Why – Shore side aspects

- Just-in-time distribution
- Low inventory levels
- Sustainable transport
Why – Sea side aspects
## How - Business process of a port call

### Chart 1: Cargo contracts
- Cargo traders (bulk): Contact cargo
- Charter (container)
- Cargo contract
- Contract vessel

### Chart 2: Vessel contract
- Vessel contract
- Contract vessel
- Vessel contract
- Contract vessel

### Chart 3: Cargo contract
- Cargo contract
- Contract vessel
- Cargo contract
- Contract vessel

### Chart 4: Terminal contract
- Terminal contract
- Contract vessel
- Contract vessel
- Contract vessel

### Chart 5: Departure passage planning
- Departure passage planning
- Port planning
- Port planning
- Port planning

### Chart 6: Berth planning
- Berth planning
- Port planning
- Port planning
- Port planning

### Chart 7: Port planning arrival
- Port planning arrival
- Port planning arrival
- Port planning arrival
- Port planning arrival

### Chart 8: Arrival
- Arrival
- Arrival
- Arrival
- Arrival

### Chart 9: Vessel / Cargo service planning
- Vessel / Cargo service planning
- Vessel / Cargo service planning
- Vessel / Cargo service planning
- Vessel / Cargo service planning

### Chart 10: Port planning departure
- Port planning departure
- Port planning departure
- Port planning departure
- Port planning departure

### Chart 11: Departure passage planning
- Departure passage planning
- Departure passage planning
- Departure passage planning
- Departure passage planning

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### Support services
- Charter
- Berth operator (terminal)
- Port authority
- Hydrographic office
- Captain (via agent): Arrival
- Captain (via agent): Departing
- Nautical services
- Vessel services
- Cargo services (terminal)
- Authorities

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*Note: This diagram outlines the business process for a port call, detailing the interactions and planning required for cargo contracts, vessels, berths, and departure passages.*
How - Scope of data
How – Existing standards
How – Functional definitions: Must
## How – Data definitions: Nice

<table>
<thead>
<tr>
<th>Definition</th>
<th>EPCIS Event Path</th>
<th>Port Call Message Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>What</td>
<td>/epcList</td>
<td>&quot;ship&quot;: {&quot;imo&quot;:&quot;9704611&quot;}</td>
</tr>
</tbody>
</table>
| When       | /eventTime/eventTimeZoneOffset | "eventTime":"2018-05-08T14:00:00Z",
  "lowerEventTimeConfidence" : "PT1H30M",
  "upperEventTimeConfidence" : "PT30M" |
| Where       | /bizLocation     | "port": "NLRTM",
  "terminal": "0123456789123",
  "berth": "0123456789123",
  "berthPosition": "0123456789123B6.25",
  "shipSide": "portside" |
| Why         | /bizStep/action  | "eventType": "ATABerth.terminal" |
| EventID     | /eventId         | "uuid": "75ecaa9b-cc77-45bc-90fa-26d9cdad5e1a" |
| Recordtime  | /recordTime      | "recordTime": "2018-05-09T09:13:47:00Z" |
| Source      | /source          | "source": "PCS" |
Next step: Support for ports

Bringing together:
1. The commercial and legal aspects of data
2. Scope of data
3. Functional definitions
4. Data definitions
Next step: Support for ports

Resulting in a step by step manual for the definition, creation and management of port information - initial version 1.3.1

Using authoritative definitions:
- UKHO NP100
- IHO S-32, S-57, S4 Hydrographic Dictionary
- Others e.g. EPSG, ISO 8601 etc.

Focus on:
- Vessel movement between Pilot Boarding Place and Berth
- Geographical Extent
- Data content with focus on “Compliancy First”
- Areas, Waypoints and Sections
Next step: Support for ports

- Explanatory text
- Use of tables and diagrams
- Structure will support modelling for data definition and interchange
- Interoperability
Next step: Support for ports

Action:
• Publication December 2019
• Full product specification (technical document) to be added after port to port testing
• Extra:
  ➢ Port passage plans
  ➢ Organizing data ownership
  ➢ Organizing data quality
Next step: Support for ports

Support for ports:
- Identification of terminal, berth, berth position
- Verification by AIS
- Verification by Mariners / Pilots

Action:
- Bring together IMO, ICAO and GS1 for lessons learned from aviation, supply chain and shipping industry to organize ID’s for locations
Next step: Support for ports

Working on a Just In Time Arrival Guide for ports

Based on Industry Roundtable discussions to address operational, contractual and regulatory barriers
Real time information exchange important part

Action:
• Draft publication December 2019
1) Not using existing time types. Events should support the Master when deciding to slow down or speed up, which can have huge financial consequences. Therefore alignment with definitions in contracts and reporting formalities is key. Apart from this, number of events should be kept to a minimum and be intuitive. Currently the introduction of existing standards is already an issue.

