



European
Commission

CWP meeting

**Walvis Bay, Namibia,
25-27 February 2015**

Francky Callewaert



AGENDA ITEM 7.4

STRATEGY TOWARDS STANDARDISATION/HARMONISATION OF FISHERIES OPERATIONAL DATA

Francky Callewaert

Agenda

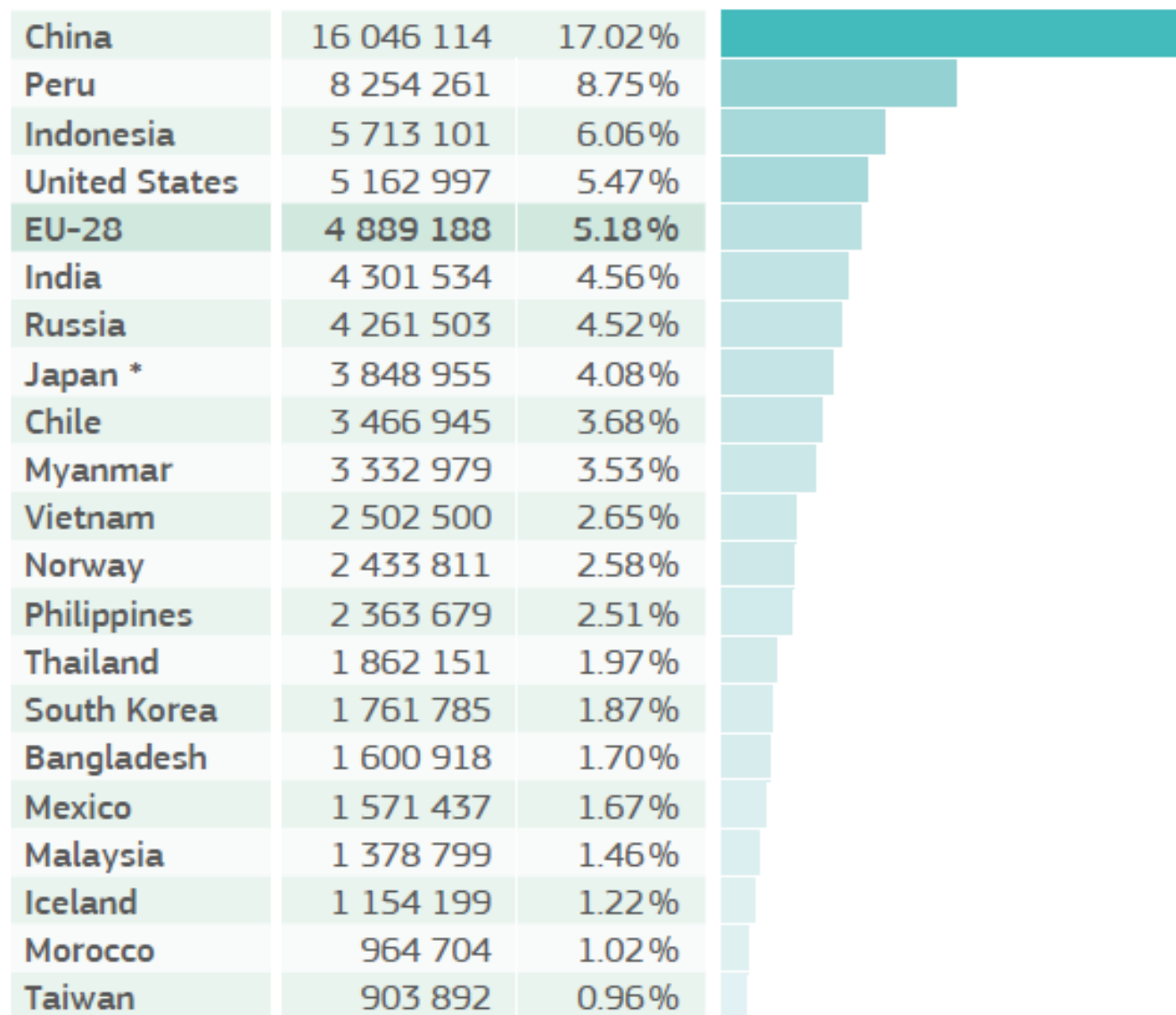
- 1. INTRODUCTION**
- 2. STANDARDISATION**
- 3. TECHNOLOGY**
- 4. STATE OF PLAY**
- 5. BUSINESS COMMUNITY**
- 6. ROADMAP?**



Introduction

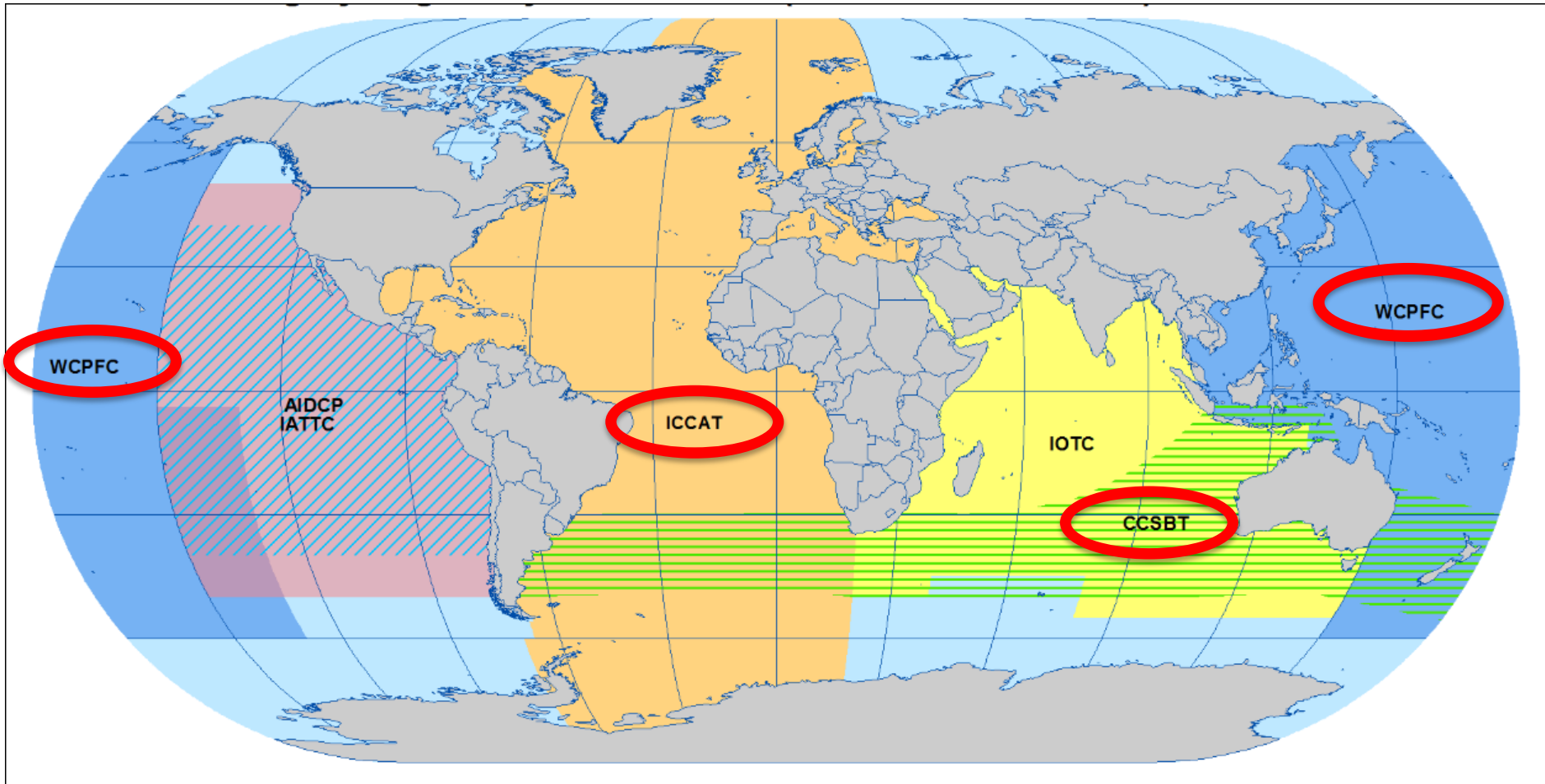
Total catches of world's leading producers (2011)

(volume in tonnes live weight and percentage of total)

