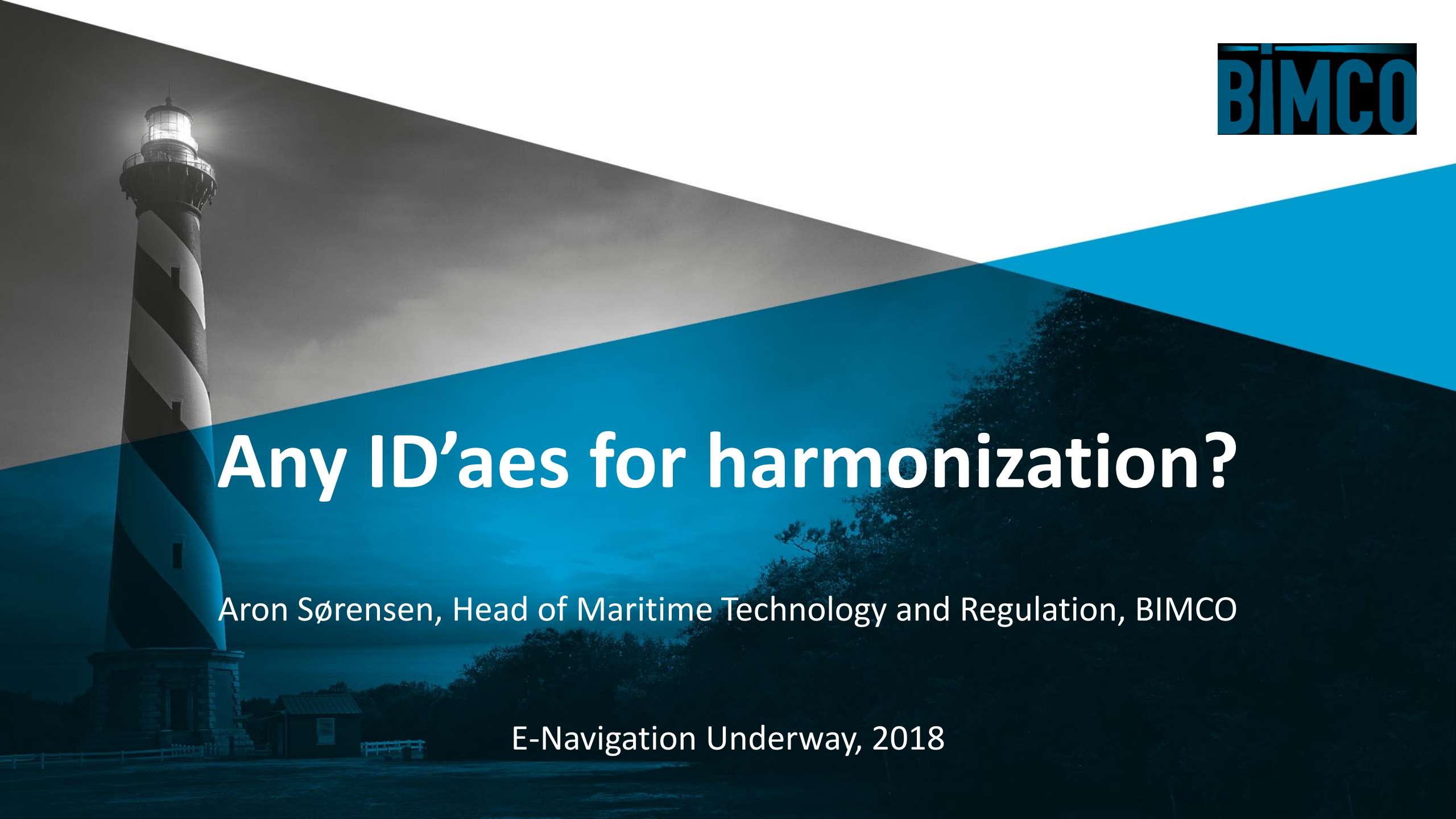

Any ID’aes for harmonization?