2) With S211 it is not possible to distinguish multiple berth visits within one port call, which is key for especially parcel tankers and feeder vessels.

3) S211 does not have an ID to distinguish multiple services of the same type. E.g.; multiple bunker services during one port call. These events are key for planning of services, which is the foundation for a reliable departure time, being the foundation for a reliable arrival time of the next ship.

4) S211 cannot identify which vessel is providing which service (e.g. which tugboat, bunker vessel etc.) – see point 3)

5)URN structure is compatible with GLNs. However S211 structure also supports other IDs for locations that could lead to berths having multiple different identities in different systems. For sharing data globally across multiple transport modes it is key to use GLN’s.

6) Not using EPCIS definitions such as source, record and event time.

Technical working group is still working. Releases are not according to a fixed updating schedule, but are based on the amount of feedback.
Next step: Organize maintenance of definitions

Maintenance is as critical as functional and data definitions. While parties develop products, new needs will arise. Today there are multiple standardization initiatives.

Learning from other industries:
Robust maintenance from day one by a robust organization saves time and money. ISO is such organization. Right organization to bring multiple standardization initiatives together.

Maintenance of some standards might be delegated to related organizations such as GS1 or UNCEFACT

Action:
• Identify source of standards
• Organize maritime industry at GS1 / IMO
Next step: Organize data ownership

Again not inventing anything new.
Learning from International Civil Aviation Organization
Together with International Taskforce Port Call Optimization, World Ports Climate Action Program, IMO Global Industry Alliance

Action:
• Paragraph to be added to Port Information Manual
Next step: Organize data sharing

Again not inventing anything new.
Learning from International Civil Aviation Organization
Together with International Maritime Organization, International Taskforce Port Call Optimization, World Ports Climate Action Program

Starting points:
- Not For Profit – for the basic data exchange
- For Profit – for additional services
- Neutral
- Global
- Business to business data to be secure
- Business to government data to be open under conditions
- Connecting ships port to port
- Connecting local services ship to ship

Action:
- On agenda IMO GIA to learn from ICAO
Next step: Organize data quality

Again not inventing anything new.
Learning from class societies and international hydrographic organization

Starting point no delay in updates of ENC’s
Support for port data base of customers

Action:
• Looking into existing ISO 9001:2015 as per IHO resolution 1/1997, section 4
• Add paragraph to Port Information Manual
• Looking into how to capture data quality in charts – discussion started in IHO Data Quality WG
Next step: IMO FAL compendium

Now only reports from ships to ports
New is reports from ports to ships for JIT arrival
Amendment in order to receive electronic information between ship and shore. Harmonized data model must ensure that not a wide series of different platforms for exchange will appear. Must also ensure reduction of administrative burden.
Data model will go directly into an ISO standard (28005) – will be updated next year with the new information.
Implementation of the data reference model by ship companies and authorities will be the challenge !!!

Action:
• Submission Q3 2019 for new data elements
Summary of actions

• Port Information Manual – Q4 2019
  ➢ Add source of standards
  ➢ Add paragraph for port passage planning
  ➢ Add paragraph for data ownership
  ➢ Add paragraph for data quality
• Just In Time Arrival Guide – Q4 2019
• Organize maintenance of standards – Q4 2019
• Organize input re. data ownership – Q4 2019
• Organize input re. data sharing – Q4 2019
• Organize input re. data quality – Q4 2019
• Input for data elements FAL Compendium - Q3 2019
Press release

Outcomes shared with press:

First Port Information Manual
Created together with ports, shipping and standardization bodies

All stakeholders are heading towards the same goal/direction, safe and efficient shipping
Common maritime data structure, aligns the different standardization bodies with interoperability as a very important result
A presentation was offered regarding Maritime Connectivity Platform for next meeting.
A proposal for linking towards IMO maritime services.
Thank you