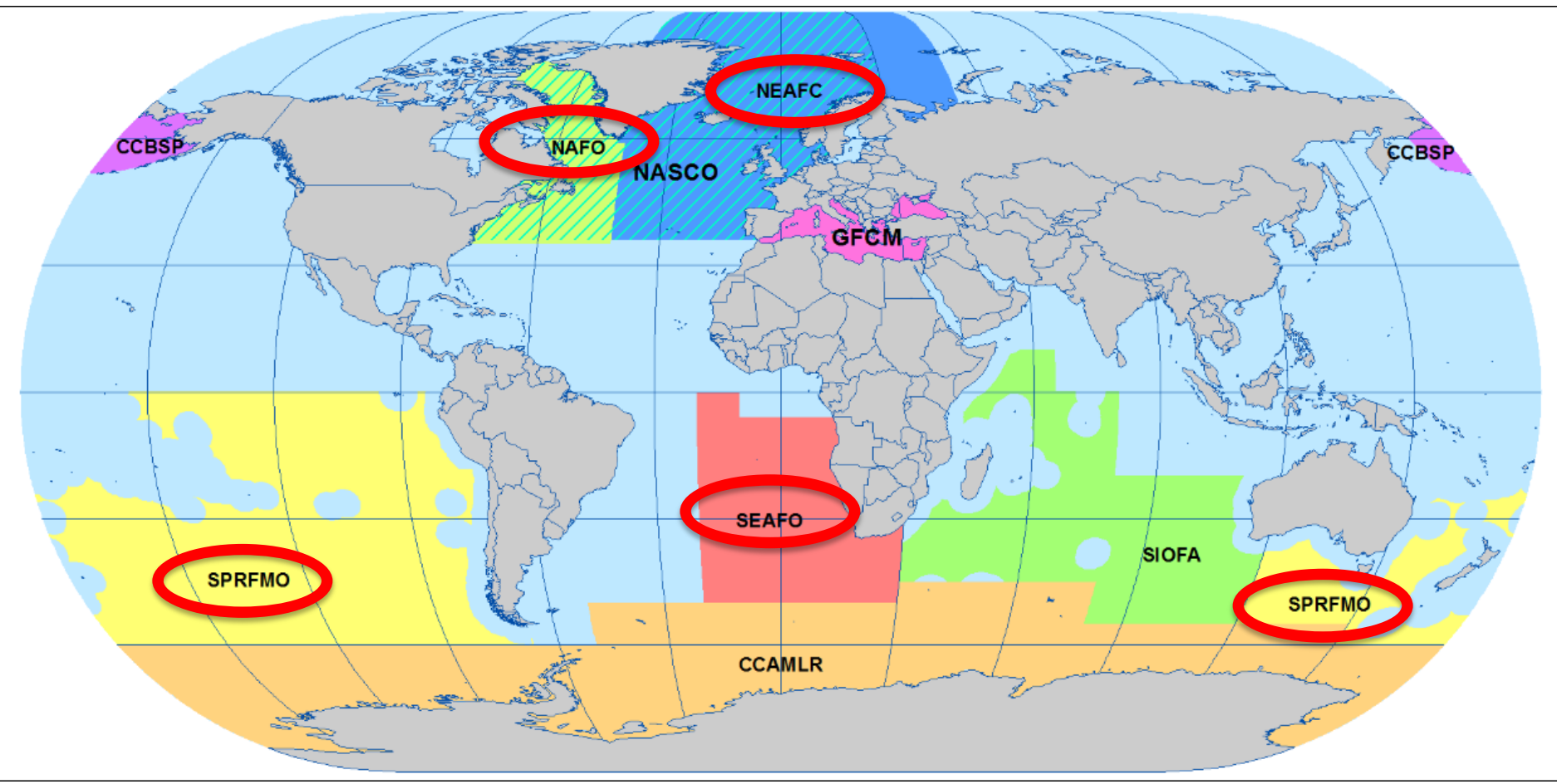


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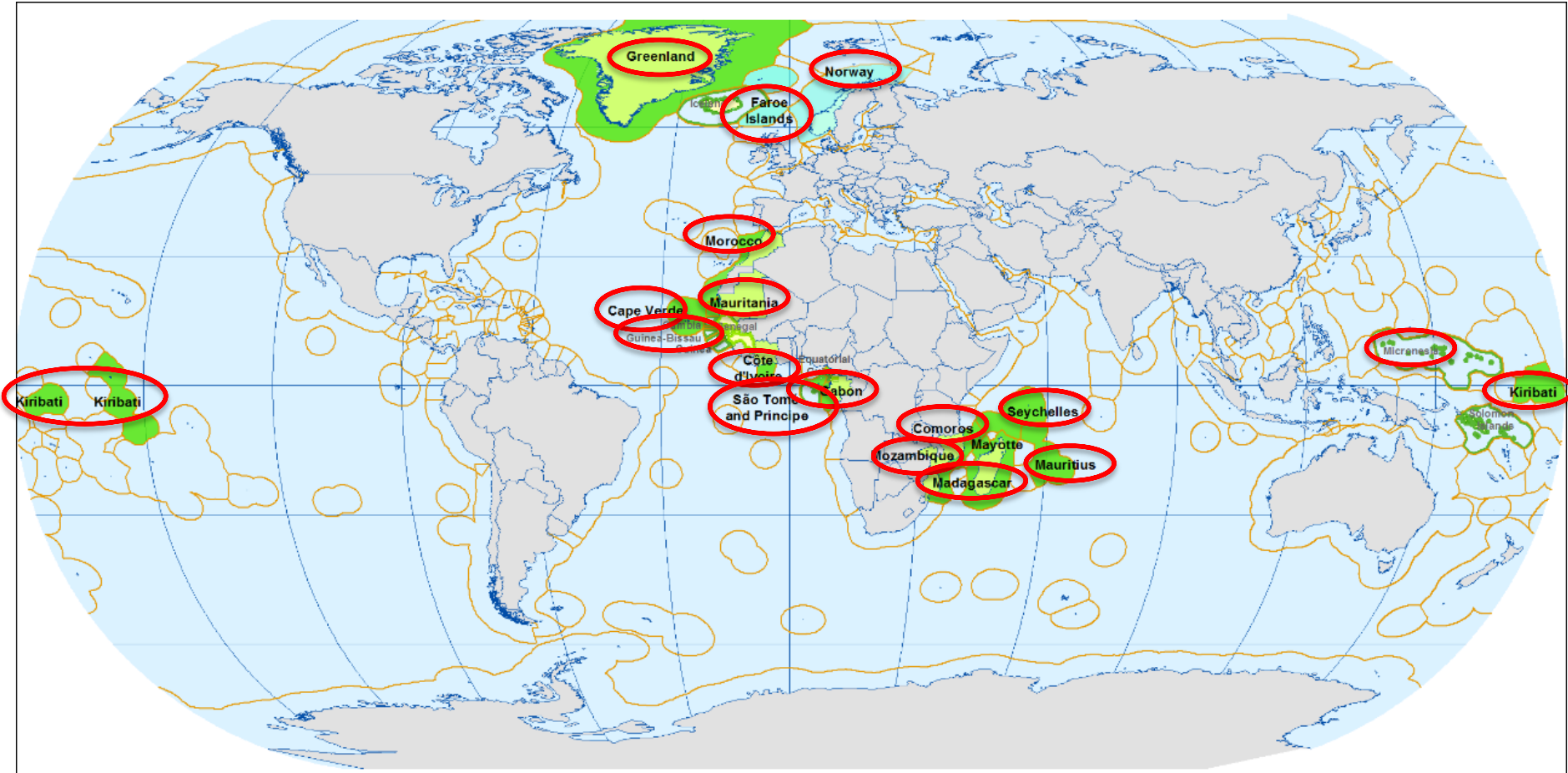
Tuna RFMOs



