



REVOLUTIONISING FISHERIES CONTROL WITH
AI DRIVEN DATA AUTOMATION

From paper to insight

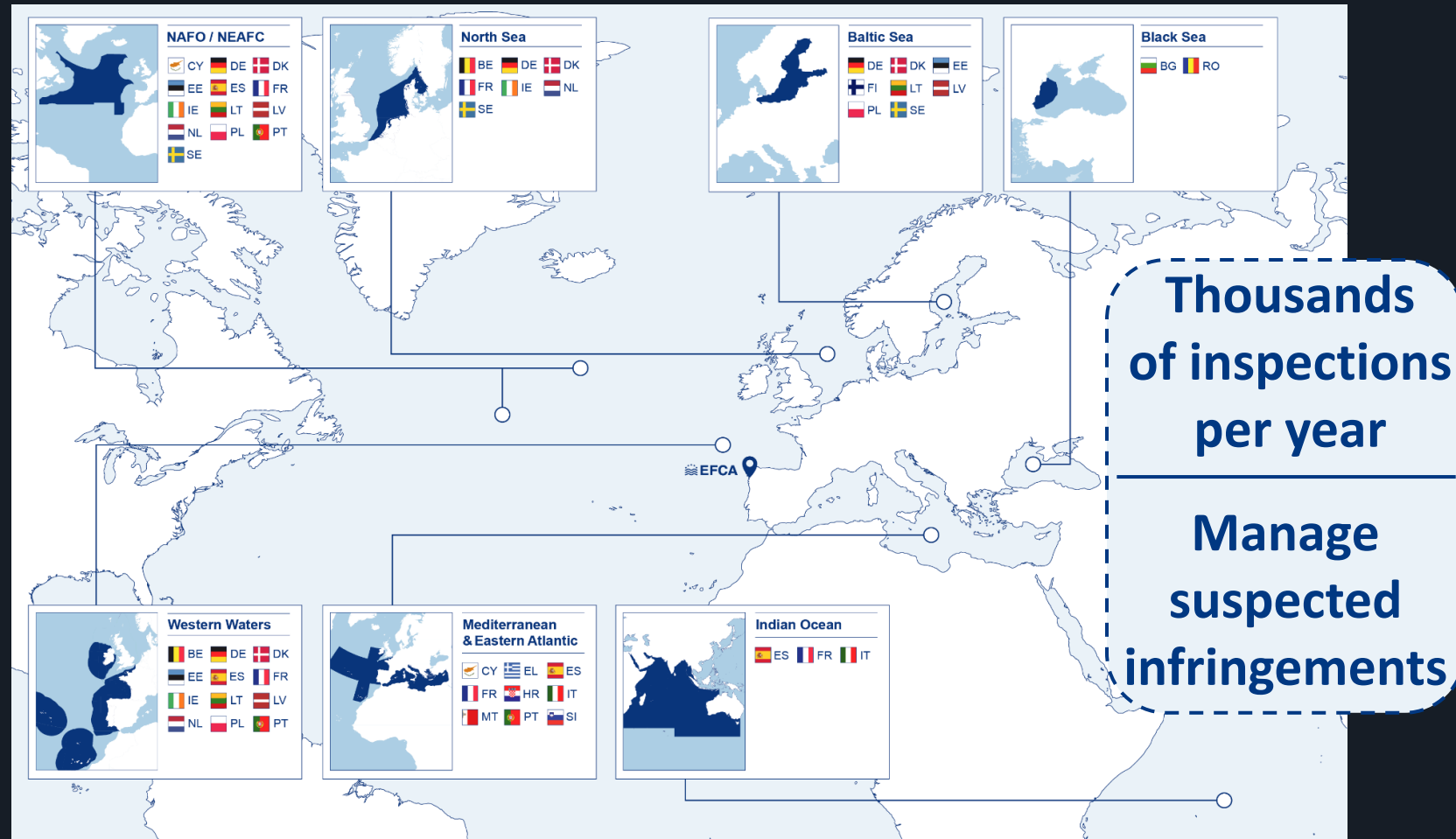
Jose Nunes

Solutions Architect

Amazon Web Services

EFCA at a glance

- Ensures sustainable fishing under the Common Fisheries Policy (CFP)
- Coordinates inspections across EU Member States



