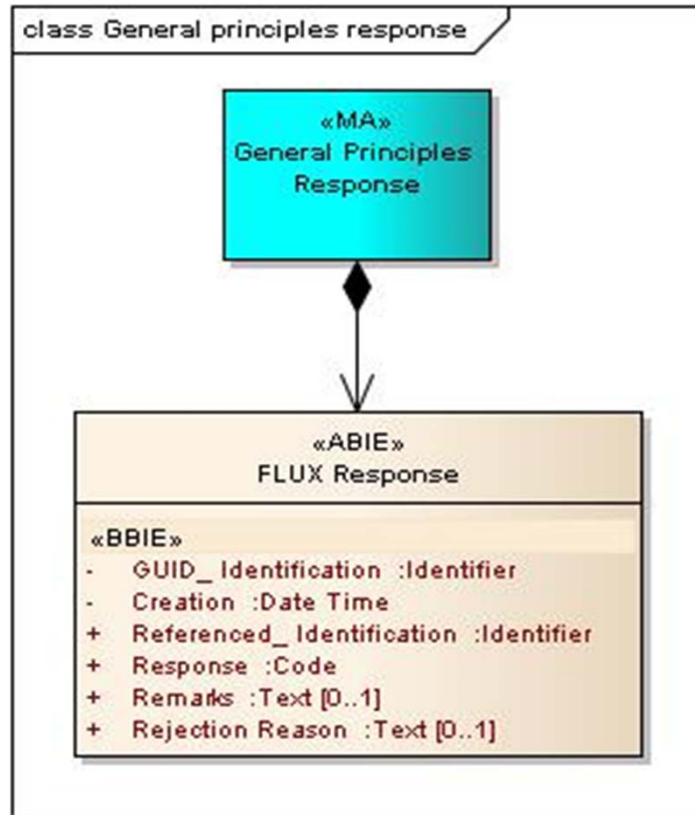
BRS Message



General Principles BIEs



General Principles Message Assembly





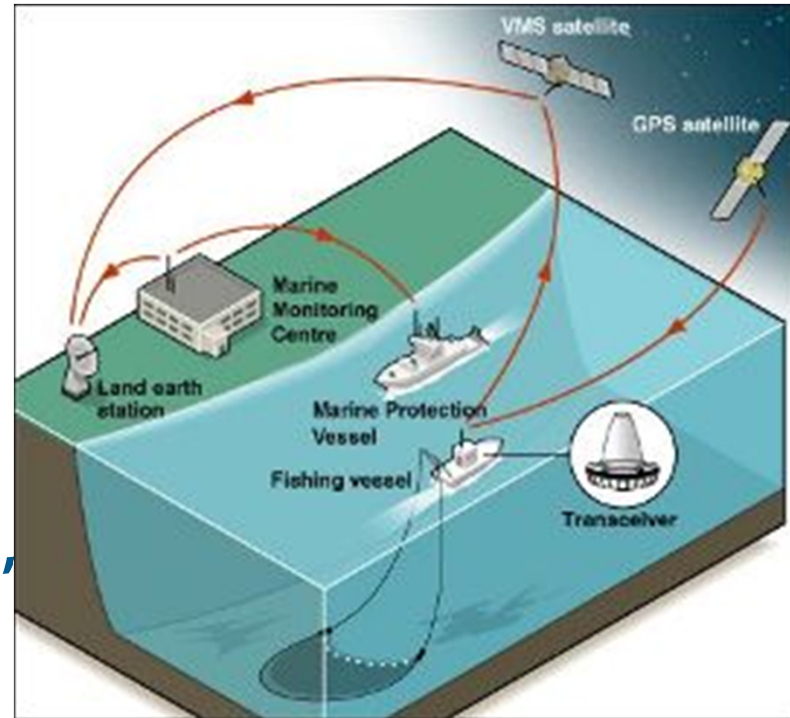
Vessel Position



VMS Communication

Position info
From Vessel to Coast

+ From Flag State to
Coastal State, Regional Govt. (EC),



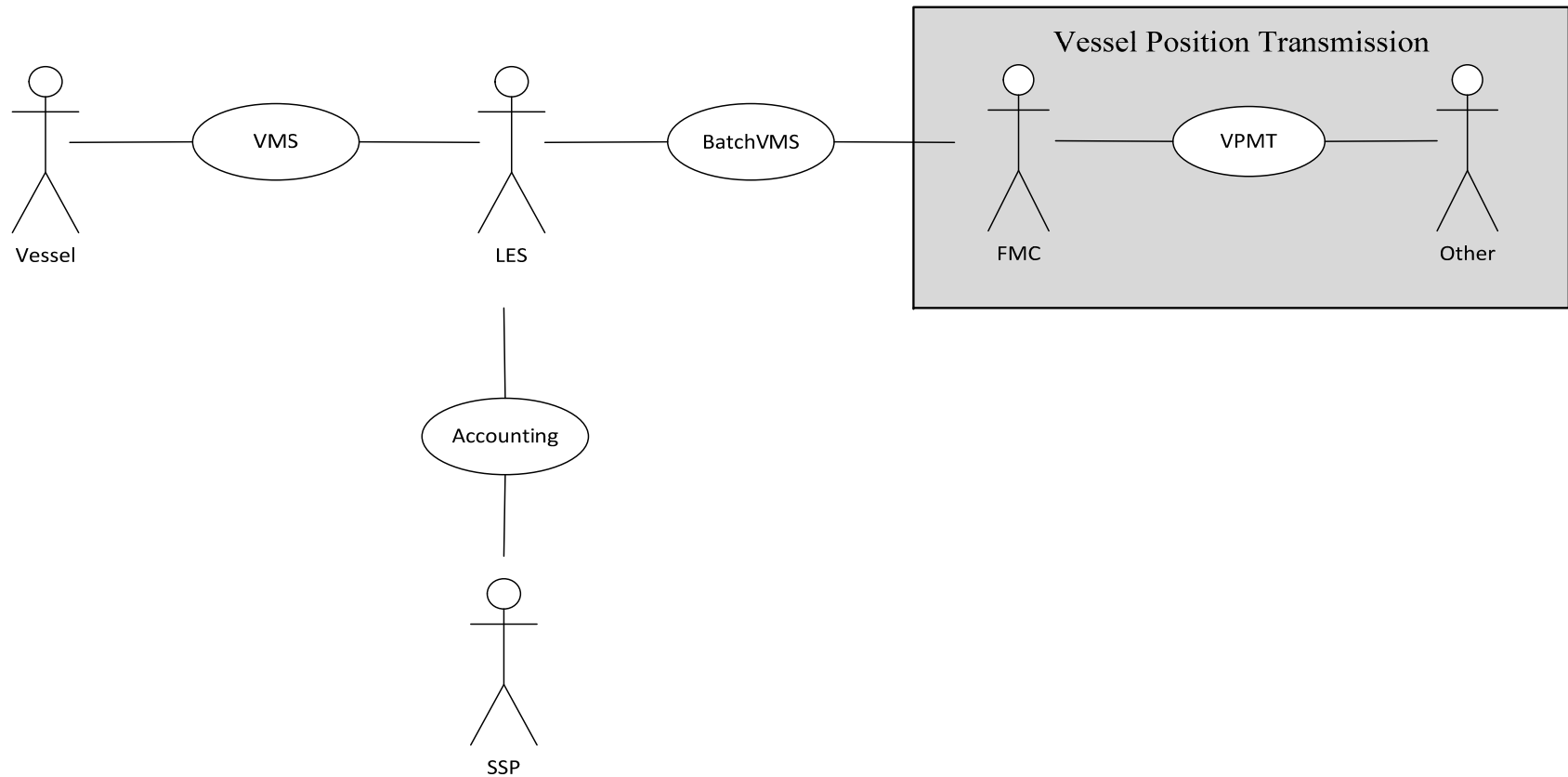
Source: www.scotland.gov.uk

VMS Data flow via FLUX

- **Vessel -> Coast (Flag State FMC)**
 - EU legislation: MS free to choose
 - (FLUX *can* be used)

- **Flag State -> Coastal State, RFMO, EC, ...**
 - EU legislation imposes format
 - Future VMS exchange will go over FLUX