Non-Tuna RFMOs



SFPAs and agreements



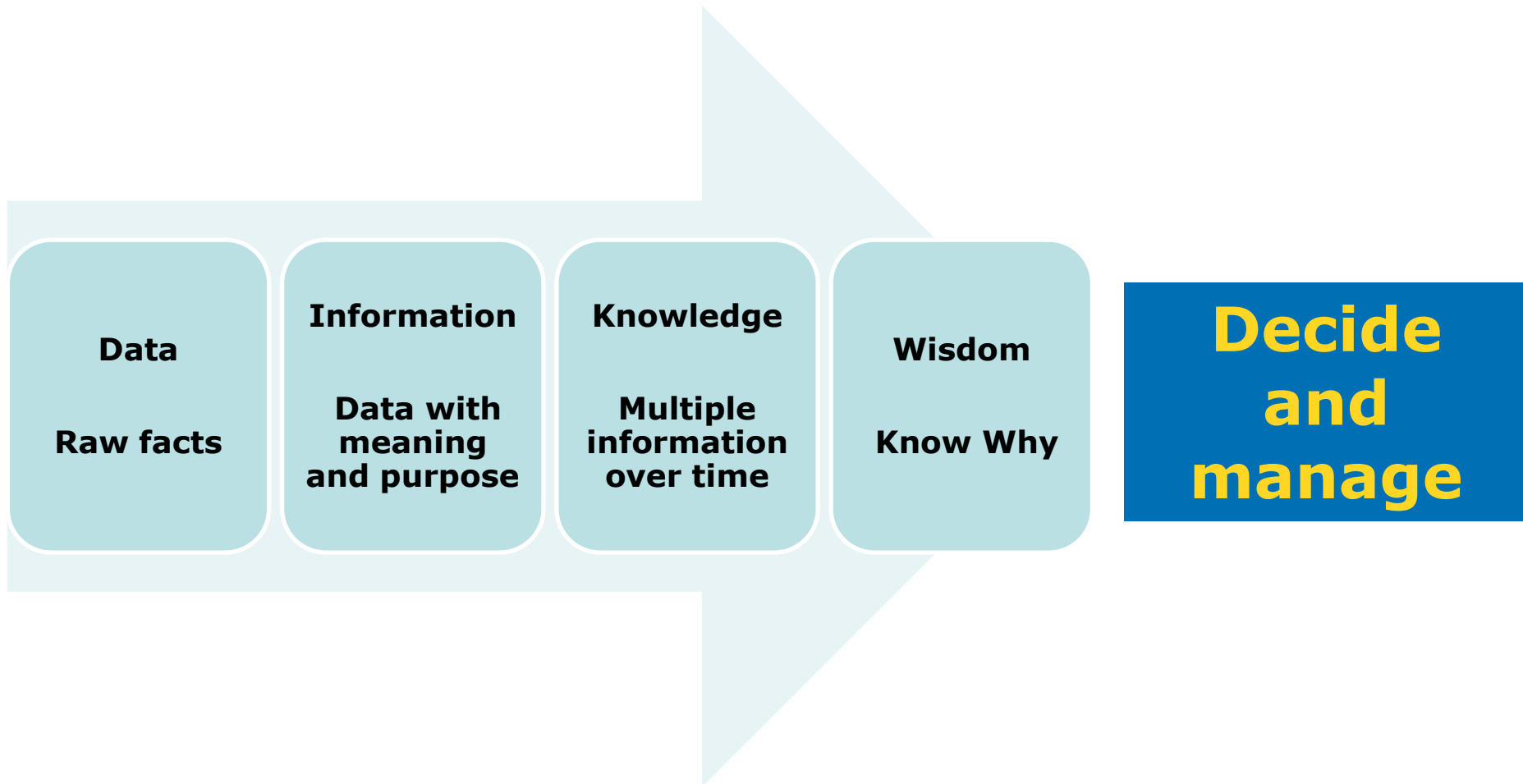
Reporting requirements

- **Vessel data**
- **Licence data**
- **Position data**
- **Catch data**
- **Gear data**
- **Landing data**
- **Sales data**
- **Scientific data**
- **Economic data**

- **Frequency**
- **Aggregation**
- **Format**
- **Availability**
- **Codes**
- **Deadlines**
- ...

- **Cost**
- **Quality**

Why is data important?

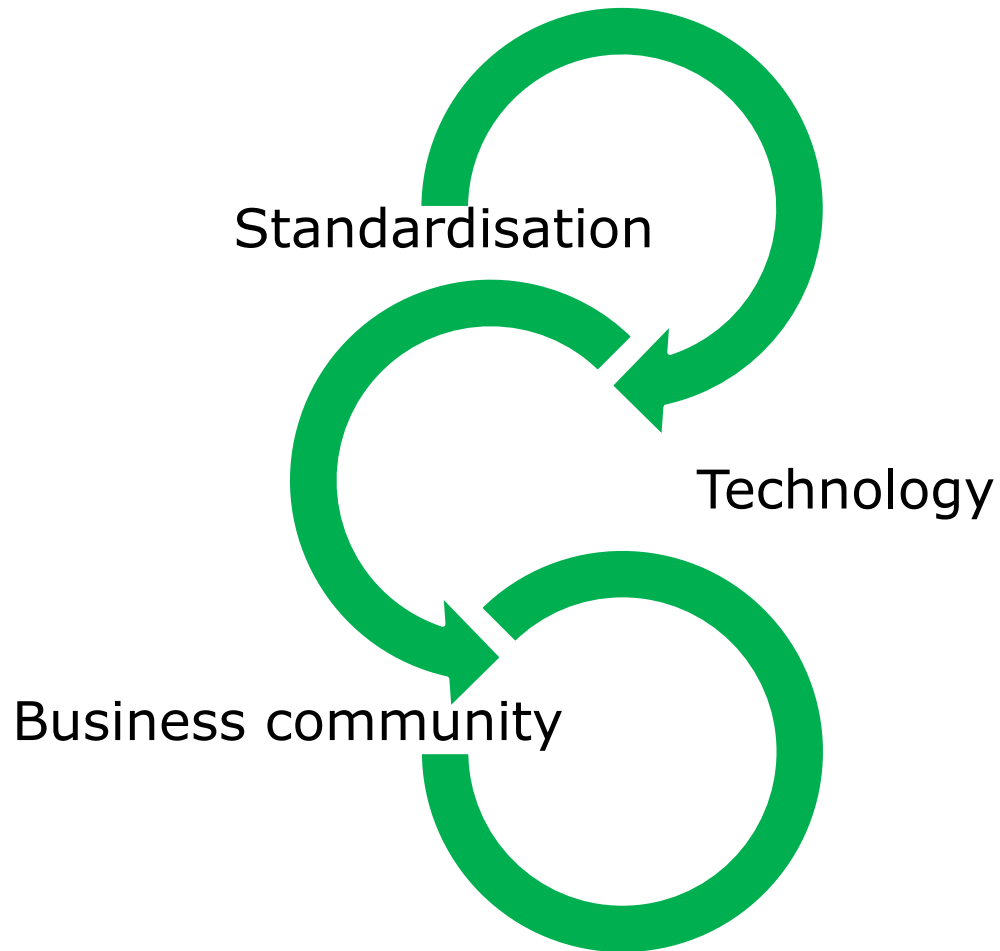


The IFDM programme goal



**Deliver high quality data
In the most effective way**

The approach



Standardisation

Back to 2010

Fishing area's

EU Mauritania NAFO

Norway Maroc NEAFC

Many reports

TAC: 7 reports: A..F, H NAFO reports

Effort: different reports NEAFC reports

Mauritanie

40+ code lists

Communication systems

disk letter email X25 Https FIDES

Communication formats

CSV XML paper X W

DG Mare Databases

FIDES CRONT VRONT FAP FRONT ...

Fleet registers

Nafo Neafc Mare Med 22 MS Global

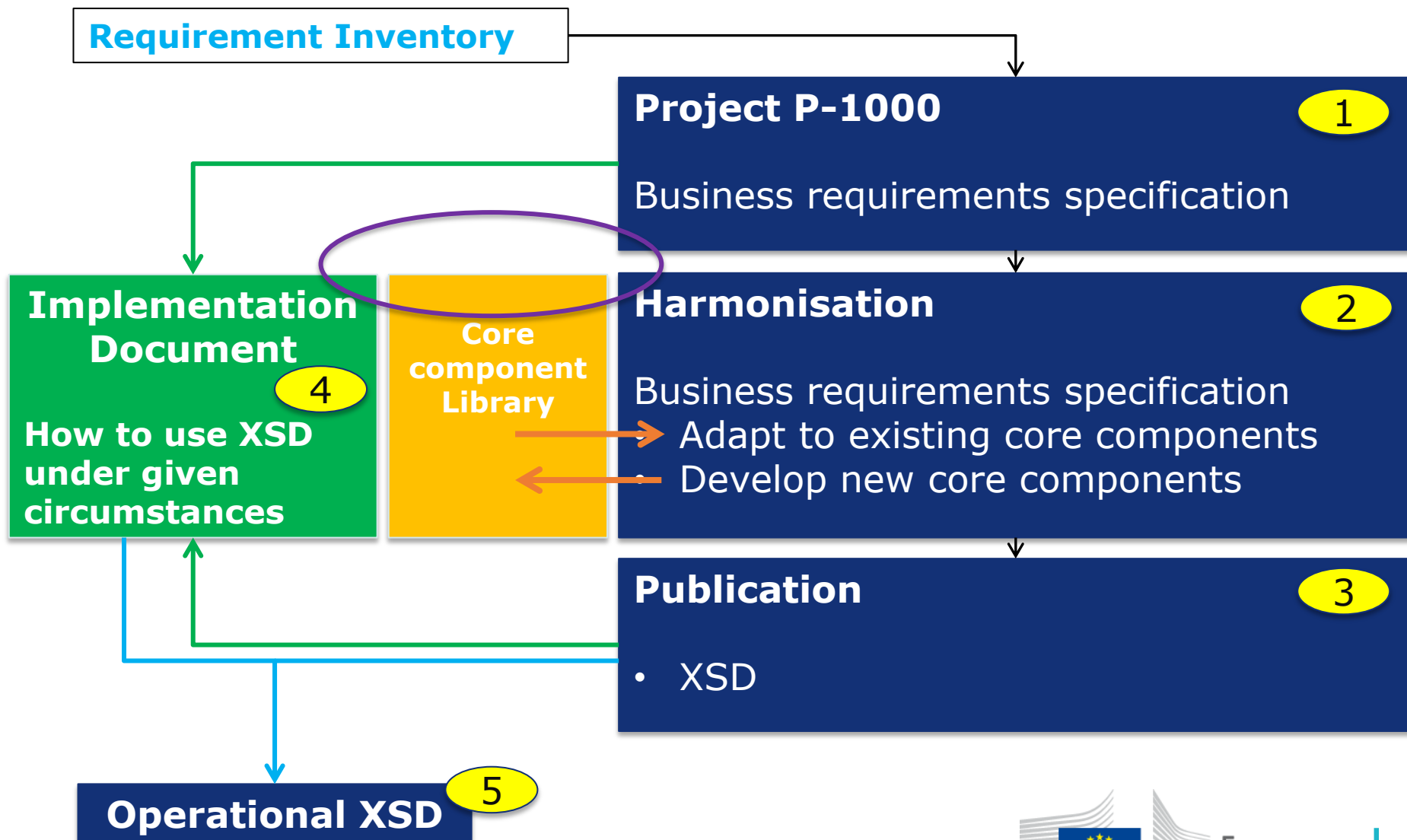
Multitude of licence rules

Norway licences FPA Licences RFMO Notifications

UN/CEFACT standardisation

- **Neutral and world-wide**
- **Related area's move in same direction**
 - Health and food safety / traceability
 - Customs
- **Output fits web based technology**
 - UML, XML, XSD
- **Huge library of core components (15 000+)**
- **Reasonably flexible and fast process**
- **Independent quality review**