Two complimentary projects



Blue-Fin Tuna (BFT) Data Analysis Platform

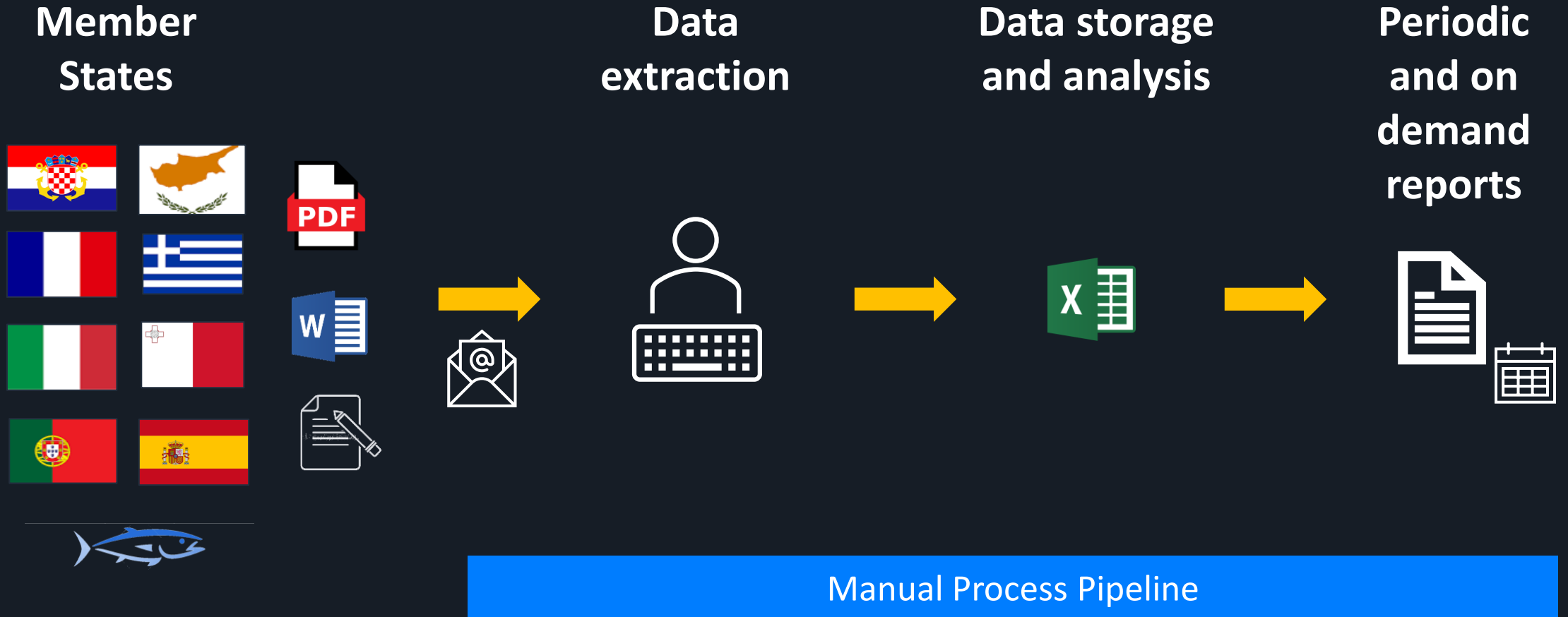
AI powered data ingestion
from multiple types of forms



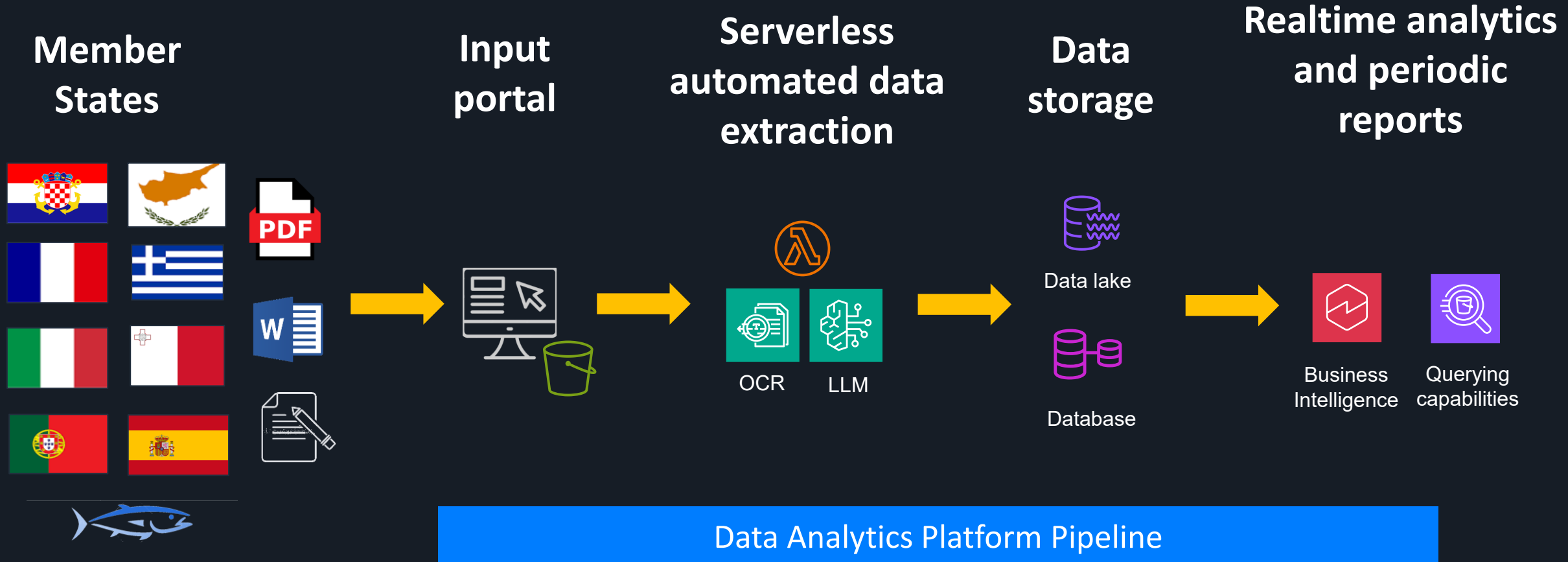
Integrated Reporting and Insights System (IRIS)