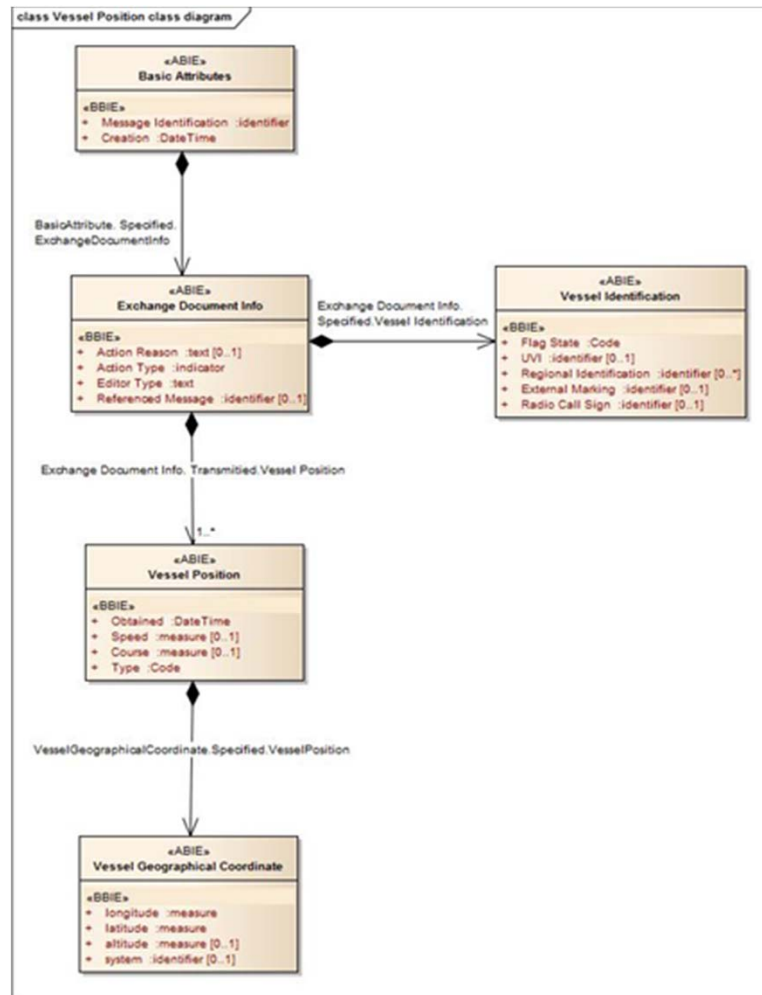
Vessel Position Scope



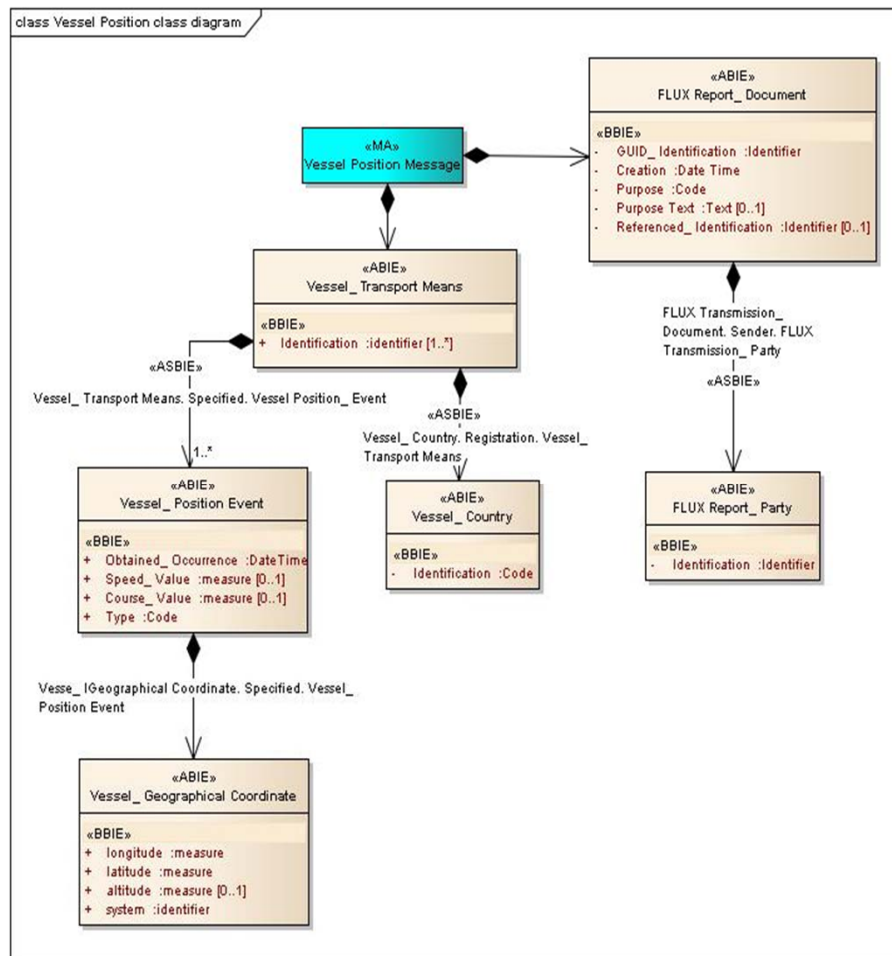
Vessel Position Data elements

- **Time information**
 - Date and Time (UTC)
- **Position Information**
 - Latitude, Longitude
 - Type of position (position/entry/exit/anchored)
- **Vessel Identification**
 - Flag State, UVI, CFRNumber, Radio Call Sign, ...
- **Other**
 - Speed, Course

BRS Message



Vessel Position Message Assembly