The process in a nutshell



Summary

- **UN/CEFACT standard and XSD**
 - Toolbox
 - As complete as possible (inventory of all needs)
 - Global
- **Implementation documents**
 - How to apply – part of – the toolbox
 - Specific circumstances

Structure for fisheries

General principles

VMS

Fishing activities

Bleu Fin Tuna

Tropical Tuna

Landings

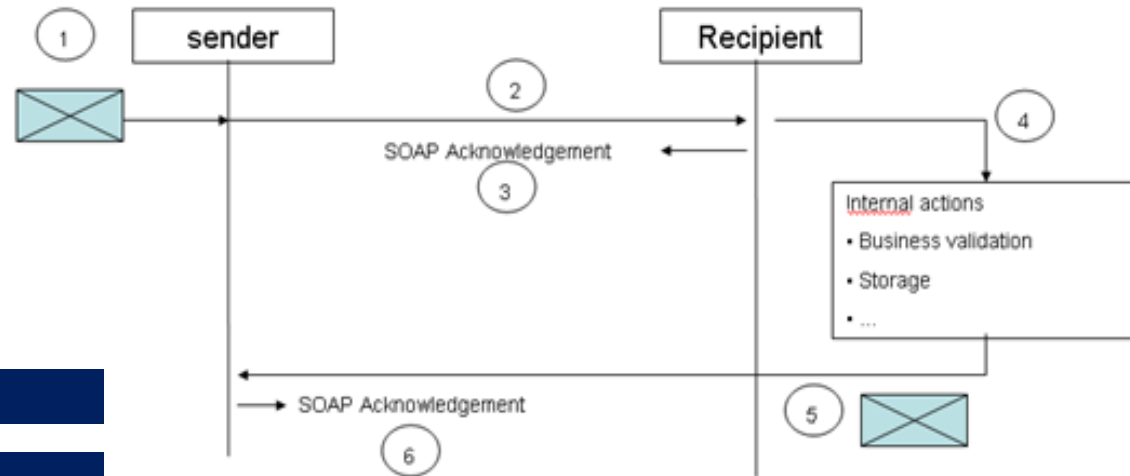
Sales notes

Vessel data

Licences

Aggregated catch

Master data



- **GUID**
- **Stateless**
- **Synchronous exchange**
- **Asynchronous process**
- **Store and forward**
- **Exception handler embedded**

Ex. Vessel domain

- **Cooperation with FAO**
 - Compatible with Global Fleet Register
- **Business Requirement specification ready (+/-)**
- **Harmonisation starts in summer**

Standards status

Name	Description	Date of delivery	Next delivery
General Principles (GP)	Basics entities & behaviour of all FLUX standards	JUN-2014 (v1)	JUN-2015 (v2)
Vessel Position	VMS messages.	JUN-2014 (v1)	JUN-2015 (v2)
ACDR	Aggregated Catch Data Report domain.	JUN-2014 (v1)	JUN-2015 (v2)
Vessel	Information for fleet register.	DEC-2014 (v1)	JUN-2015 (v2)
MDM	Master Data Management For retrieving Codes Lists from a Master Data Register	DEC-2014 (v1)	JUN-2015 (v2)
Sales	Sales note; Take-over note & Transport document.		JUN-2015 (v1)
FLAP	Fishing Licenses; Authorisations & Permits		JUN-2015 (v1)
Fishing Activity	Fishing Vessel Logbook		DEC-2015 (v1) ?
Inspection Report	Electronic inspection reports		DEC-2015 (v1) ?



Technology

Back to 2010

Fishing area's

- EU
- Mauritania
- NAFO
-
- Norway
- Maroc
- NEAFC

Many reports

- TAC: 7 reports: A..F, H
- Effort: different reports
- NAFO reports
- NEAFC reports
- Mauritanie
- 40+ code lists

Communication systems

- disk
- letter
- email
- X25
- Https
- FIDES

Communication formats

- CSV
- XML
- paper
- X
- W

DG Mare Databases

- FIDES
- CRONT
- VRONT
- FAP
- FRONT
- ...

Fleet registers

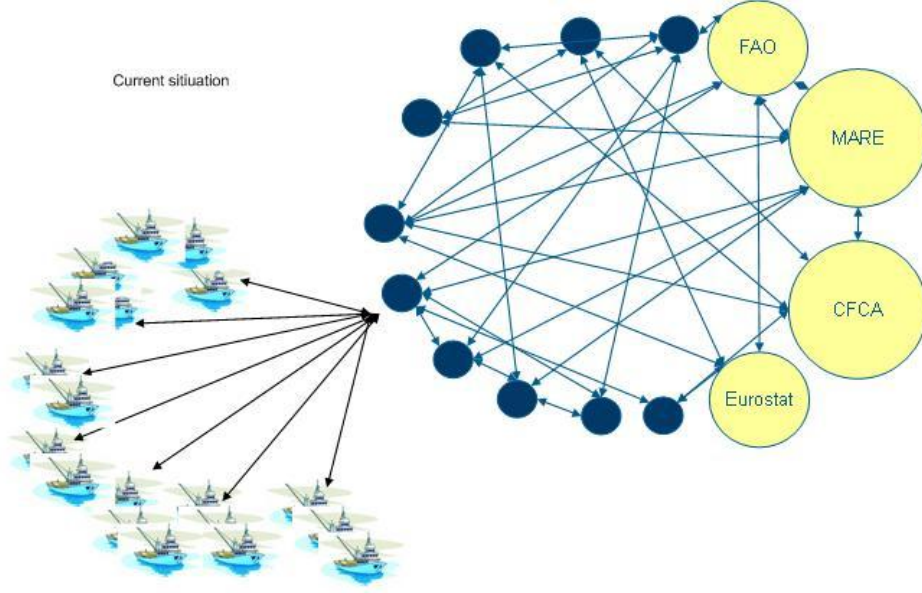
- ...