Self-Service Analytics Platform
with real time data integration

From manual to AI-powered data ingestion



From manual to AI-powered data ingestion



Three document types driving BFT

FORM 4.E TRANSFER AUTHORISATION

Part 1. Information on catching vessel/trap

Vessel name	JFO number
Authorization No	ITD Number

Part 2. Information on donor towing vessel (if applicable)

Name of vessel	Flag State	
Donor Cage Nb	Quantity (Kg)	Quantity (Nb)
ITD Nb(s)		

Part 3. Information on receiving towing vessel (if applicable)

Name of vessel	Flag State	
Receiving Cage Nb	Quantity (Kg)	Quantity (Nb)
ITD Nb(s)		

Part 4. Information on transfer

Position	Lat	Long	Date
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eBCD

- electronic Bluefin Catch Document
- Structured PDF
- Relatively straightforward

Document No. 123456789

1. TRANSFER OF LIVE BFT DESTINATED FOR FARMING

Fishing vessel name	Trap name	1st towing vessel name	Name destination farm
ICCAT Register No.	ICCAT Register No.	ICCAT Register No.	ICCAT Register No.
Donor farm name (1)	ICCAT Register No.	1st towing vessel name (2)	Name destination farm (2)
ICCAT Register No.	ICCAT Register No.	2nd towing vessel name (3)	Name destination farm (3)

2. FIRST TRANSFER INFORMATION

No. individuals and estimated weight (Kg) in first cage (A)	No. individuals and estimated weight (Kg) in second cage	No. individuals and estimated weight (Kg) in third cage
First transfer	First transfer	First transfer
Voluntary transfer	Voluntary transfer	Voluntary transfer
Control transfer	Control transfer	Control transfer
BFT dead during the transfer (B)	BFT dead during the transfer (C)	BFT dead during the transfer (D)

ITD

- ICCAT Transfer Declaration
- Fully handwritten
- Hardest to extract

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F4E

- Form 4E (Caging Report)
- Printed, often handwritten

Finding the right AI for for the job



OCR

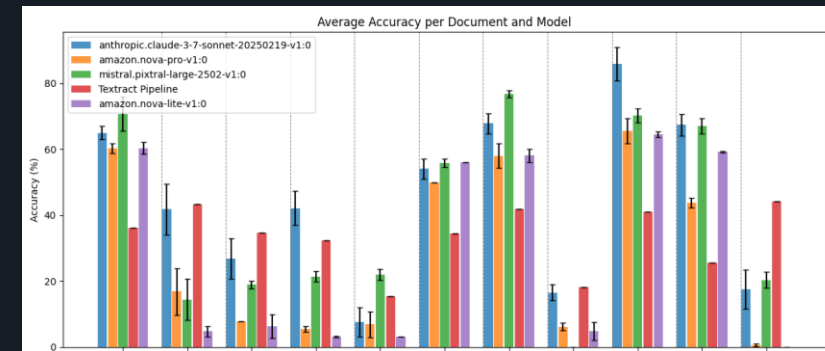
- Works well with printed documents
- Poor accuracy for handwritten documents
- Needs language specific configuration