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Aggregated Catch Data Report (ACDR)



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Scope of the ACDR Domain

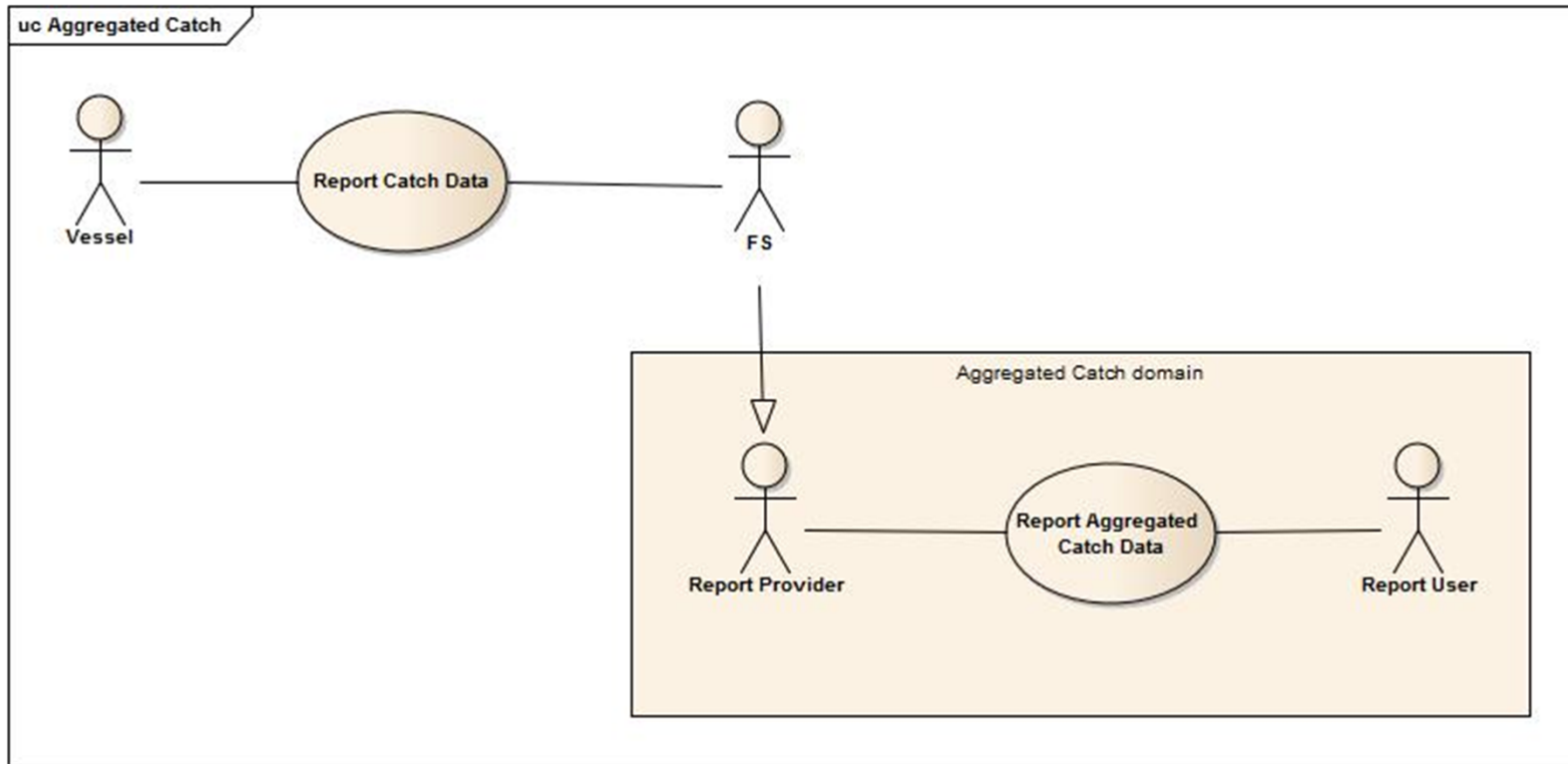
Vessel -> Flag State

- Vessels send catch data via Logbook (Fishing Trip domain)
- Aggregated at the level of MS

Flag State -> EC -> Data requester (i.e. Eurostat, FAO)

- EU legislation imposes frequency of reporting
- EC is a central point for exchanging report to other data requester (different level of aggregation)