Aron Sørensen, Head of Maritime Technology and Regulation, BIMCO

E-Navigation Underway, 2018

EfficienSea2 project has 15 end-user services

Navigation

- Navigational Warnings and Notices to Mariners
- Weather on Route
- Nautical Charts based on S100 Standards
- Smart Buoy Interaction
- Route Optimisation
- Ice Charts
- Crowd Sourcing of Ice Information
- Route Exchange
- No-go Areas and Comfort Zones

Arctic

- Arctic Live Position Sharing
- Arctic SAR Tool
- Space Weather Forecast

Administration

- Automated VTS/SRS reporting
- **Automated exchange of port information**

Emissions

- Sulphur emission monitoring

Exchange of information

- Complex and diversified picture
  - Pre-arrival documents are sent in advance
    - Pre-arrival documents very often have different deadlines for submitting; 72-48-24 hours before arrival,
  - Port documents for the Authority are handed over on arrival
  - Information exchanged between many stakeholders

- The recieving entity, type and template differs from port to port – even within same country and region

E2 Case study on required reporting from a ship

En route from Port of Gdansk, Poland calling Port of Aarhus, Denmark							
1		Great Belt PreTransit	VTS				
2	72 hours before arrival	Port State Control information	Notification for ships eligible to expanded inspections		EU-SSN form C3		
3		VTS	Notification				
4	As early as possible		Garbage removal form				
5	24 hrs before arrival	ETA-24 hours to ETA	Notification for ships arriving in and departing from ports of the EU		EU-NSW form A1		
6	24 hrs Pre-Arrival documents	Border Control	Border checks on persons		EU-NSW form A2		
7		Dangerous Goods	Notification of dangerous or polluting goods carried on board		EU-NSW form A3		
27			Ship's stores list	(deck and engine)	IMO FAL form B3	2	
28			Temporage storage list		EU-NSW form C5		
29			Narcotics and weapons list			2	
30			Ship's cash list			1	
31			Crew change information			1	

Identified

150+ reporting requirements!

for 4 ports

International regulation on reporting

- IMO Facilitation Committee (FAL) adopted in 2016 new requirements for electronic data exchange
- New mandatory regulation requires public authorities to establish systems to assist ship clearance processes **by April 2019**
- For international shipping, a unified, global approach to facilitation of international maritime traffic is vital