Both methods allow transparent and auditable data extraction

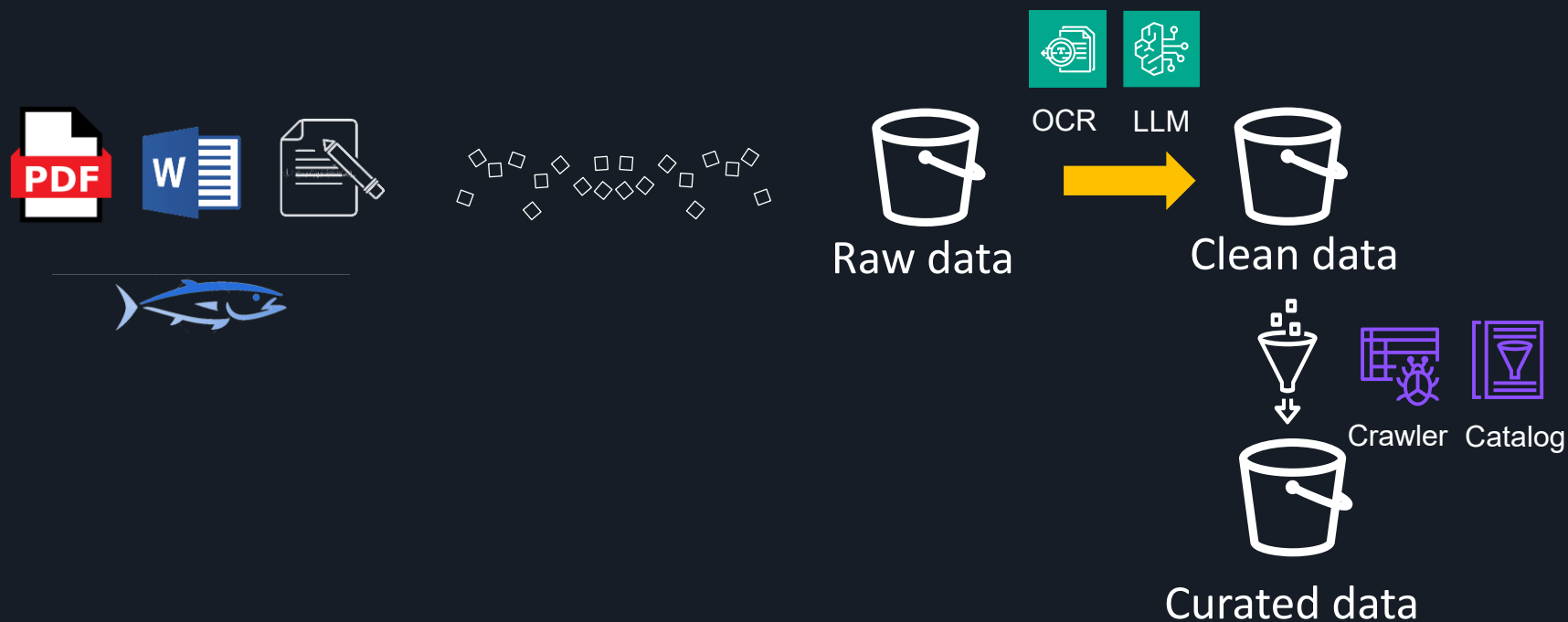


LLM

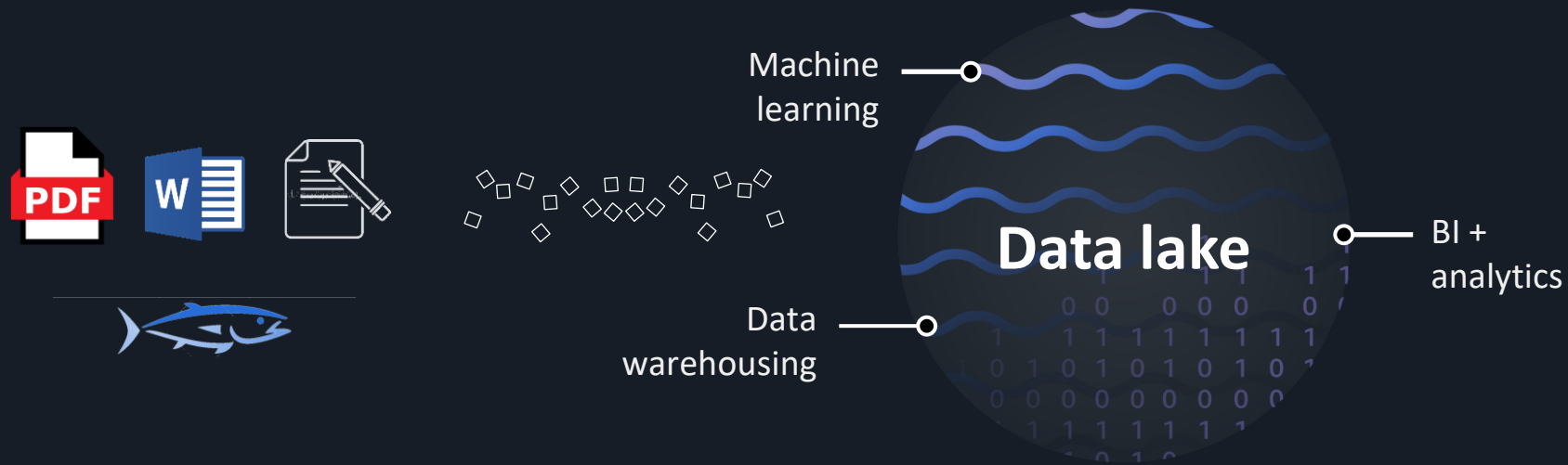
- Better accuracy for handwritten documents
- Can be cost-effective (depends on model)
- Variable performance depending of document type
- Possibility of model selection according to cost, performance and availability in the EU