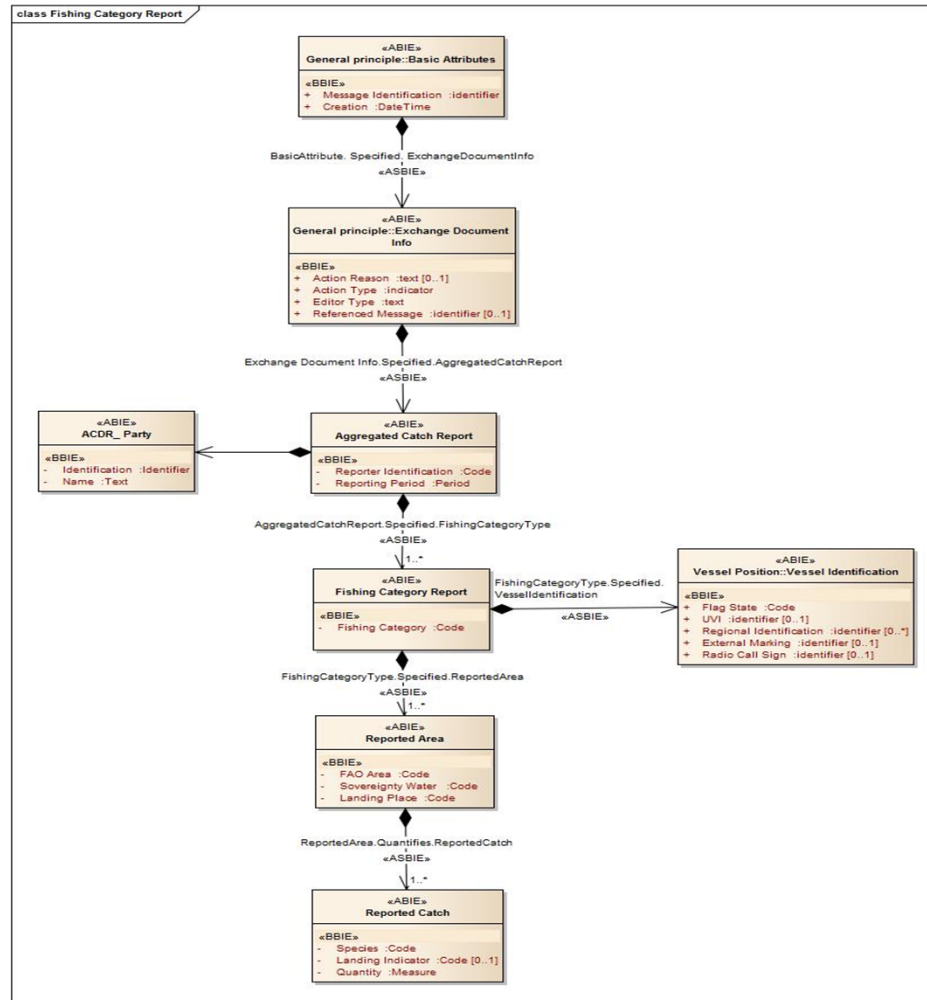
Scope of the ACDR Domain



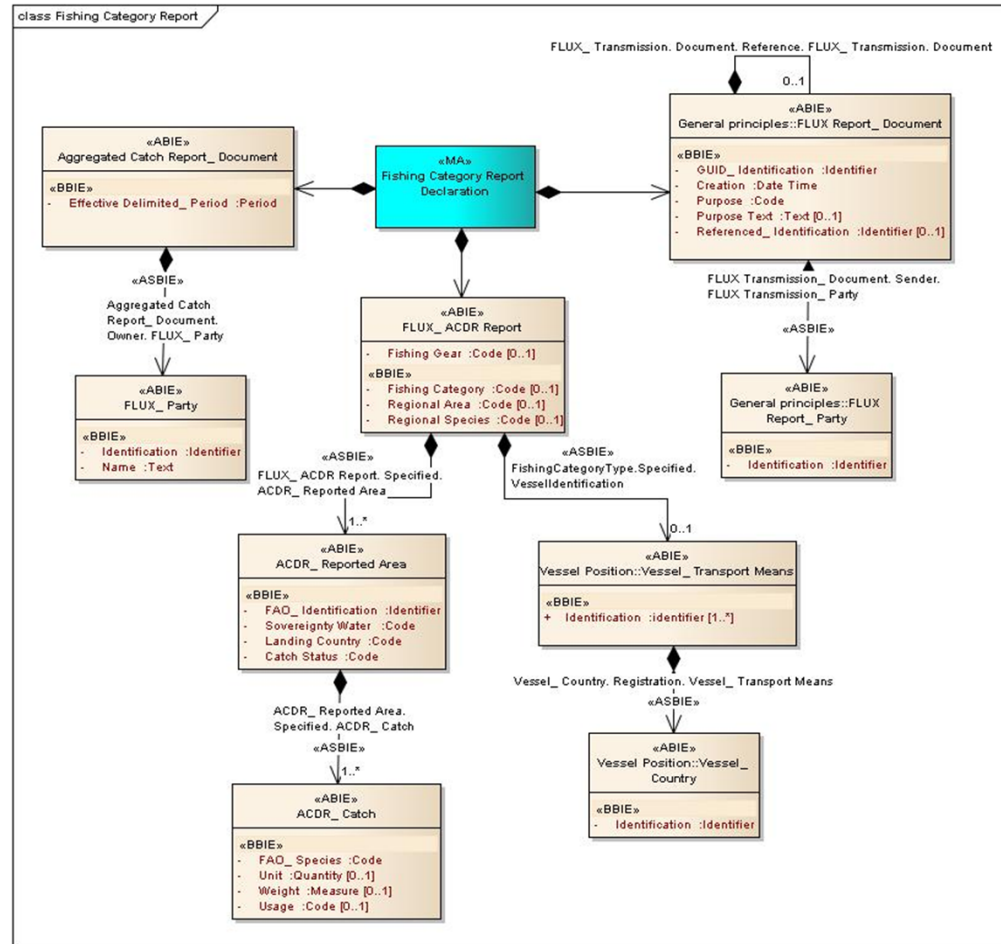
ACDR Data elements

- **Reporting period**
 - The period of time covered by the report
- **Upper level of aggregation (depending on report)**
 - Fishing category
 - Regional Area
 - Regional Species
 - Fishing Gear
 - Vessel
- **Other**
 - Reported Area
 - Reported Catch