A business independent data exchange system

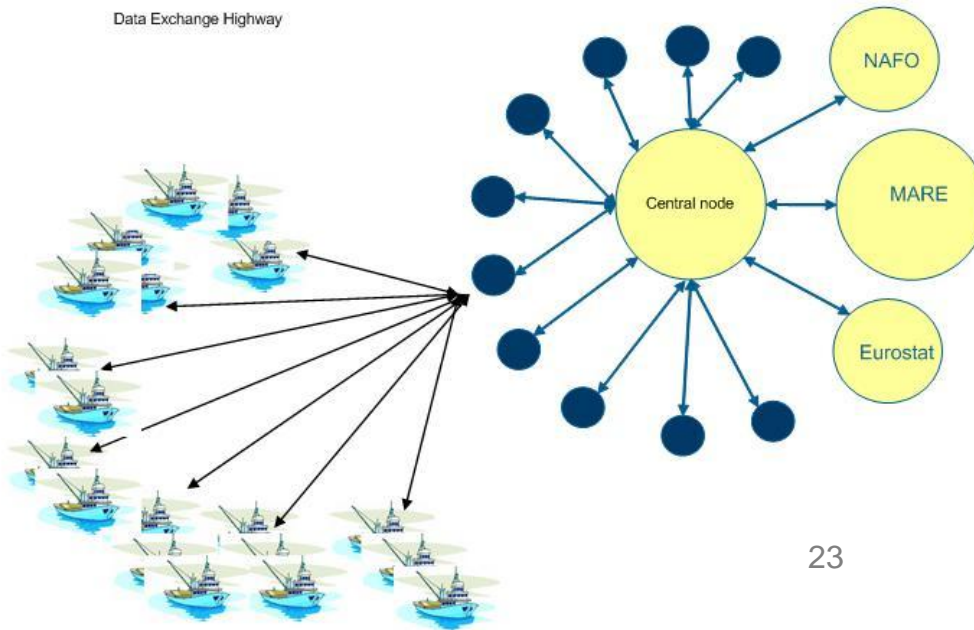
Multitude of licence rules

- Norway licences
- FPA Licences
- RFMO Notifications

Current situation



Data Exchange Highway



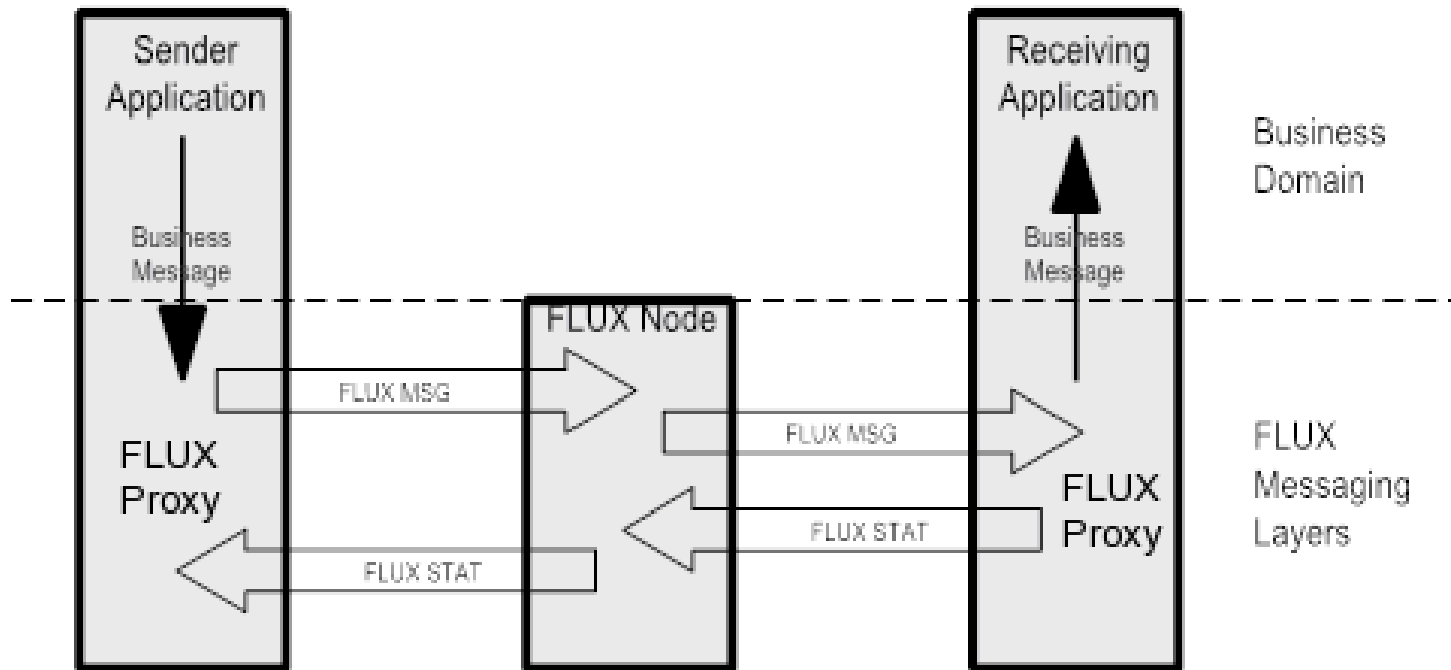
Transportation Layer

- **Configurable software**
 - Based on SOAP
 - Including workflows for handling exceptions
 - "Bridge" to link local IT systems with the TL
- **Protocol called "The envelope"**
 - Set of parameters determining the behaviour of the software
 - Can contain any well formatted XML business content
 - Content unaware

Envelope

Data Element	Code	Mandatory/Optional	Description
From	FR(*)	M	Address of the envelope originator Endpoint.
Operation number	ON(*)	M	Unique Operation Number generated by the system
Address	AD	M	Address of the envelope destination Endpoint.
Data flow	DF	M	Data flow name
Message time out	TODT	M	The Message Timeout given as an XSD DateTime (UTC). Indicates the time limit which the business content is considered to be expired.
Acknowledge of receipt	AR	M	Boolean indicating if an Acknowledge-of-Receipt (STAT) is expected by the originator Endpoint.
Contact persons	CT	O	Space-separated list of e-mail addresses of contact persons
Verbosity level	VB		verbosity level telling which type of events need to be reported by e-mail
Time out	TO		Indicates the synchronous timeout value in seconds.

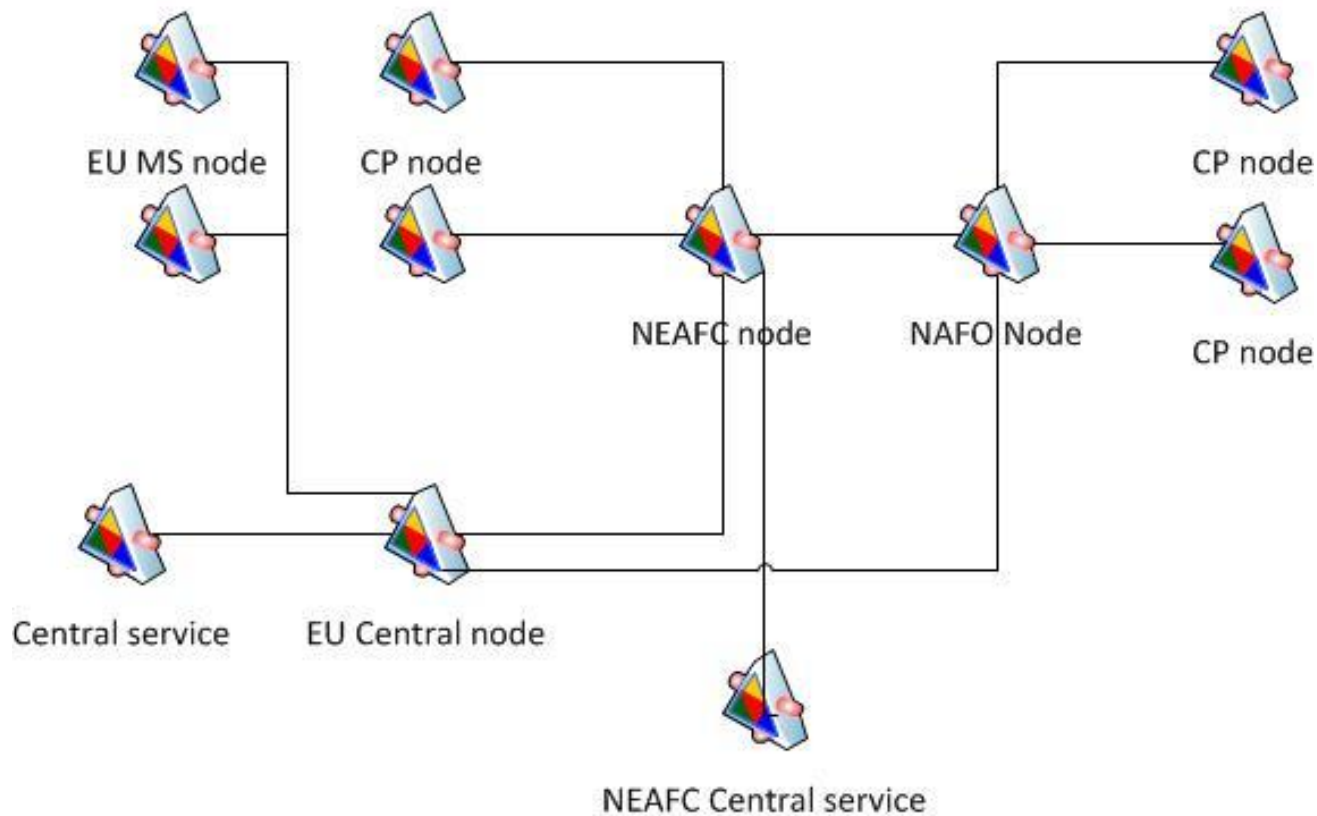
Workflow



Network example

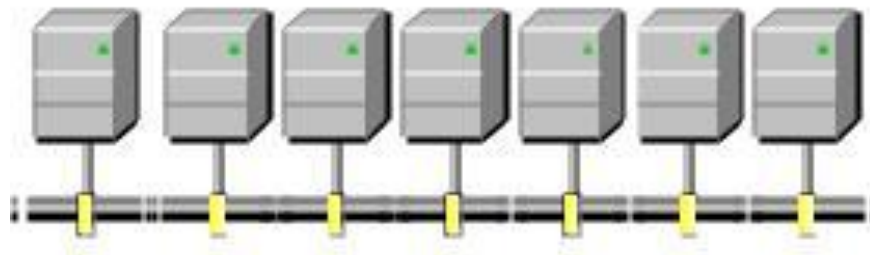
FLUX TL based network: Physical topology

Physical network topology expanded (example)



Logical topology

Logical topology



Node 1 Node 2 Node 3 Node 4 Node .. Node .. Node ..