EFFICIENSEA 2.0 GETTING CONNECTED

A SCENARIO COULD BE…

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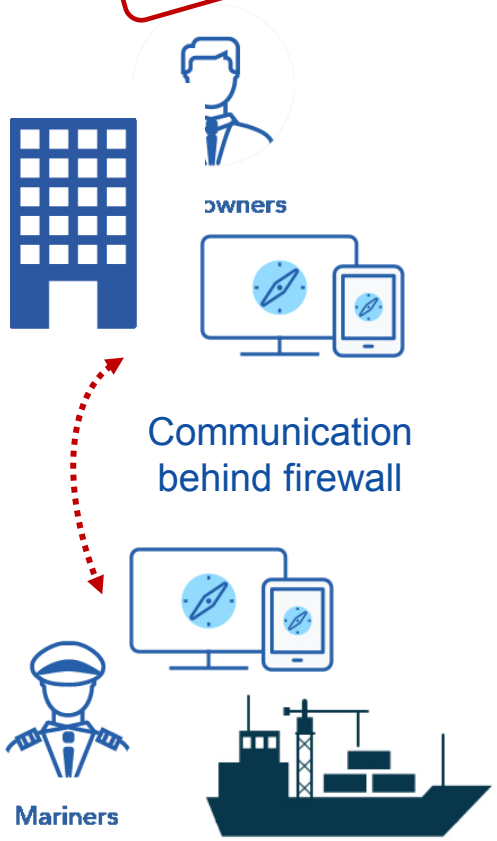
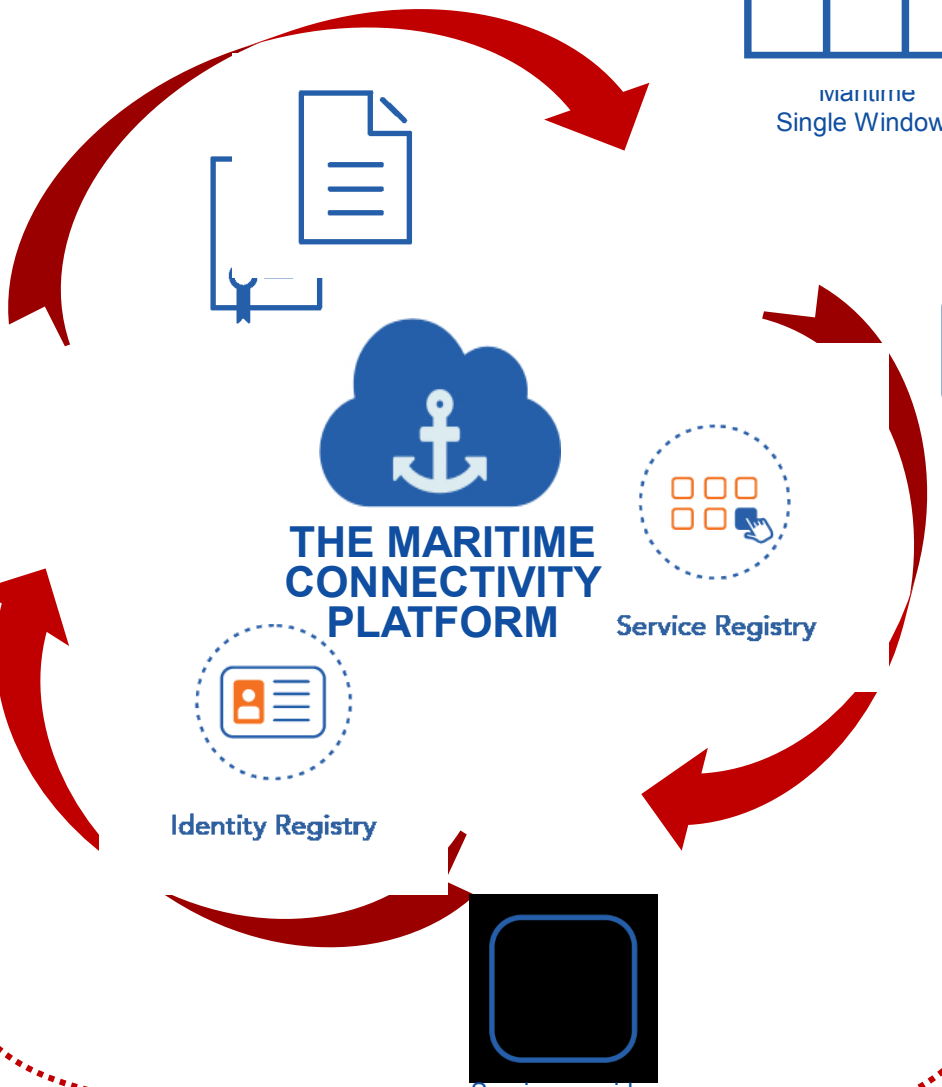
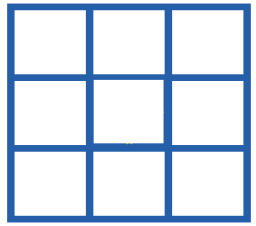
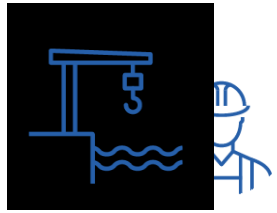








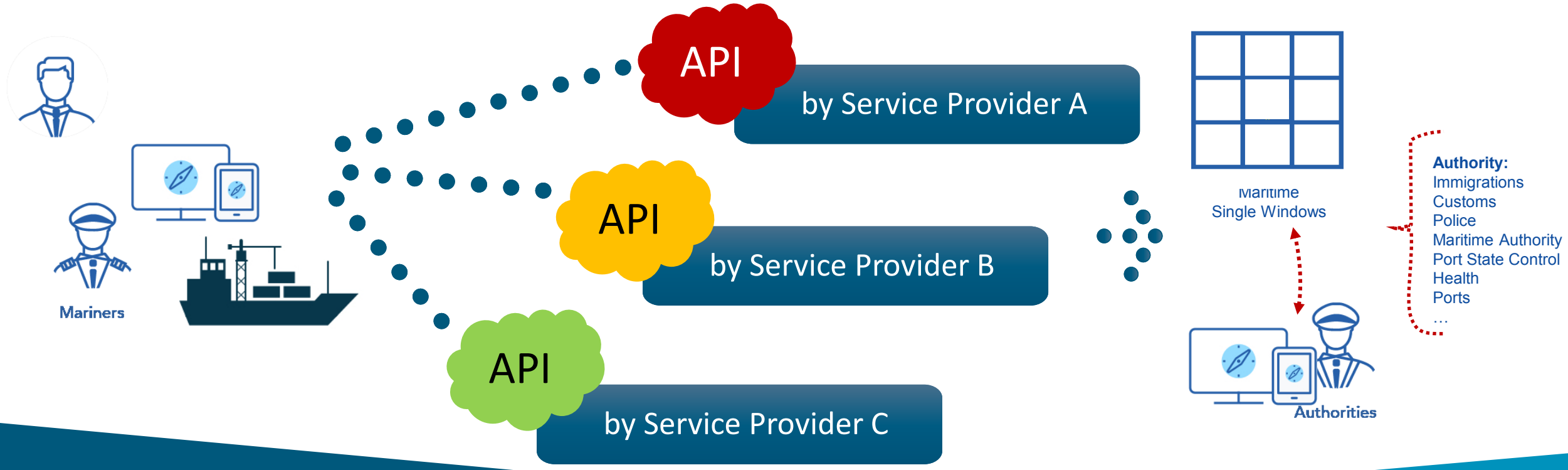
Authority:
Immigrations
Customs
Police
Maritime Authority
Port State Control
Health
Ports
…

