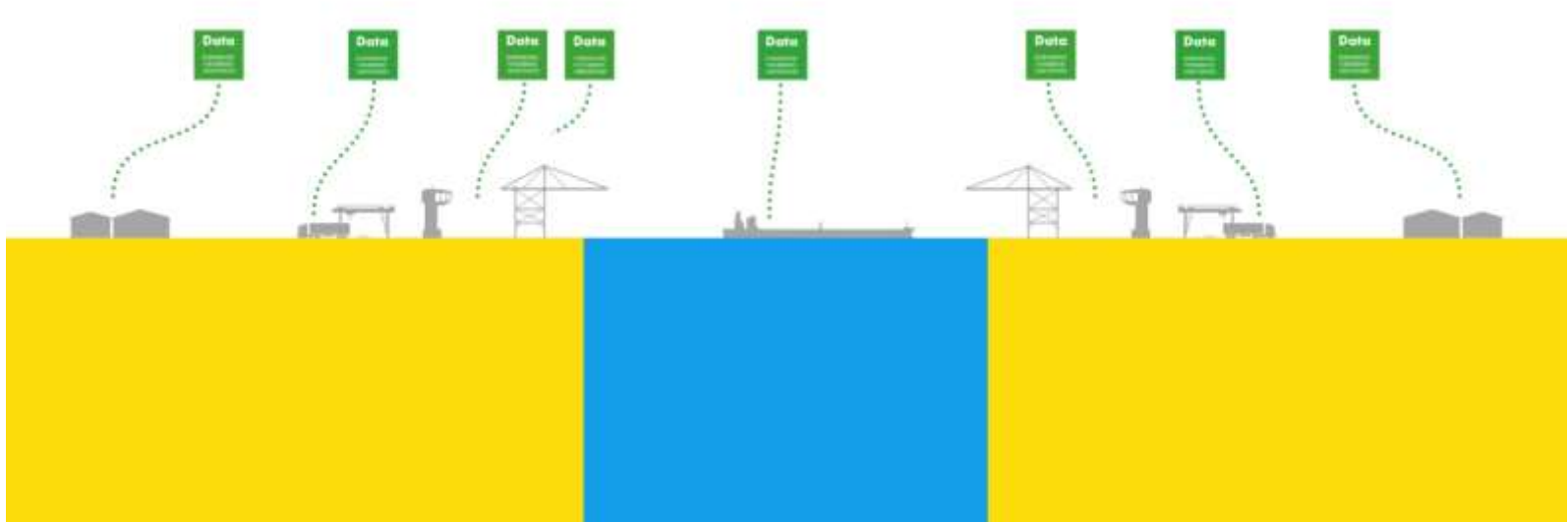


# Supply chain bottleneck



# Port bottle neck



# Ship bottleneck



# Ambition IMO

## General context of the IMO decarbonization agenda

“

consider and analyse measures to encourage port developments and activities globally to facilitate reduction of GHG emissions from shipping, including provision of ship and shoreside/onshore power supply from renewable sources, infrastructure to support supply of alternative low-carbon and zero-carbon fuels, and to further optimize the logistic chain and its planning, including ports;

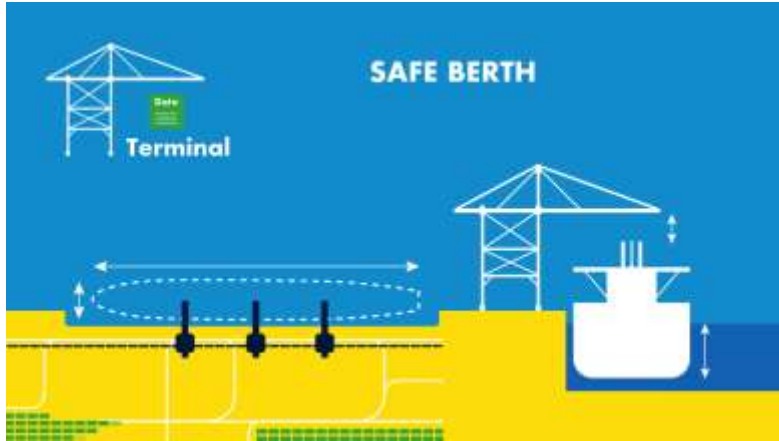
## Cooperation between the port and shipping sectors to contribute to reducing GHG emissions from ships