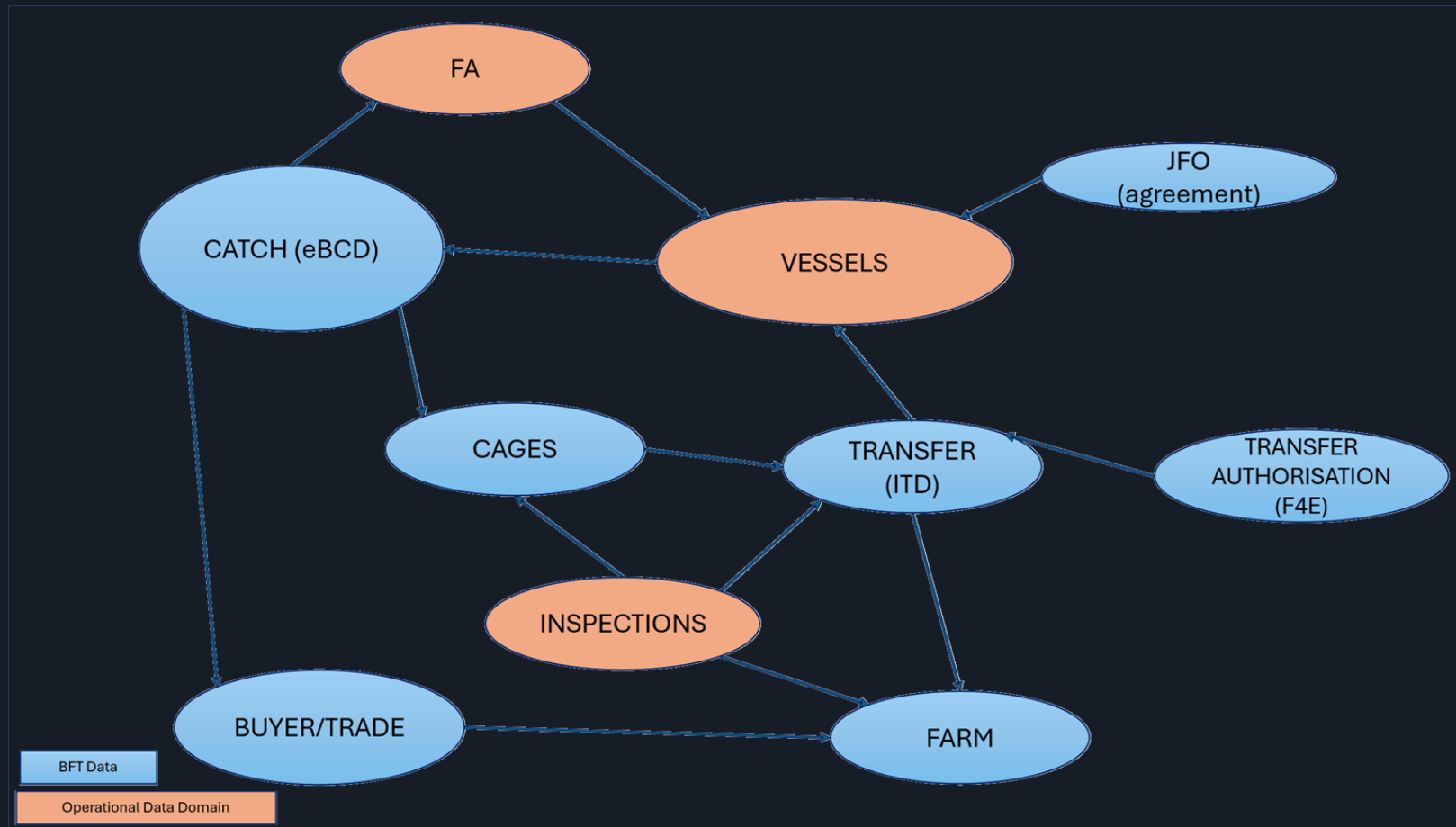
Building a scalable way of processing and storing data