Information:
Cargo formalities
Waste delivery
Bunkers
Pre-arrival/departure
Dangerous goods
Crew/Passenger lists
Ten last ports of call
Certificates
…

Authority:
Ports
Service providers
…

Information:
Reception facilities
Contact points
Holiday Calendar
Taxes & Tariffs
…

On-line test of e-solution



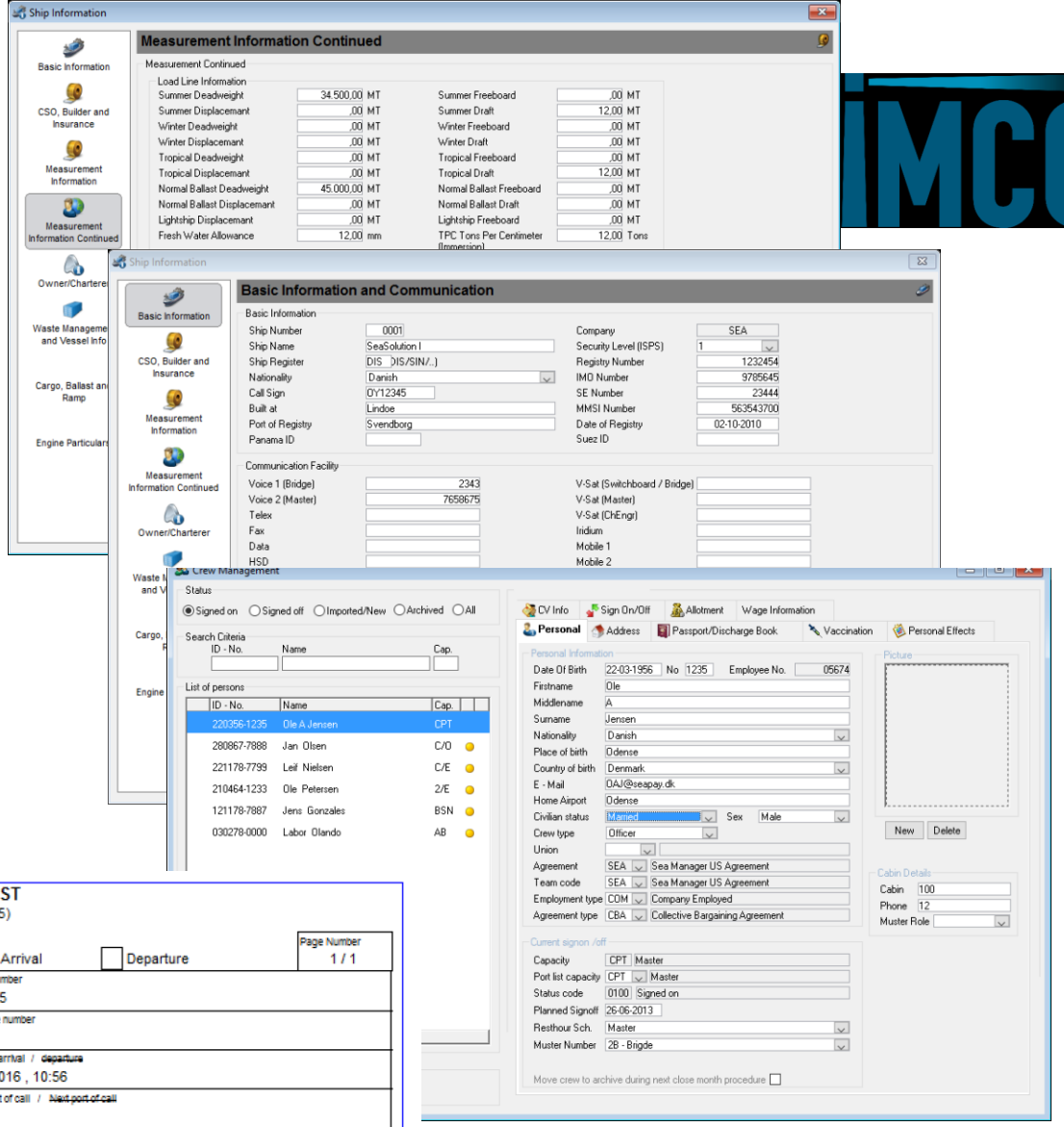
EFFICIENSEA 2.0 GETTING CONNECTED

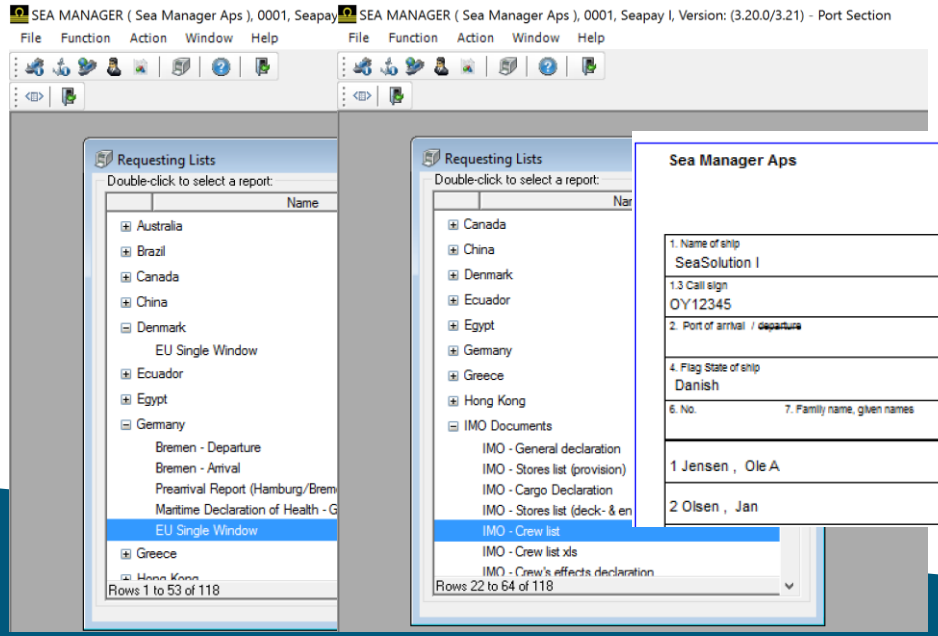
THE SHIPBOARD SYSTEM

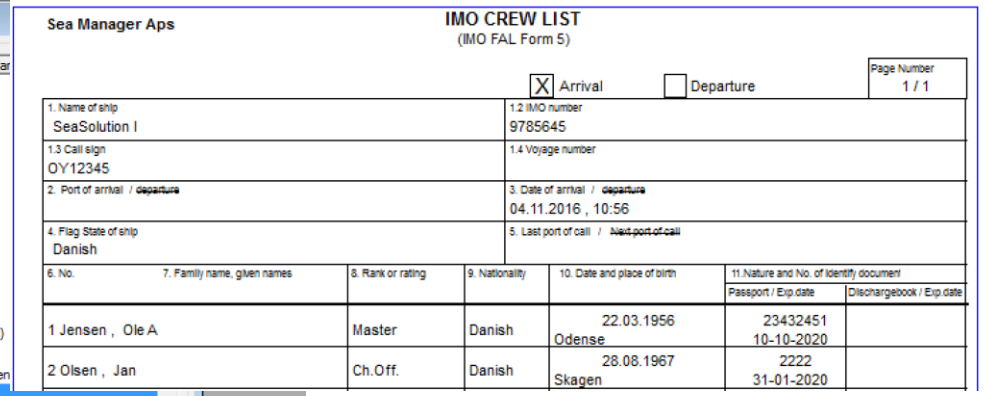
IMCO

Ship management system

- Collect and maintain ship report data
- Release report data when ready







Sea Manager Aps

IMO CREW LIST
(IMO FAL Form 5)

