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# Any ID'aees 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 receiving 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	
<h2 style="color: red;">Identified 150+ reporting requirements! for 4 ports</h2>						
27			Ship's stores list (deck and engine)		EU-NSW 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

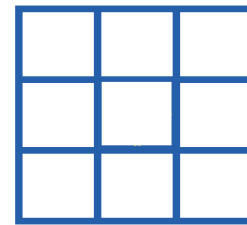
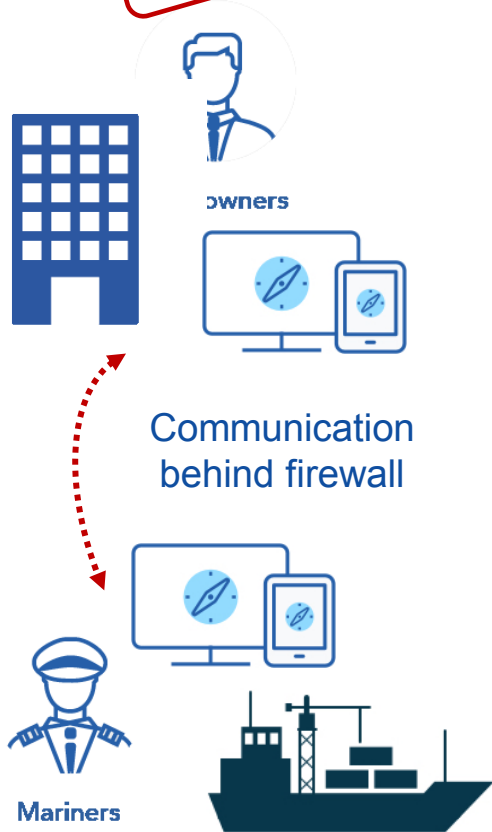


## International regulation on reporting

- 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...**



**BIMCO**

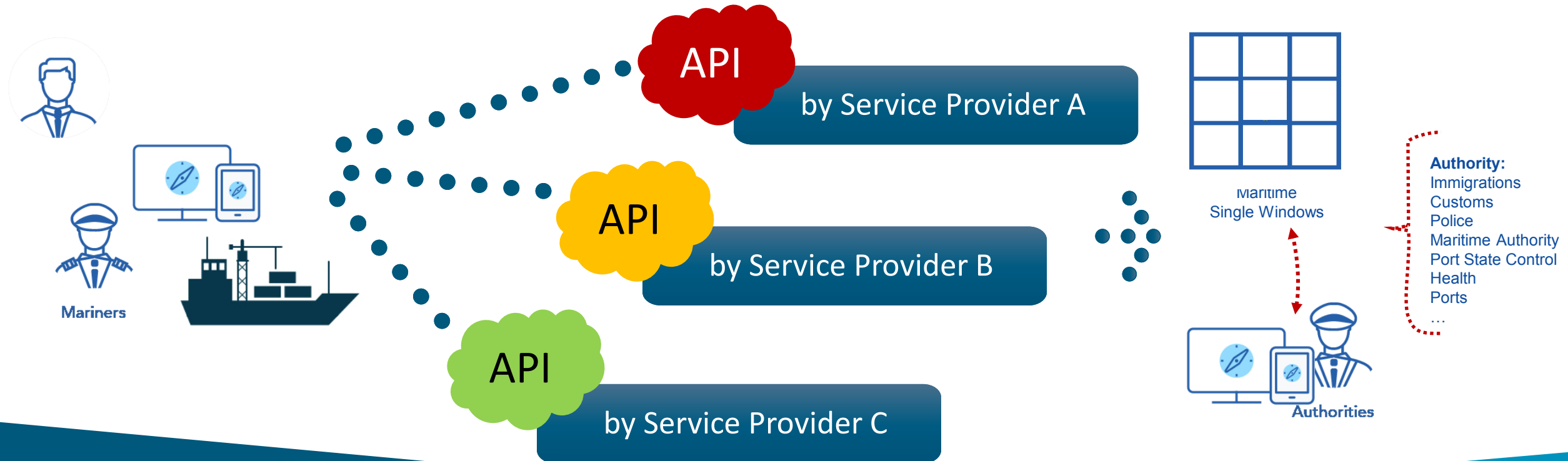
**Authority:**  
Immigrations  
Customs  
Police  
Maritime Authority  
Port State Control  
Health  
Ports  
...

**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



# Ship management system

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

The screenshots show the following modules:

- Measurement Information Continued:** Displays various ship metrics such as Load Line Information, Summer Deadweight (34,500.00 MT), and Summer Freeboard (0.00 MT).
- Basic Information and Communication:** Shows ship details like Ship Number (0001), Ship Name (SeaSolution I), and Company (SEA).
- Crew Management:** Lists crew members with columns for ID, Name, and Cap. (e.g., Ole A. Jensen, CPT).
- Personal Information:** Detailed profile for Ole A. Jensen, including Date of Birth (22-03-1956), Nationality (Danish), and Employment type (Company Employed).

The main interface includes:

- Requesting Lists:** A tree view for selecting reports by country (Australia, Brazil, Canada, etc.) or document type (IMO - Crew list, etc.).
- Sea Manager Aps:** A window for managing ship data, including ship name, call sign, and port of arrival.
- IMO CREW LIST (IMO FAL Form 5):** A detailed table for crew information.