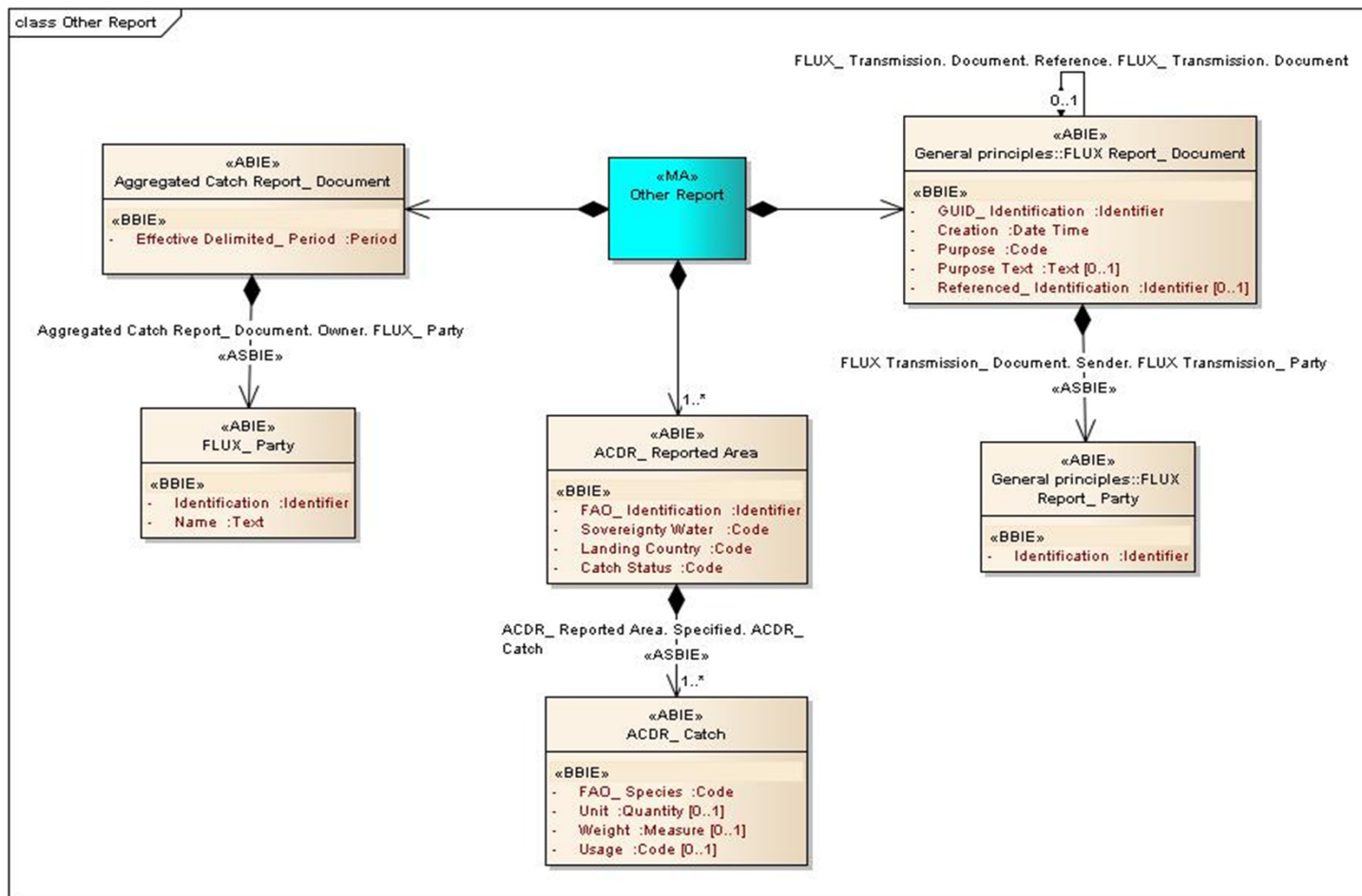
BRS Message: Fishing Category report



ACDR Message Assembly



ACDR Message Assembly: other report





Other Sub-domains



Master Data Register

What is MDR ?

- **Master data register is a single source of basic business data used across multiple systems, applications, and/or processes**
- **Basic and typical MD are code lists (mainly a code and a description):**
 - ISO-3 Country codes (BEL, FRA ...), AFSIS Species codes, UN/LOCODE ports ...