X Arrival ☐ Departure

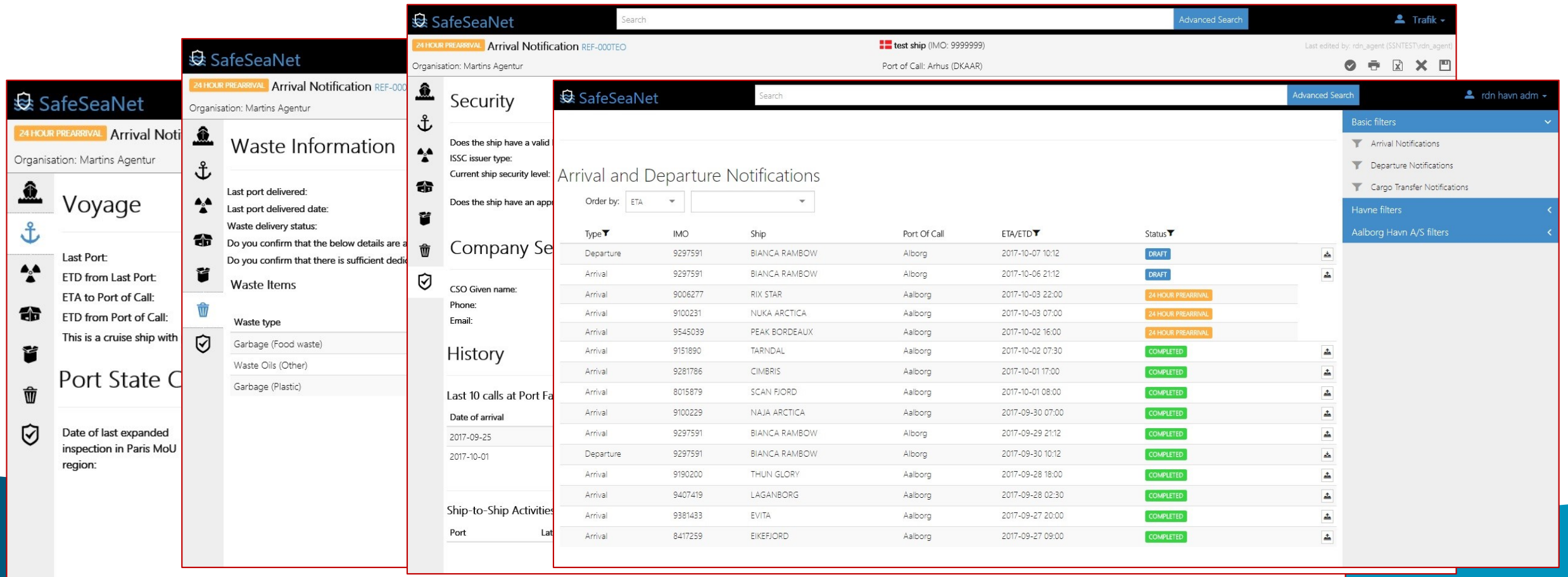
Page Number 1 / 1

1. Name of ship	1.2 IMO number
SeaSolution I	9785645
1.3 Call sign	1.4 Voyage number
OY12345	
2. Port of arrival / departure	3. Date of arrival / departure
	04.11.2016 , 10:56
4. Flag State of ship	5. Last port of call / Next port of call
Danish	

6. No.	7. Family name, given names	8. Rank or rating	9. Nationality	10. Date and place of birth	11.Nature and No. of identify document: Passport / Exp.date	Dischargebook / Exp.date
1	Jensen , Ole A	Master	Danish	22.03.1956 Odense	23432451 10-10-2020	
2	Olsen , Jan	Ch.Off.	Danish	28.08.1967 Skagen	2222 31-01-2020	

THE SAFESEANET.DK SYSTEM

Examples – information's from the SafeSeaNet.DK



STANDARDS – HARMONIZATION – STANDARDS

- **Harmonization** and use of **international standards** is key to for M2M **interoperability**
- Use of a suitable data model, mapped across main models (e.g. UN/CEFACT Multimodal Reference Data Model, WCO Data Model and ISO)
- The solution shall be **technology neutral**, and provide the ability to adapt to new technologies (backwards and forwards compatible)
- The solution do not call for additional systems/equipment; but must be implemented by all stakeholders