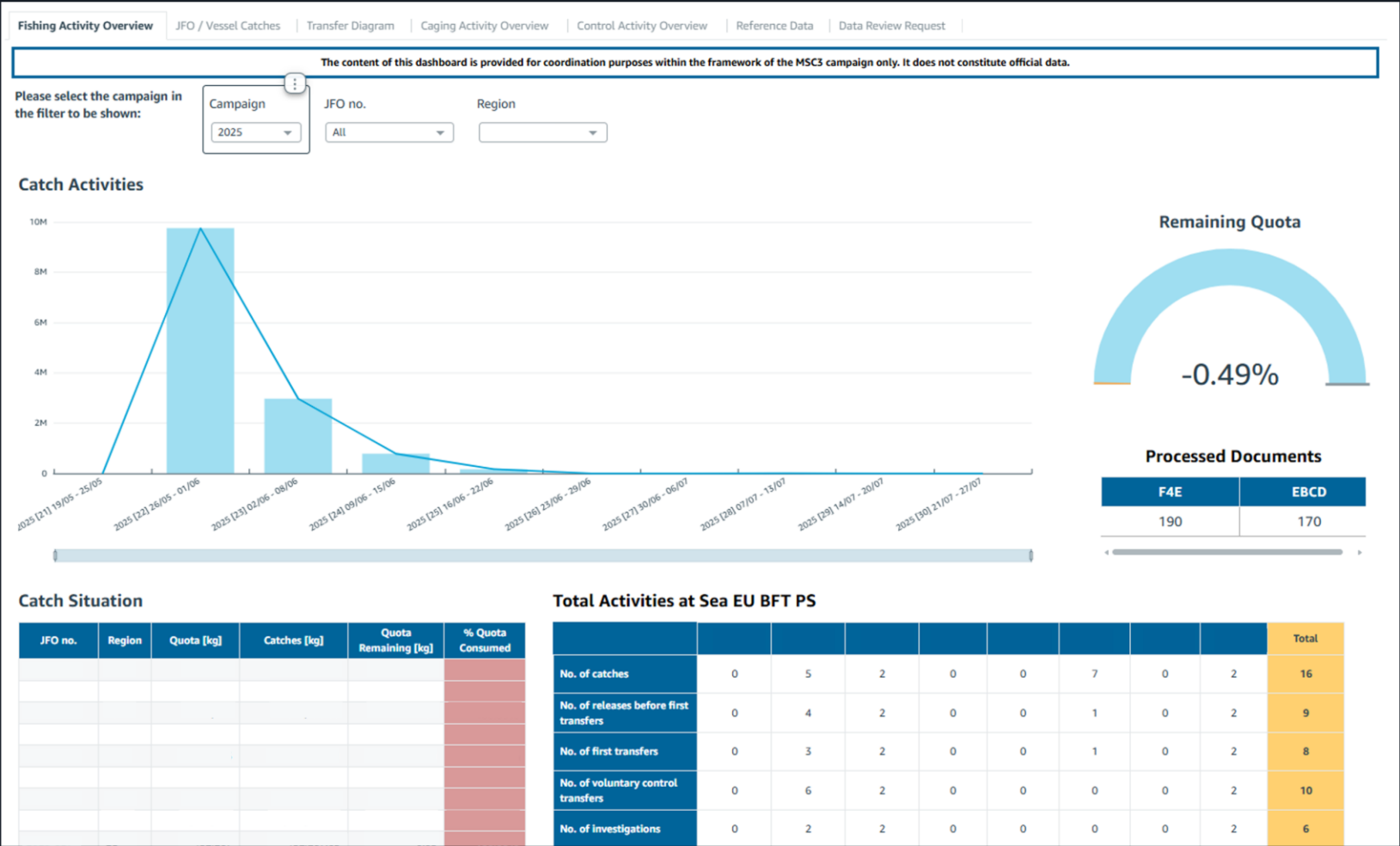
Building a scalable way of processing and storing data