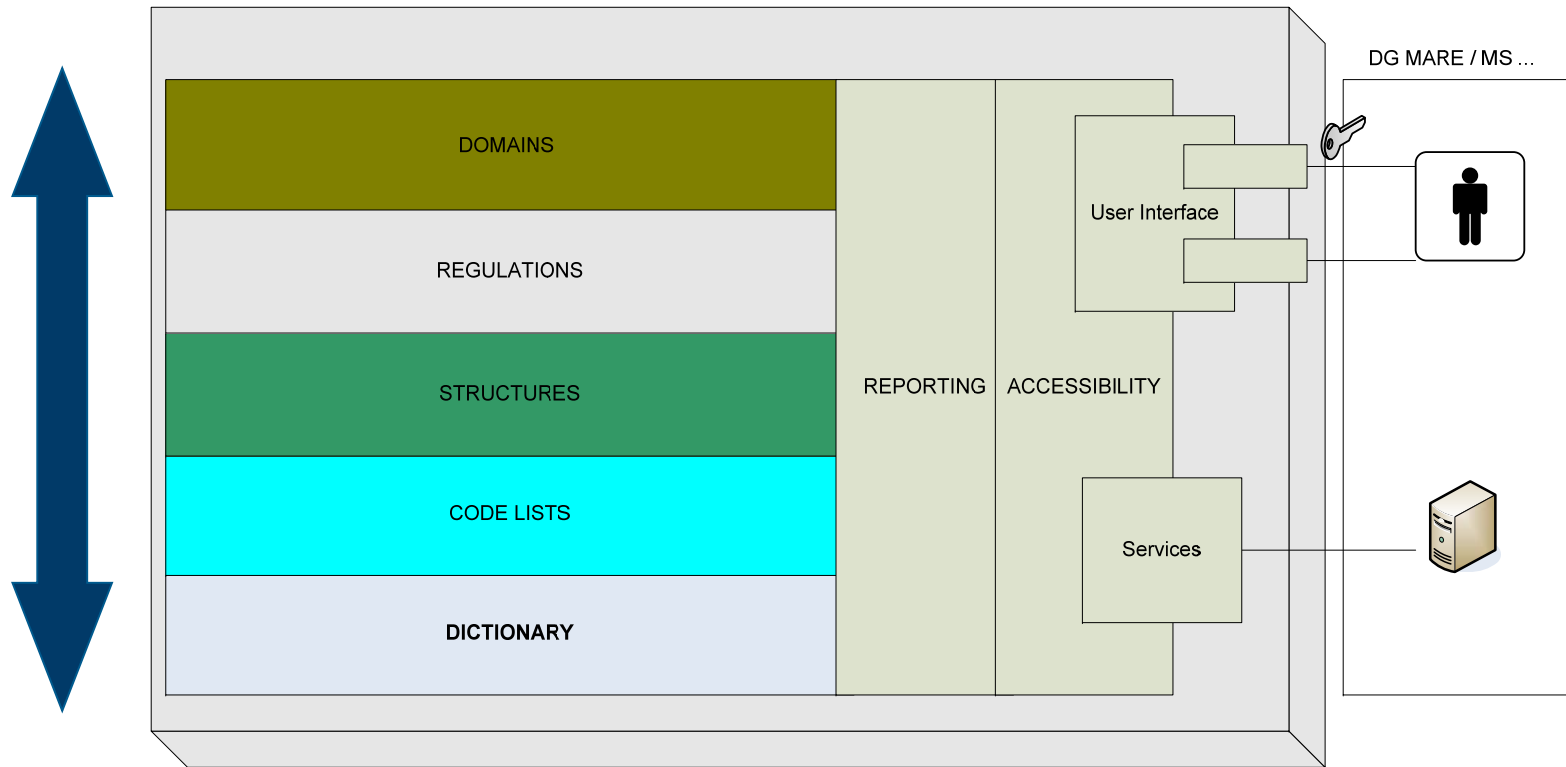
Master Data Register

What is it for ?

- To avoid any ambiguities when data has to be entered into information systems, exchanged between parties for collection purposes or disseminate even publicly through generated reports or in various publications
- Part of the FLUX standard

Master Data Register

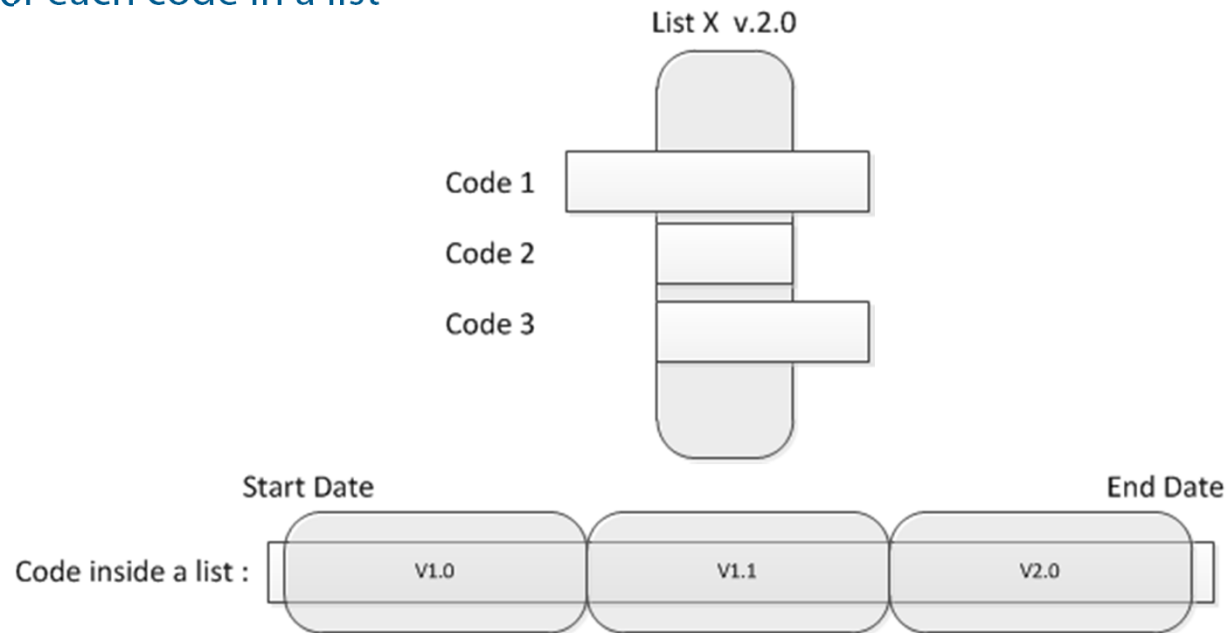
A more complete set of MD



Master Data Register

Versioning

- At the level of a list → version x.x + validity period (start/end date)
- At the level of each code in a list