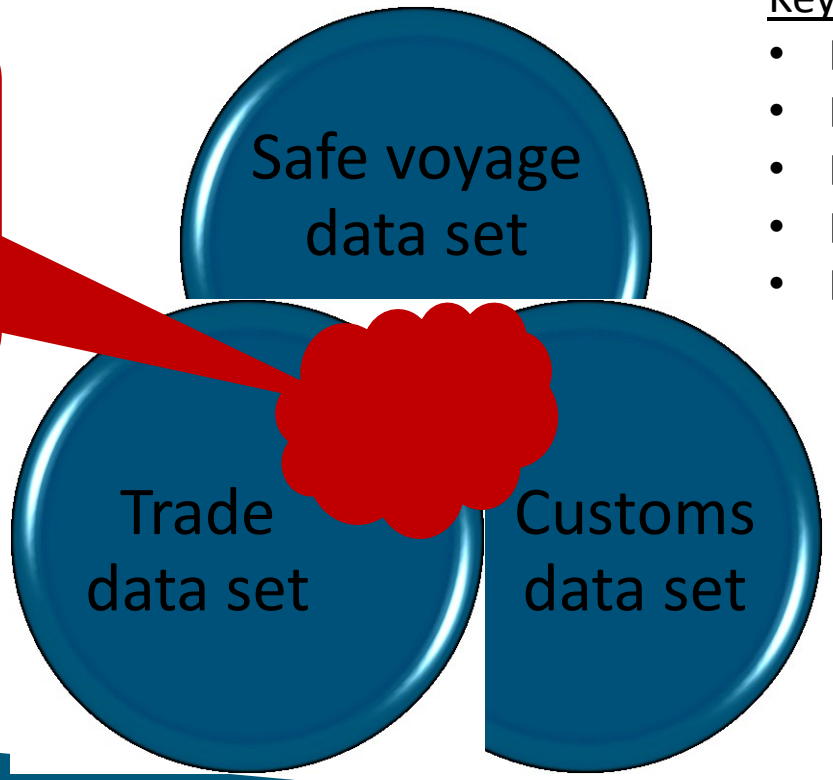
What are the obstacles….

- Need for common data element's ID standard

Data element	Description	Data element ID's			
		ISO 28005	UN/EDIFACT	WCO ID	IACS R.75
Ship name	Given name of the ship in the ship registry	ShipID.ShipName	C222:8212 (Name of ship)	T005	SHIP_Name
Call sign	Call sign for the ship. Sequence of letters and numbers, unique to each ship by w hich ships can be identified usually in radio communications.	ShipID.CallSign	C076:3148 (call sign)	Type (253)	SHIP_Call_Sign
IMO number	Unique ship identification number assigned by Lloyd's Register – Fairplay in accordance w ith IMO resolution A.600(15).	ShipID.IMONumber	C222:8213 (IMO Number)	T006	SHIP_IMO_Number
MMSI number	Identifier used by maritime digital selective calling (DSC), automatic identification systems (AIS) and certain other equipment to uniquely identify a ship or a coast radio station.	ShipID.MMSINumber	-	Type (253)	-
Comments	Any other information related to ship identity	ShipID.Comment	-	-	-
….					

Common maritime data model

Where overlap between the data models exists, there is a need for associating the data definition with multiple data element ID's



Key source

- UN/CEFACT data set
- …

Key sources

- IHO S-100 framework data set
- IMO FAL compendium data set
- IALA port call message standard data set
- IHMA nautical port information data set
- ISO 28005-2 data set, comprises also:
  - National Single Window (building on EMSA data set)
  - WHO maritime health declaration
  - IMO data on safety and environmental matters
- …

Key source

- WCO data set
- …

Reduction of the administrative burden

- E2 project have issued a questionnaire asking navigators about time spend to prepare, perform and finish 32 mandatory administrative tasks
  - The average total time to complete the most time consuming tasks is 62 minutes
  - The average total time to complete the least time consuming tasks is 16 minutes

- E2 solution estimate a reduction between 67-79% of this time*

* we are still analysing the numbers, but the reduction seems to be conservative

Thank you!

Contact BIMCO at

www.bimco.org

For further information, contact
Jeppe Skovbakke Juhl, jsj@bimco.org