Physical topology becomes "unimportant"

- Configuration can be adapted to new needs
- Data flows can be optimized
- Network can organically grow

Each node can be configured according to its role

- Load balancing between instances
- Automated data flow optimisation

State of play

- **TL V1.2 operational in DG MARE and 12 (+) EU MS**
 - Aggregated Catch Data reports
- **TL V1.5 available since June**
 - Bug fixes
 - Performance increase
 - VMS ready
 - *VMS bridge*
 - *NAF-XML-NAF transposition*
- **Agreement with Norway to use TL**
- **Agreement with Faroe Islands to test TL**



Benefits

Standardised data exchange platform

- Can grow "organically"
- IT decoupled from business
- Cost reduction
- Flexible and configurable
- Simplification



Could become a world standard

Reminder

DON'T

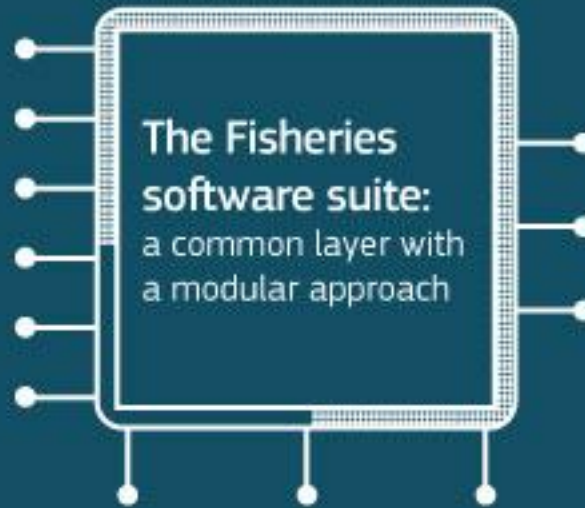
FORGET

An "email" system for computers

One data exchange platform for all data exchanges

1. Single envelope, parameters tailored for each data flow
2. Bridges to local IT systems
3. Envisaged to connect whole community

Next phase



A module

for each aspect of the **IFDM programme**:

Electronic recording and reporting system (ERS)

Vessel Monitoring System (VMS)

Licence Workflow

FLEET Project

Aggregated catch data reporting

Master Data Register (MDR)

**The Fisheries
software suite:**
a common layer with
a modular approach



A module

for each aspect of the **IFDM programme**:

Electronic recording and reporting system (ERS)

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The Fisheries software suite:
a common layer with a modular approach

Abilities:

receive all fisheries data

analyse all fisheries data

send all fisheries data



A module

for each aspect of the **IFDM programme**:

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Master Data Register (MDR)

The Fisheries software suite:
a common layer with a modular approach

Abilities:

receive all fisheries data

analyse all fisheries data

send all fisheries data

Utilities:

visualise
content

receive
content

store
content



State of Play

How it works

Core data flow: VMS



location



course



speed

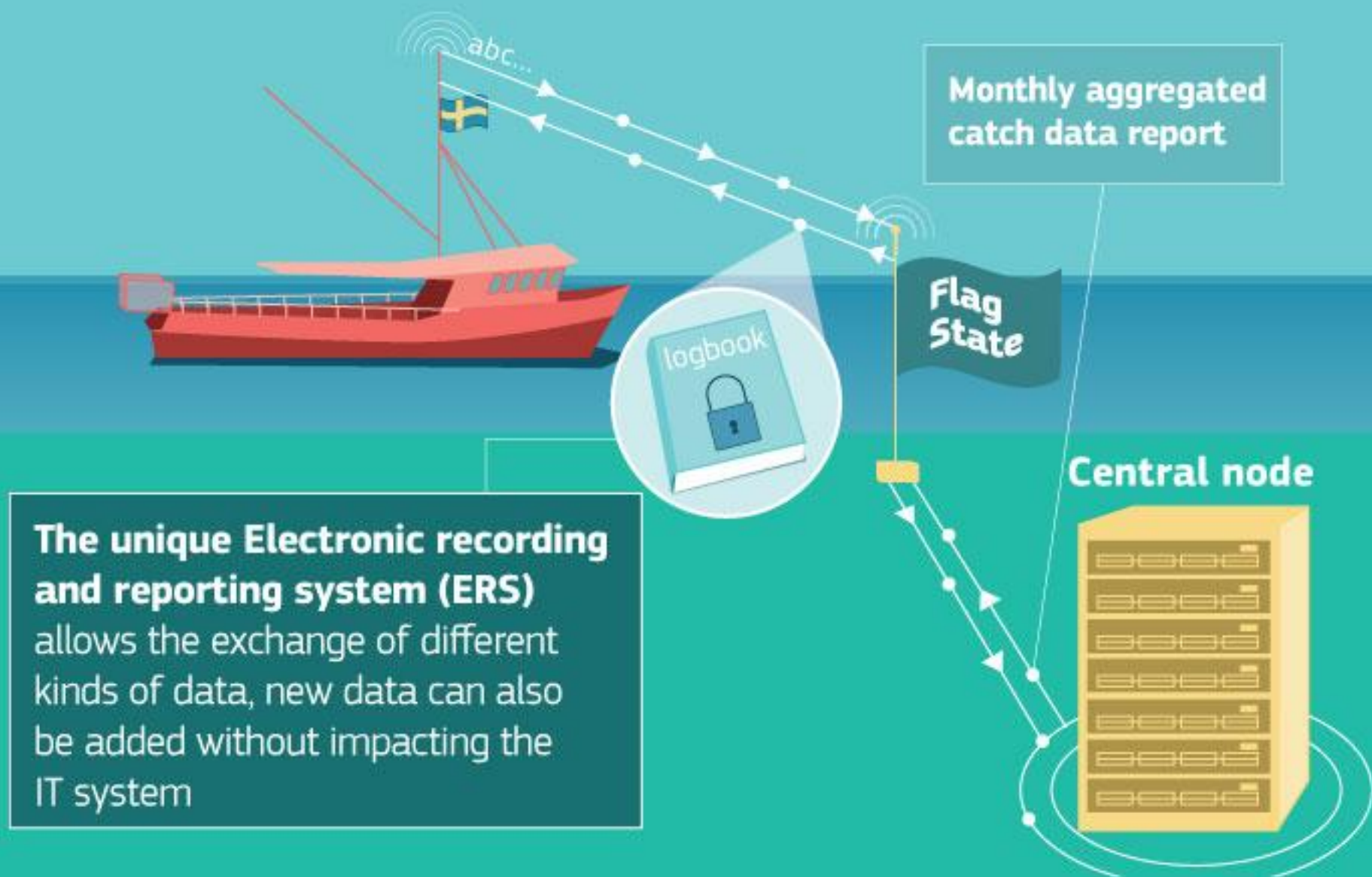


Flag
State



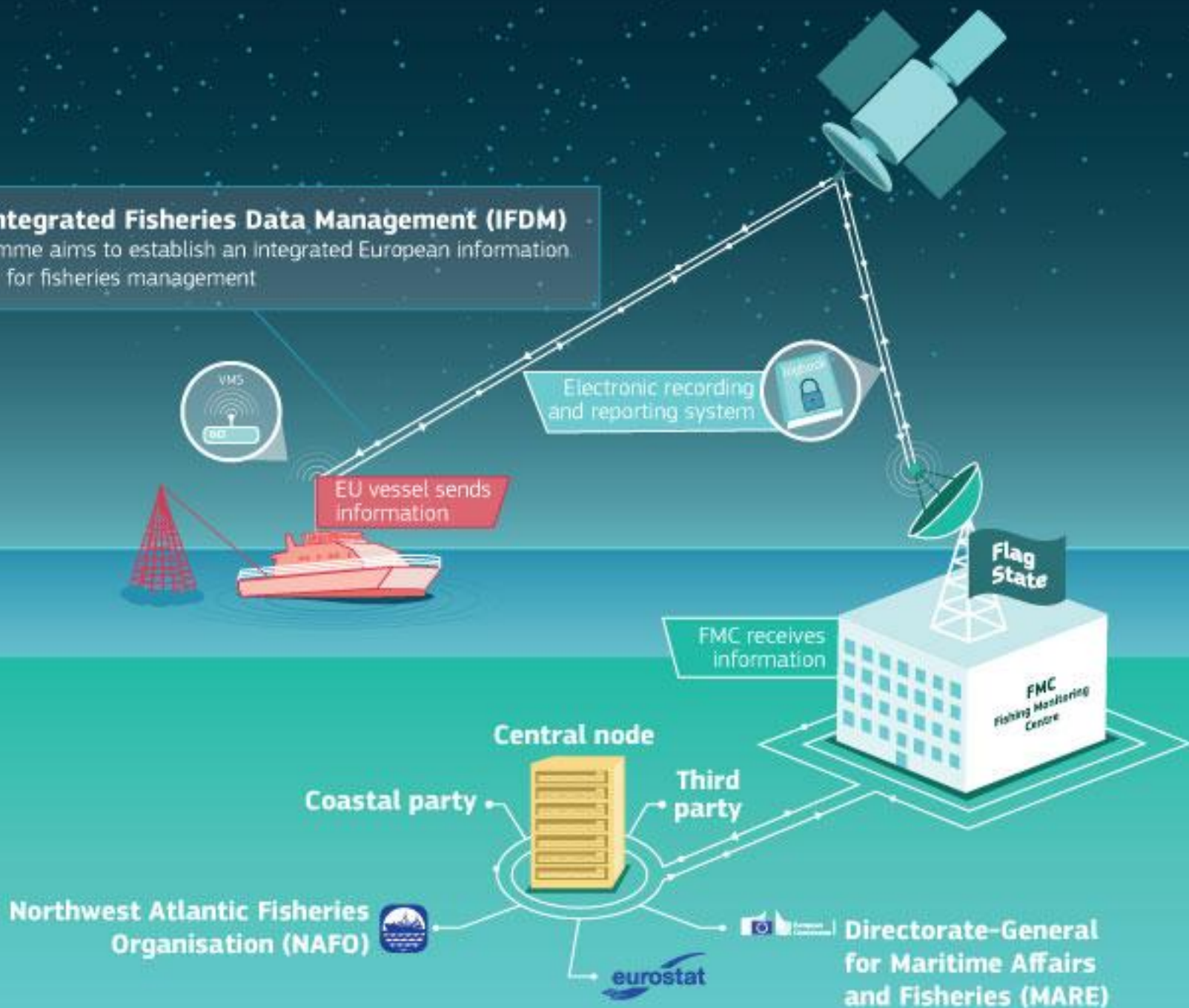
The Vessel Monitoring System (VMS) is a satellite-based monitoring system which provides data to the fisheries authorities on the **location, course and speed of vessels**