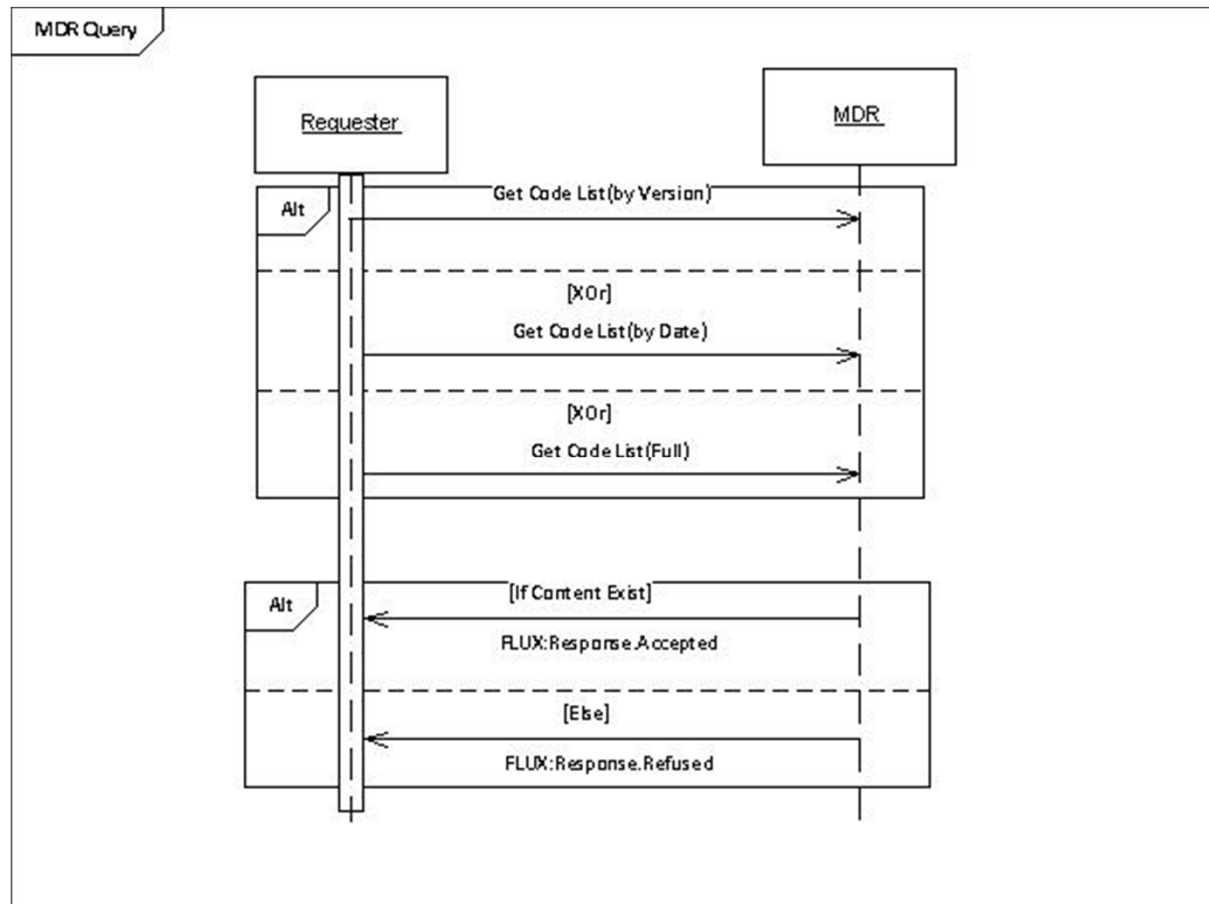


Master Data Register

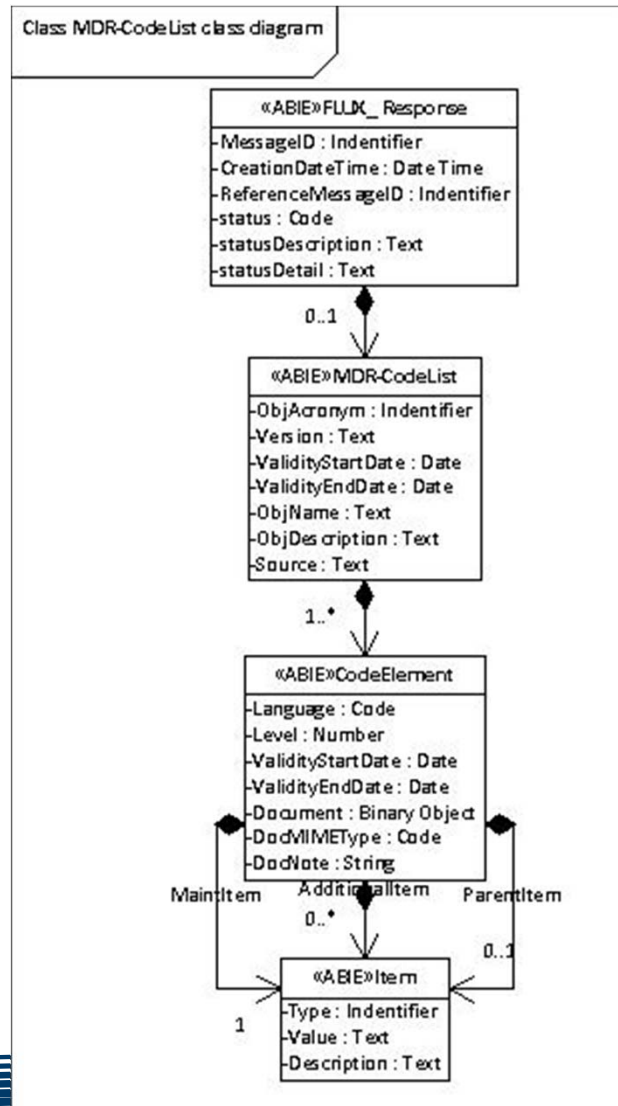
Dissemination

- Through Web Services (WS)
 - Only to get the content of a code list
- Services
 - **WS_OBJ_VERSION** : to get the content of a list based on a version number
 - **WS_OBJ_DATE** : to get the list of codes valid at a certain date
 - **WS_OBJ** : to get the full content of a list (all codes with their validity period)