Sea Manager Aps		IMO CREW LIST (IMO FAL Form 5)			
1. Name of ship SeaSolution I		1.2 IMO number 9785645			
1.3 Call sign OY12345		1.4 Voyage number			
2. Port of arrival / departure		3. Date of arrival / departure 04.11.2016 , 10:56			
4. Flag State of ship Danish		5. Last port of call / Next port of call			
6. No.	7. Family name, given names	8. Rank or rating	9. Nationality	10. Date and place of birth	11. Nature and No. of identity document
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



# Examples – information's from the SafeSeaNet.DK

The screenshot displays the SafeSeaNet.DK web application interface. The main header includes the logo, a search bar, and user information. The left sidebar contains navigation icons for Voyage, Waste Information, Security, and Company Se. The central area shows a detailed view of an arrival notification for a ship named 'BIANCA RAMBOW' at the port of Aalborg. The table below lists various arrival and departure notifications with columns for Type, IMO, Ship, Port Of Call, ETA/ETD, and Status.

Type	IMO	Ship	Port Of Call	ETA/ETD	Status
Departure	9297591	BIANCA RAMBOW	Aalborg	2017-10-07 10:12	DRAFT
Arrival	9297591	BIANCA RAMBOW	Aalborg	2017-10-06 21:12	DRAFT
Arrival	9006277	RIX STAR	Aalborg	2017-10-03 22:00	24 HOUR PREARRIVAL
Arrival	9100231	NUKA ARCTICA	Aalborg	2017-10-03 07:00	24 HOUR PREARRIVAL
Arrival	9545039	PEAK BORDEAUX	Aalborg	2017-10-02 16:00	24 HOUR PREARRIVAL
Arrival	9151890	TARNDAL	Aalborg	2017-10-02 07:30	COMPLETED
Arrival	9281786	CIMBRIS	Aalborg	2017-10-01 17:00	COMPLETED
Arrival	8015879	SCAN FJORD	Aalborg	2017-10-01 08:00	COMPLETED
Arrival	9100229	NAJA ARCTICA	Aalborg	2017-09-30 07:00	COMPLETED
Arrival	9297591	BIANCA RAMBOW	Alborg	2017-09-29 21:12	COMPLETED
Departure	9297591	BIANCA RAMBOW	Alborg	2017-09-30 10:12	COMPLETED
Arrival	9190200	THUN GLORY	Aalborg	2017-09-28 18:00	COMPLETED
Arrival	9407419	LAGANBORG	Aalborg	2017-09-28 02:30	COMPLETED
Arrival	9381433	EVITA	Aalborg	2017-09-27 20:00	COMPLETED
Arrival	8417259	EIKEFJORD	Aalborg	2017-09-27 09:00	COMPLETED



# 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

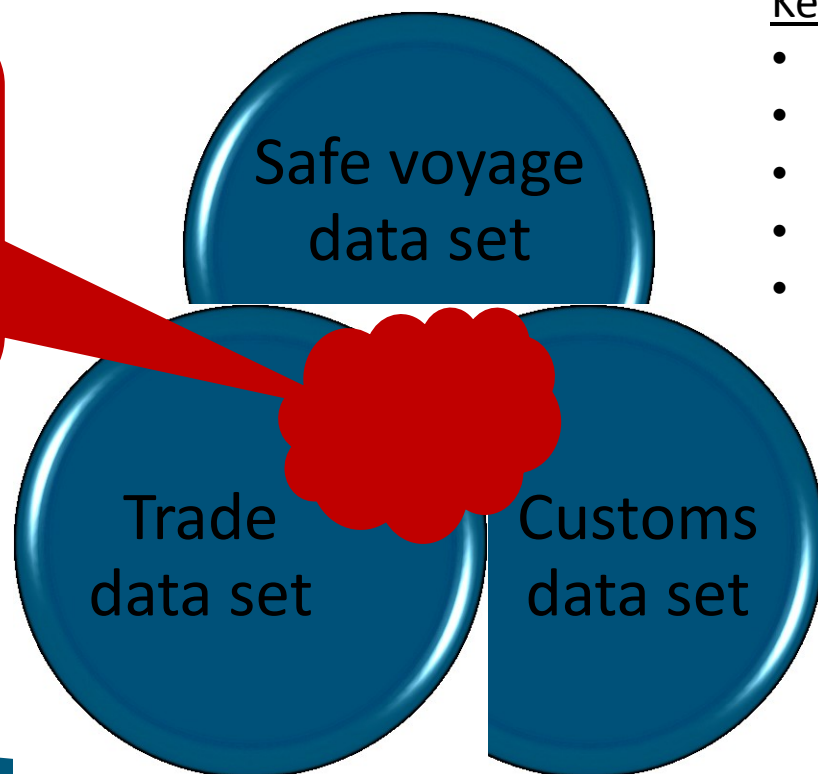
# What are the obstacles....

- 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 which 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 with 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

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# Thank you!

Contact BIMCO at  
**[www.bimco.org](http://www.bimco.org)**

For further information, contact  
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