Core data flow: ERS

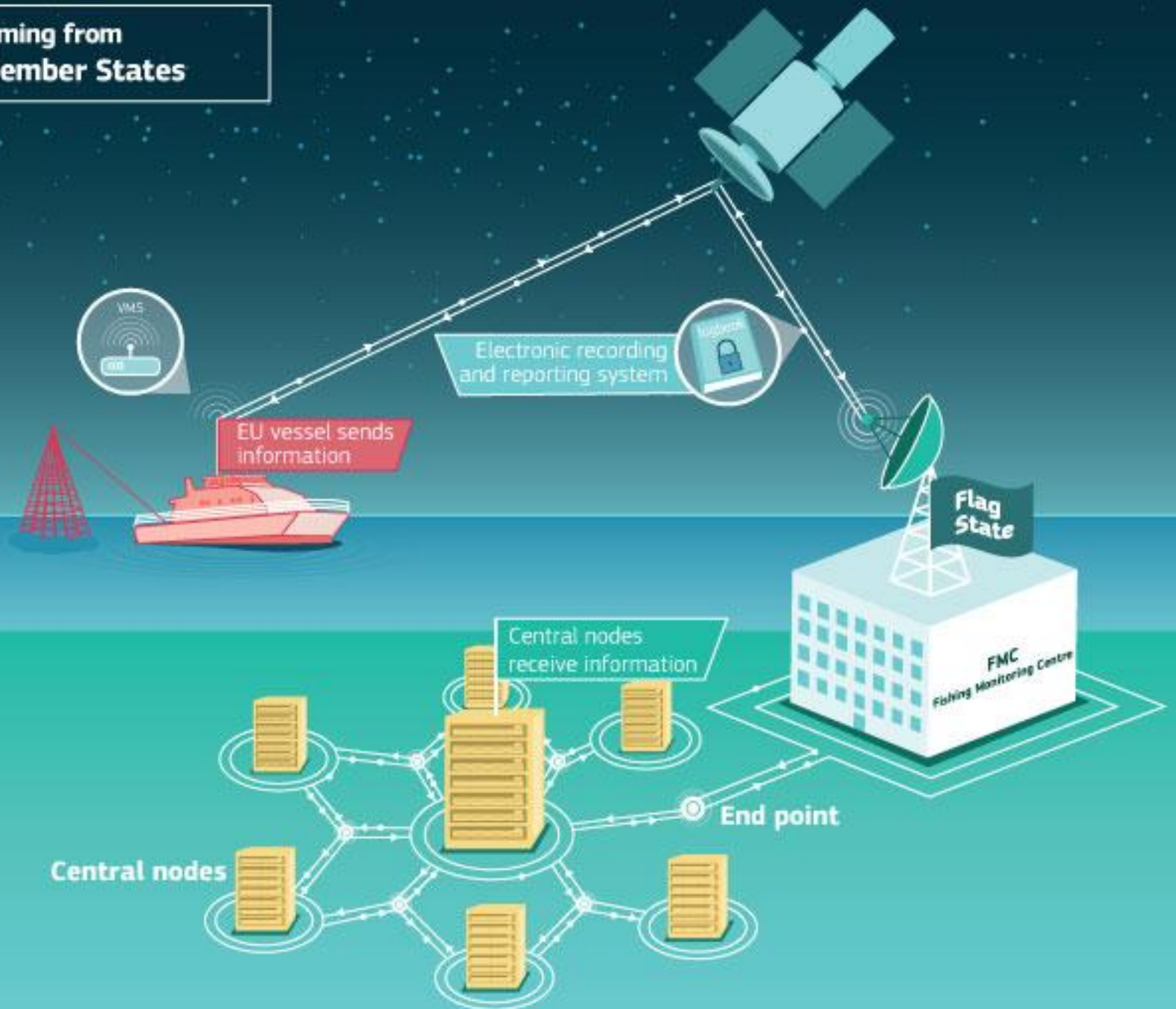


The Integrated Fisheries Data Management (IFDM)

programme aims to establish an integrated European information system for fisheries management



Vessels coming from non EU Member States



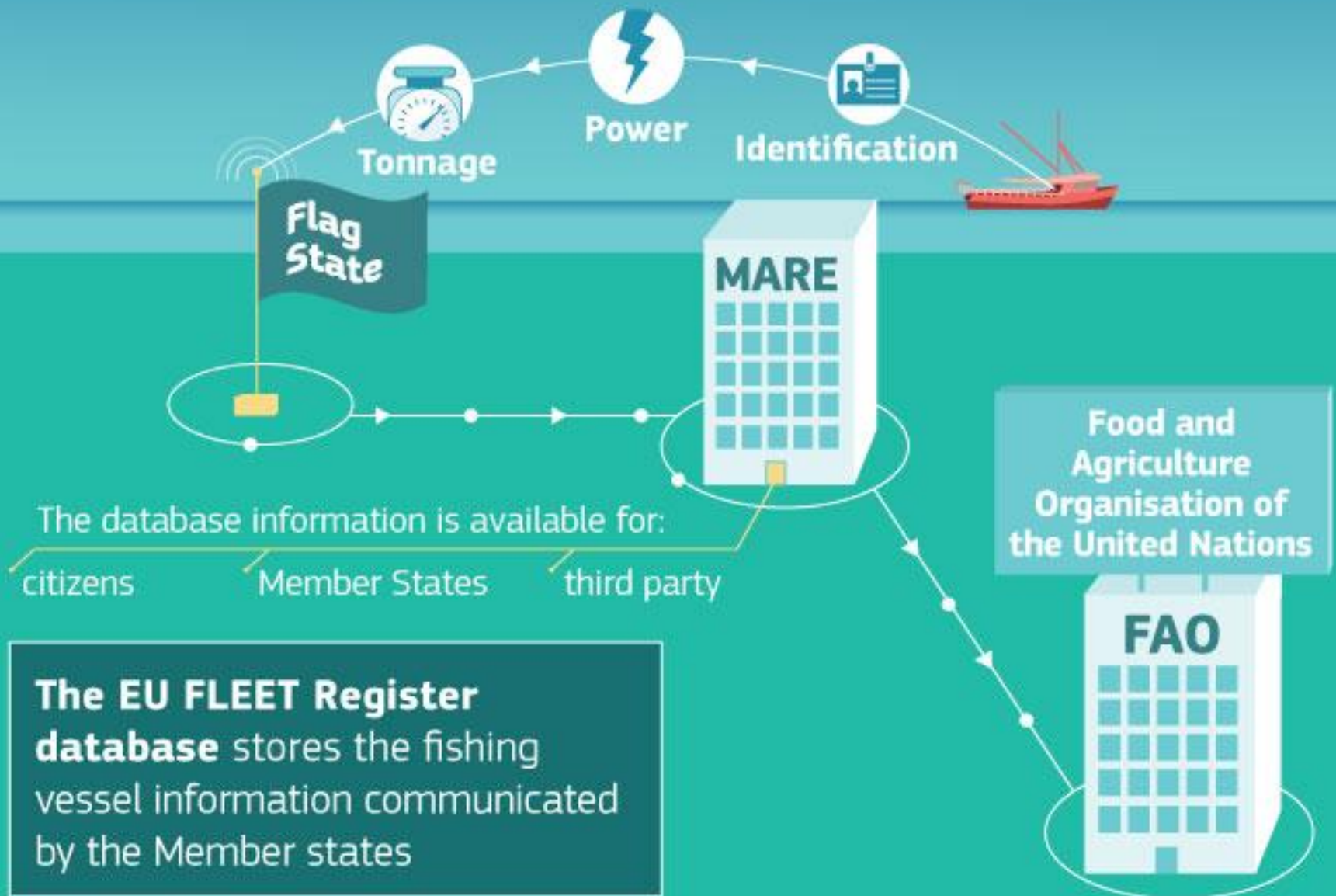
IFDM

FLUX TL will connect the IT systems of Member States, DG MARE and European Fisheries Control Agency (EFCA). It can be used for any data exchange



Development of the data exchange software

Central service: FLEET



The EU FLEET Register database stores the fishing vessel information communicated by the Member states