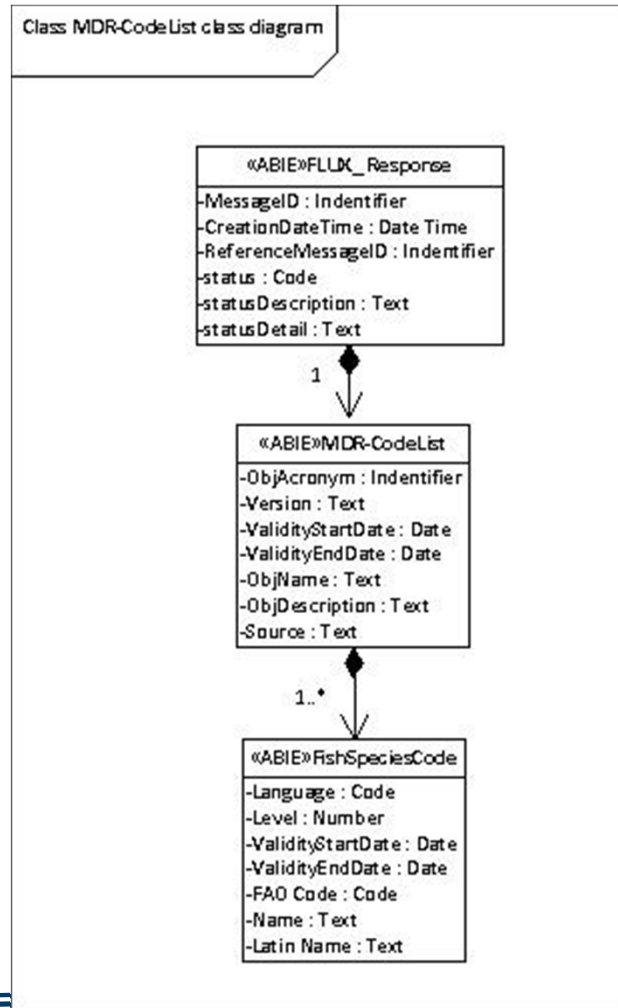
Master Data Register Query



MDR Generic Data Structure



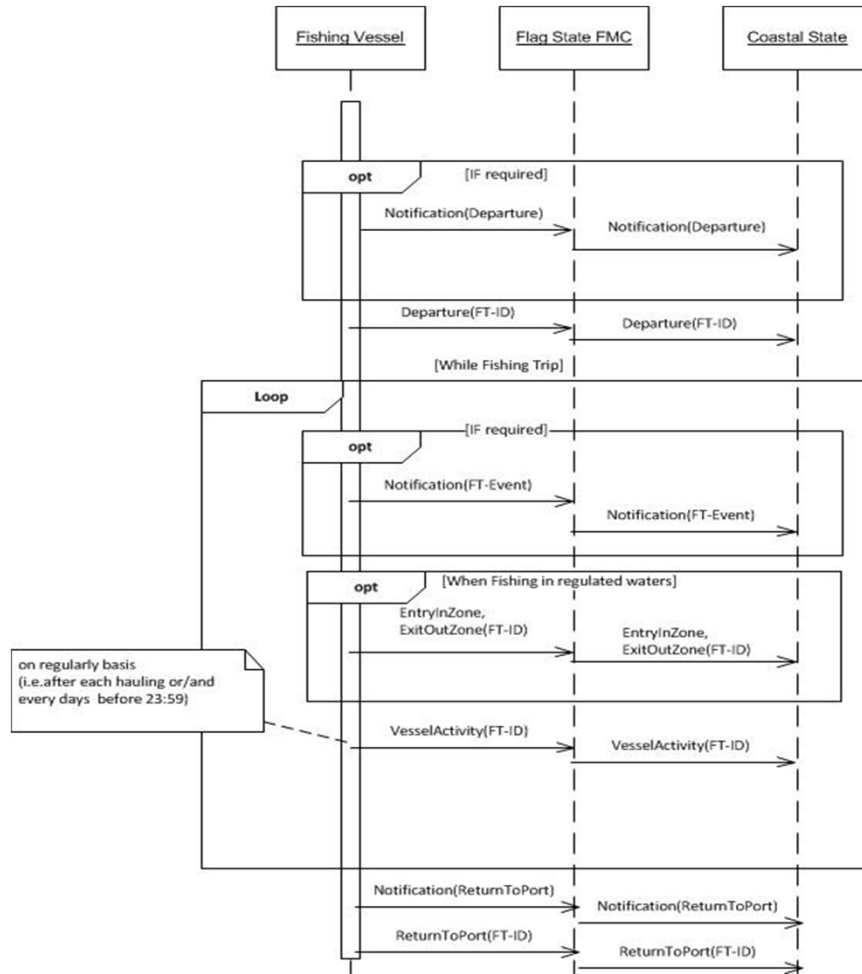
MDR Code Dependent Data Structure



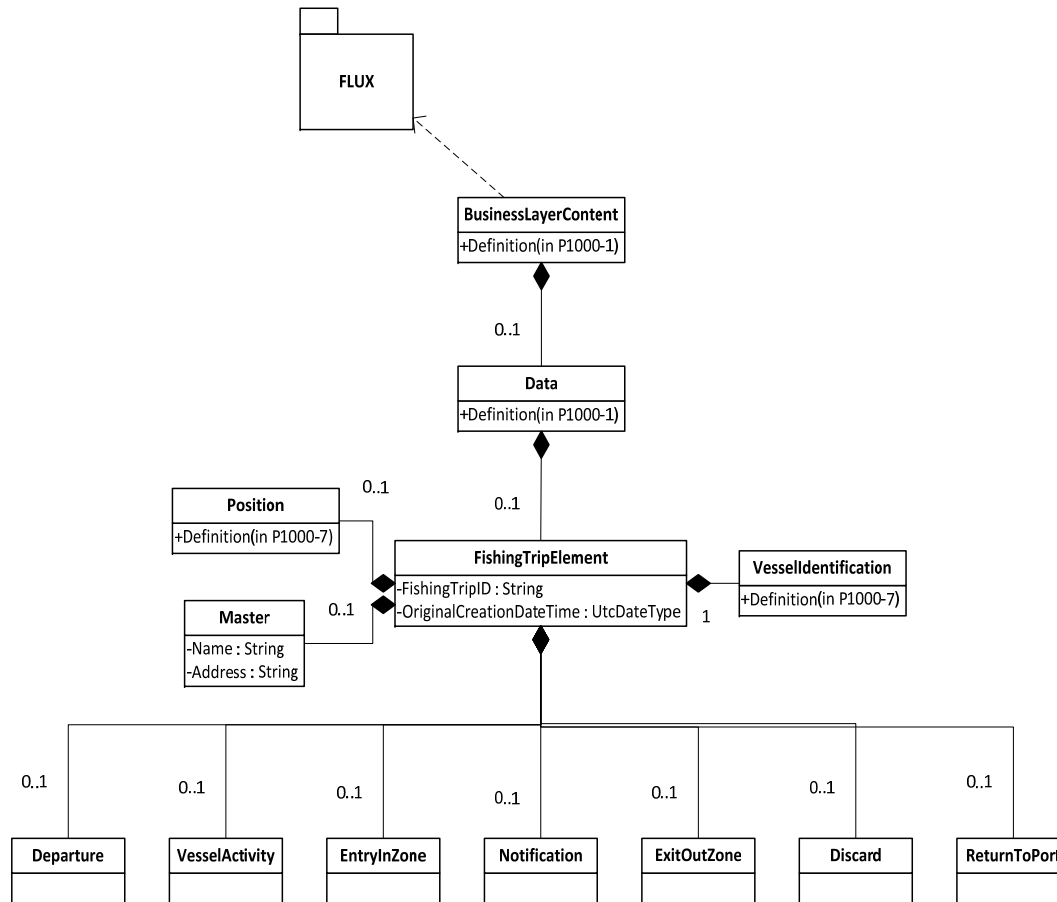
Fishing Trip domain

- **Defining events occurring during the trip of the fishing vessel**
 - Departure
 - Fishing Activity
 - Return to port
- **Notification for legal authorisations**
 - Entering/Existing into regulated area
- **Data about fishing activity and catches**
 - What species was caught in which area.
- **Other**
 - Scientific data

Fishing Trip domain: Events sequence



Fishing Trip domain: Entities overview



Fishing Trip domain: Vessel activity