Connecting the dots – keeping data lineage

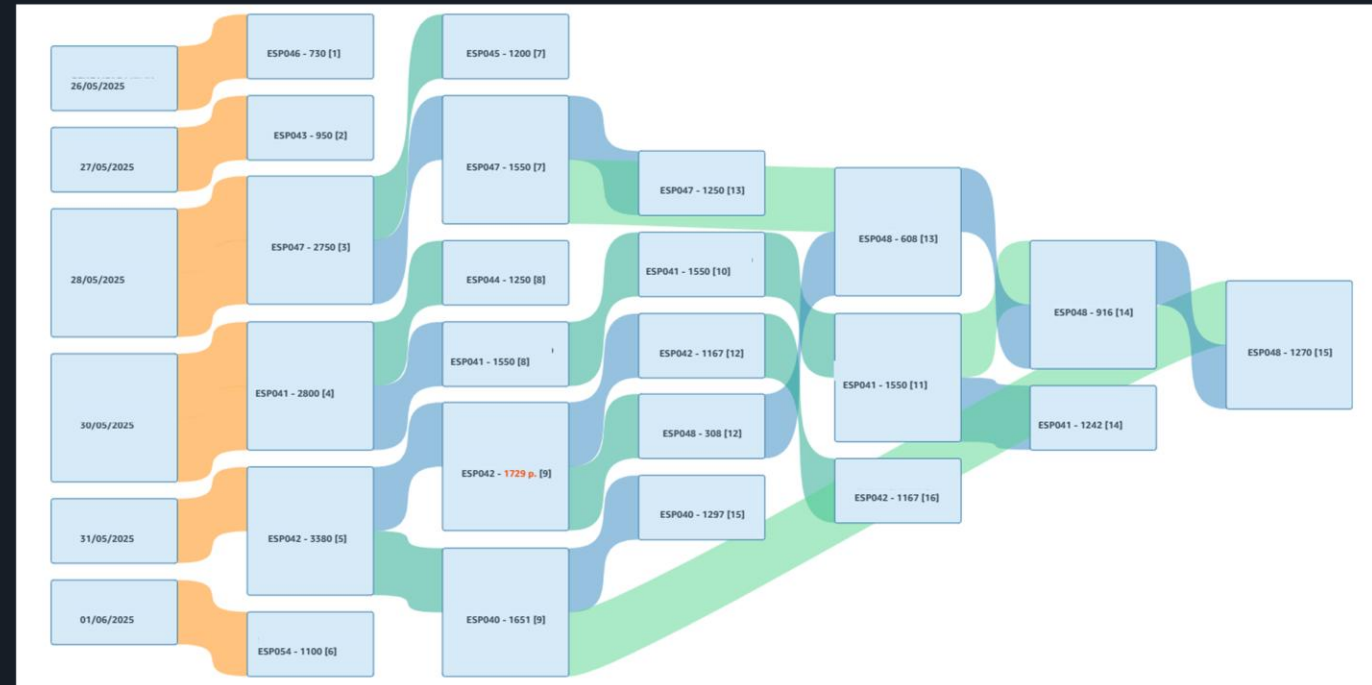


On-demand dashboard creation

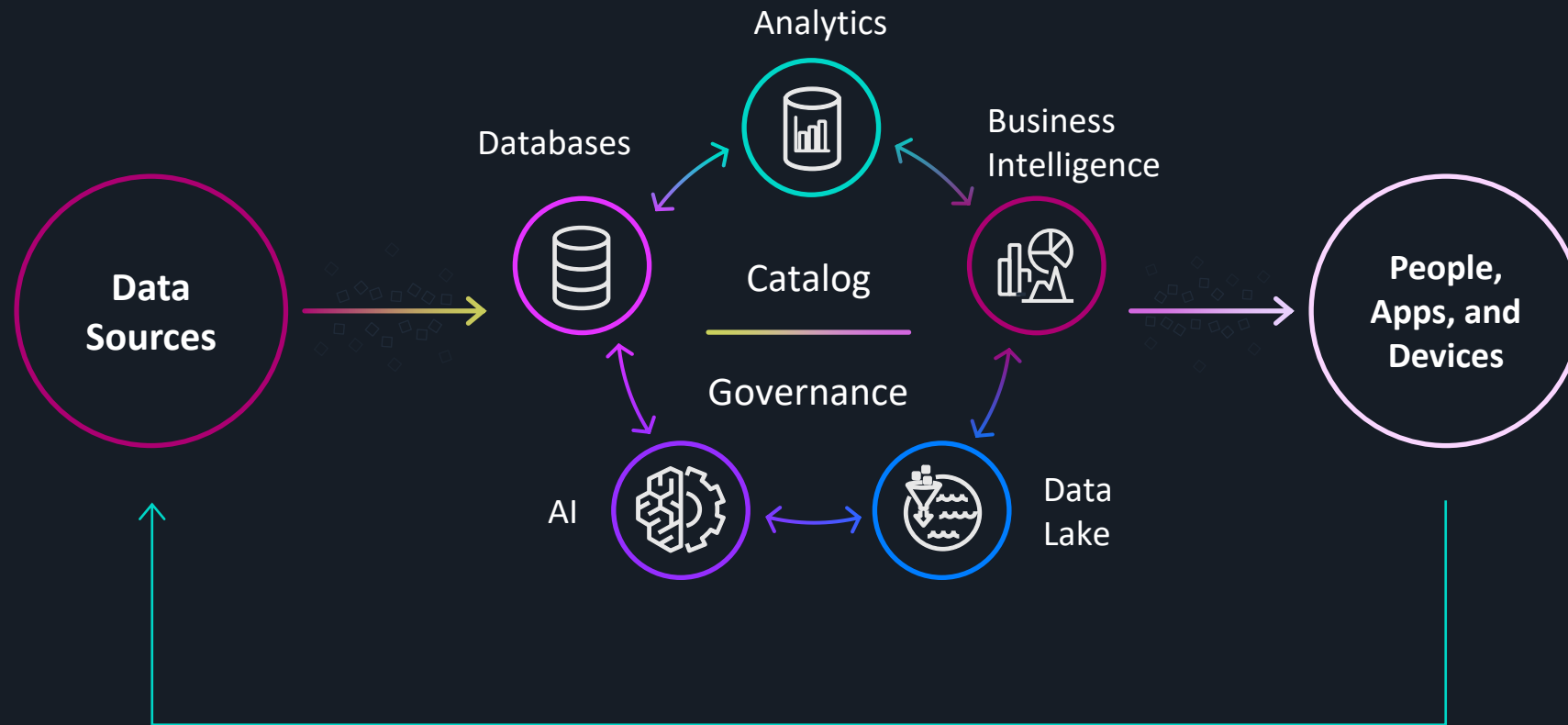


Extracting value from the data

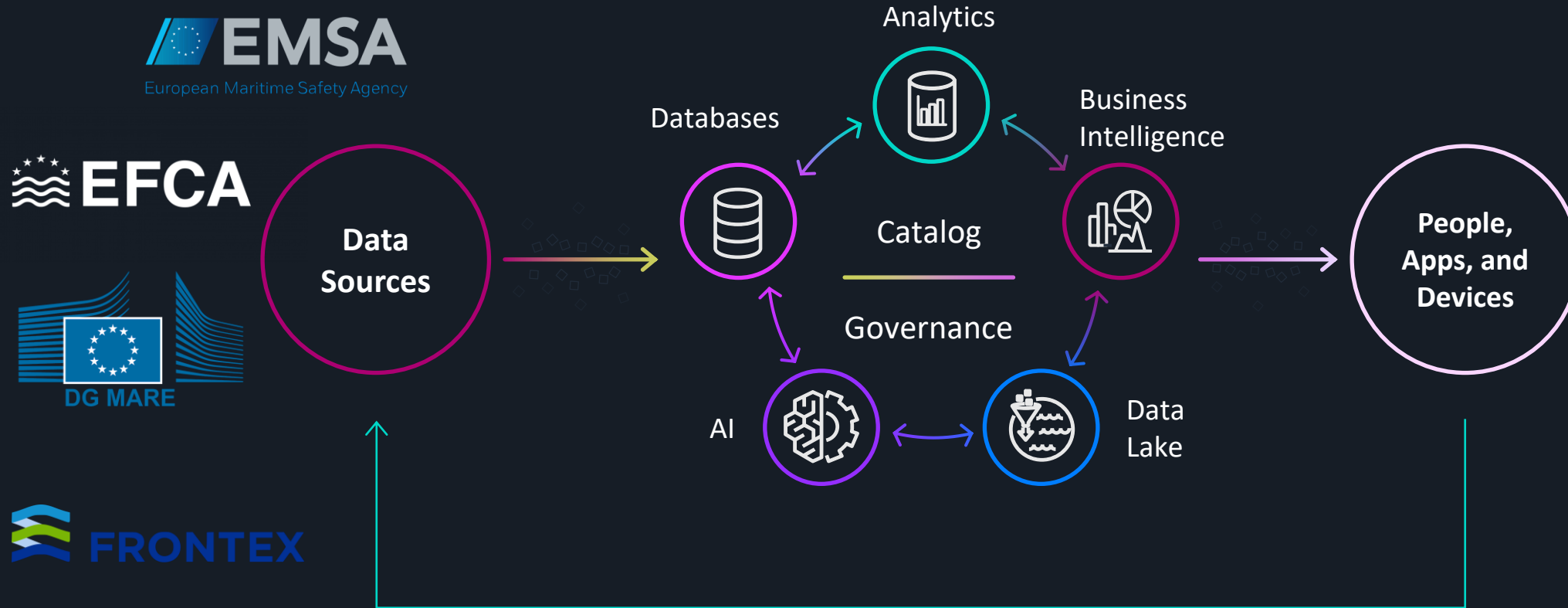
- Evolution to near-real time data analysis
- Cross-correlation and fraud detection with other collected data
- End-user empowerment (custom reports and dashboards)
- Intuitive graphics and automatic generation/ update of dashboards and reports



The big picture



The big picture





Thank you