The Master Data Register (MDR) is a central service database with code lists

Central service: MDR



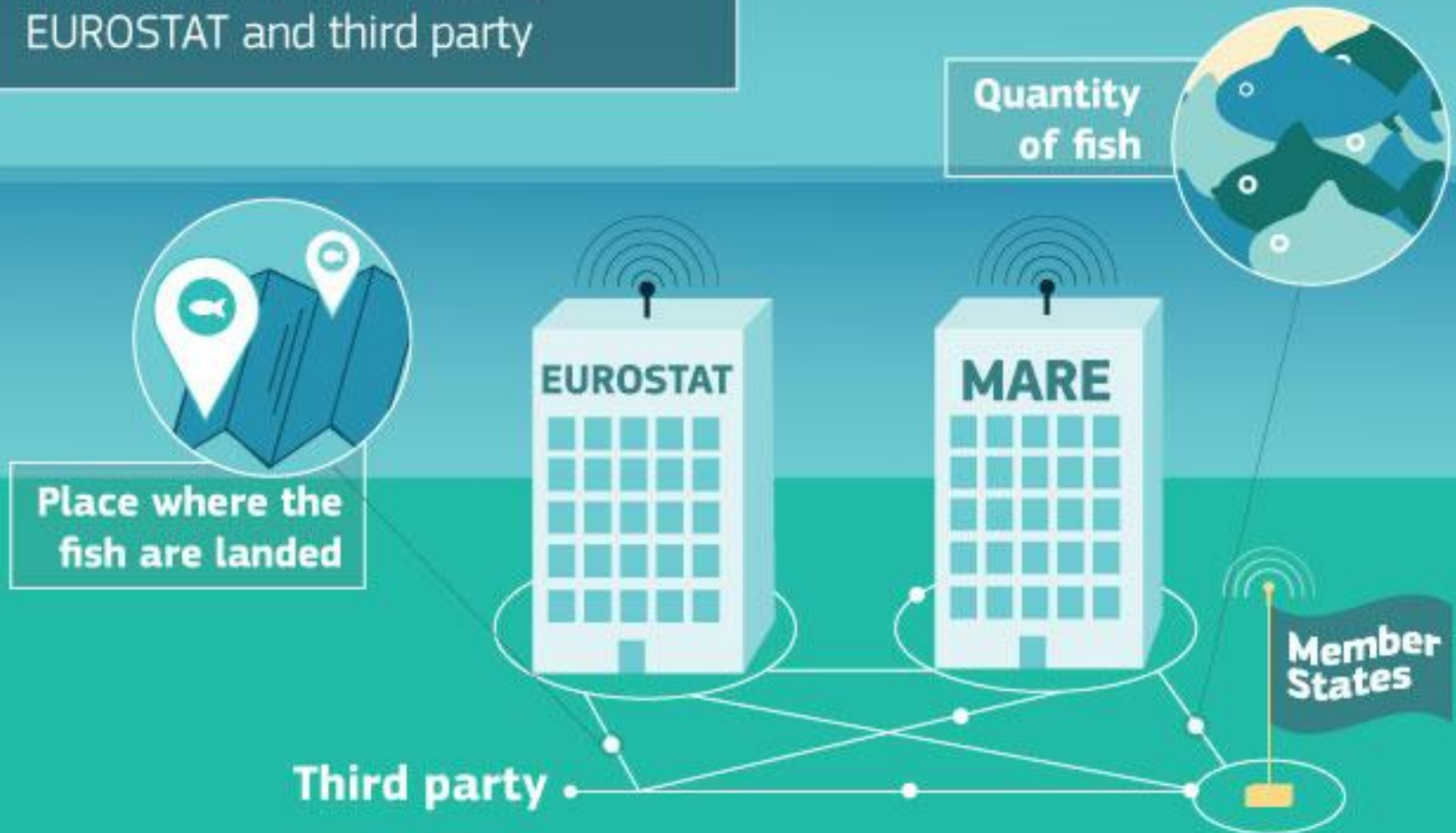
in the Future

there can be several central services managed by different parties



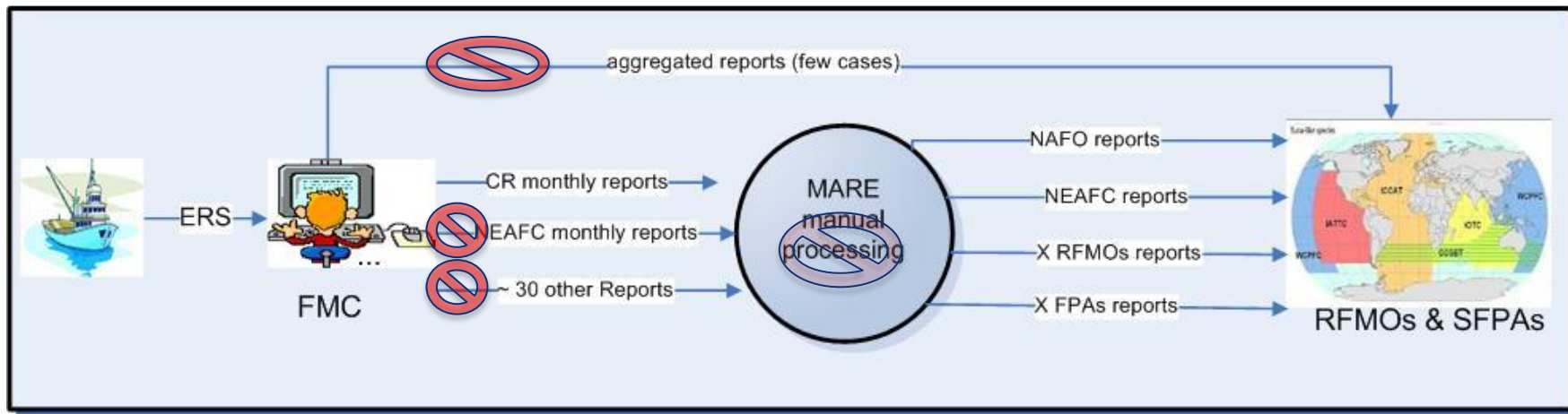
Aggregated Catch Data Reporting is exchanged between Member States, DG MARE, EUROSTAT and third party

Central service: ACDR

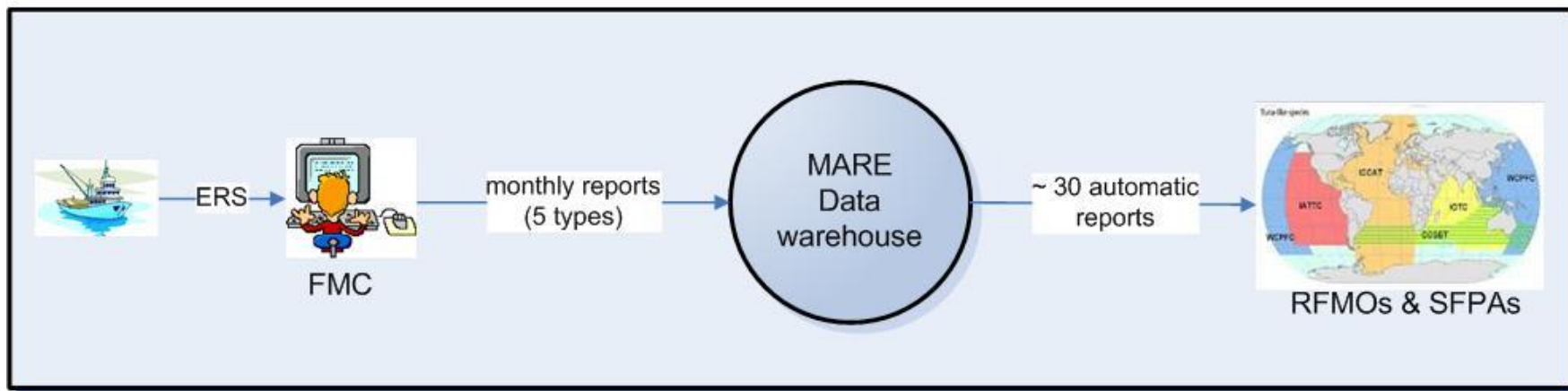


ACDR – benefits

PAST



PRESENT



IFDM



The Licence workflow is used to request fishing authorisations

In preparation: Licences



Business community

**Please
join**



Roadmap?

On offer 1

First condition

- Operational FLUX Transportation Layer in RFMO or third country

Fully operational

- Vessel data of EU vessels active in the waters of the third party.
- Aggregated catch reports in XML format of EU fishing activities in the waters of the third party.
- A code lists master data register

On Offer 2

Spring 2015

- The VMS positions of EU vessels fishing in the waters of the third party
- EU-ERS v3.1 messages of vessels active in the waters of the third party

Autumn 2015 onwards

- VMS viewer software

From 2016

- **Complete software suite compatible with UN/CEFACT standards for fisheries:**
 - Receiving/requesting/sending all data
 - Receiving/sending aggregated catch reports
 - Visualising VMS and ERS
 - Analysing and reporting on fishing activities
 - Receiving/Requesting/Visualising vessel data
 - Treating fishing authorisation requests

Main limitations

- **Transportation Layer installed (4 months)**
- **2-4 months to activate a data flow**
 - VMS
 - ACDR
 - MDR
 - Vessel data (temporary)
- **Ready for**
 - Vessel data (standardised)
 - Licences
 - Electronic logbooks

For extra information

- Francy.Callewaert@ec.europa.eu

- **IFDM deliverables:**

<https://circabc.europa.eu/w/browse/9d6098eb-e128-45ae-a4ca-5703b31d8257>

**Please
join**