- Resolution MEPC.323(74) identifies four possible areas of action:
  - Provision of Onshore Power Supply (preferably from renewable sources)
  - Provision of safe and efficient bunkering of alternative low-carbon and zero-carbon fuels
  - Incentives promoting sustainable low-carbon and zero-carbon shipping
  - **Support for the optimization of port calls**
- IMO encourages the adoption by ports of regulatory, technical, operational and economic actions to facilitate the reduction of GHG emissions from ships
- MEPC also calls for sharing successful examples of initiatives taken in relation to port developments and activities to facilitate the reduction of GHG emissions from ships

actions by States may include:  
"supporting the industry's collective efforts to improve quality and availability of data and develop necessary global digital data standards that would allow reliable and efficient data exchange between ship and shore as well as enhanced slot allocation policies thereby optimizing voyages and port calls and facilitating just-in-time arrival of ships"

# Support for optimization of port calls of ships

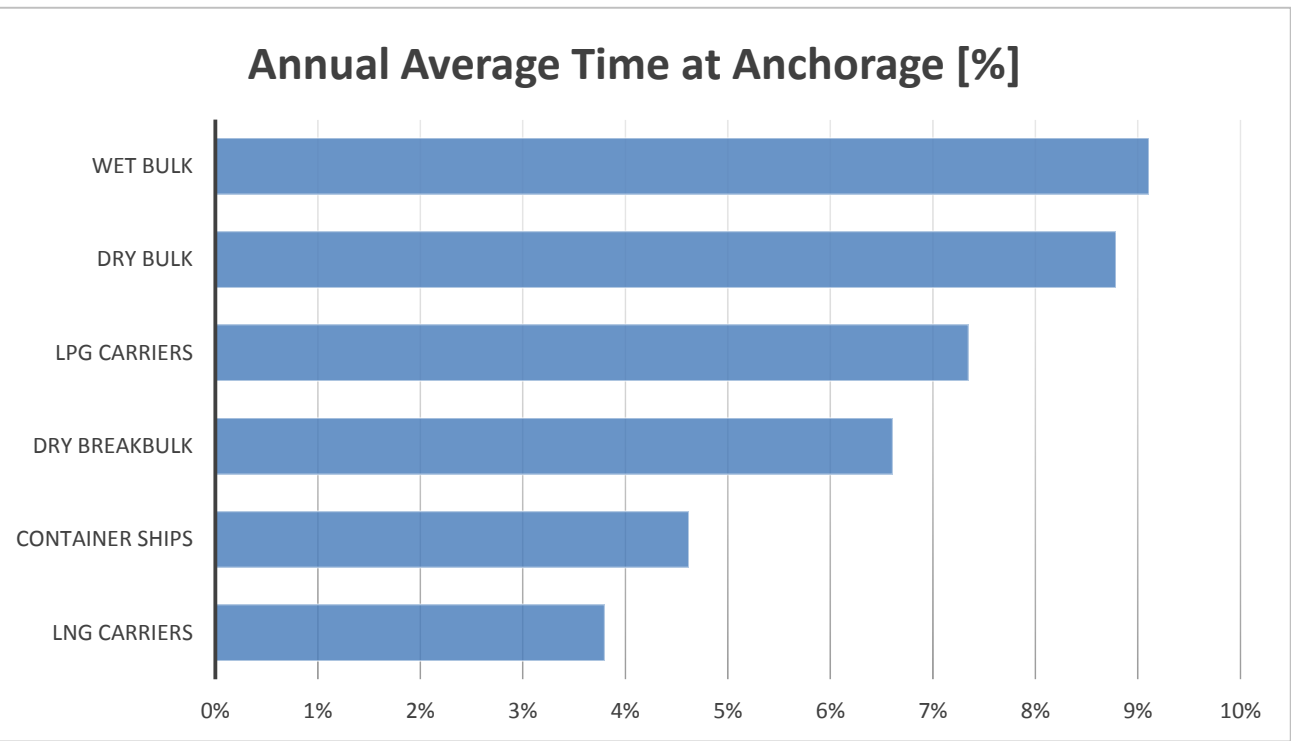
## Starting with Just In Time Arrivals



# What is Just In Time Arrival?



# Ships spend time waiting at anchorage



- Data analysis of annual average time at anchorage
- Data timeframe: 1/1 – 31/12 2019
- Waiting time at anchorage for all ships > 5000 GT

# ..and maneuvering



## Preliminary analysis:

- Data and analysis: Port of Rotterdam
- Timeframe: 26/2 –5/3 2019

Of 61 deep sea container ships calling the port:

- 11 ships anchored
- 19 ships maneuvered in the approaches
- 31 ships sailed JIT

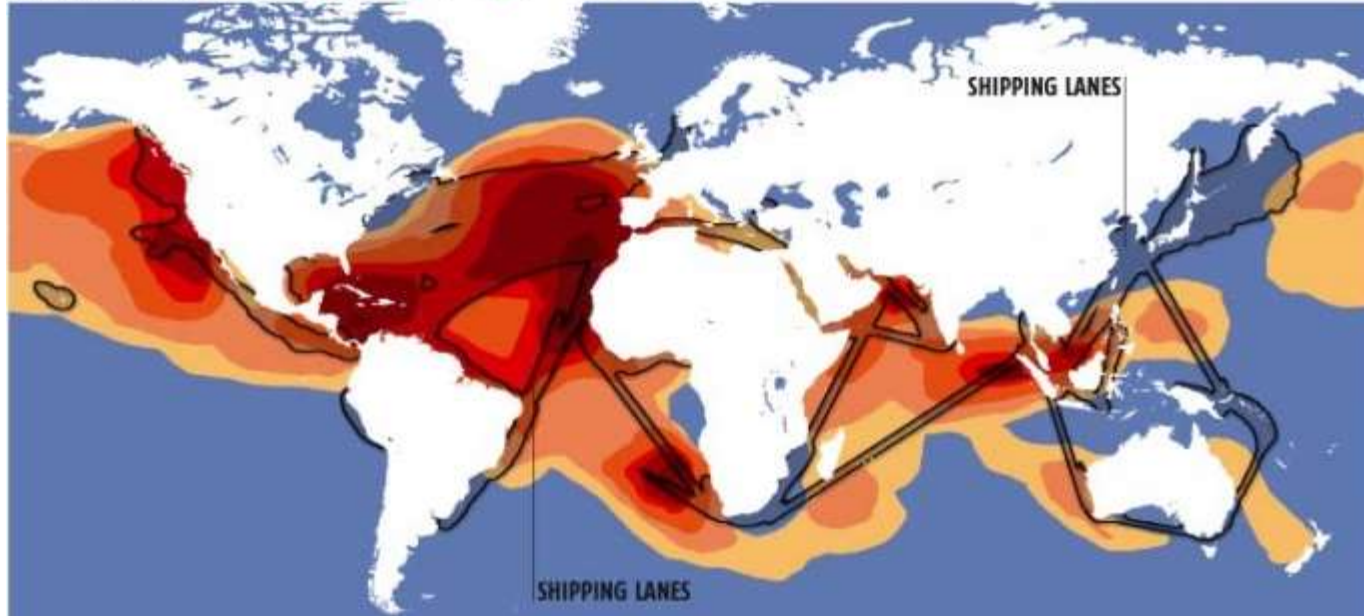


# Advantages at sea

## POLLUTION AT SEA

Sulphur emissions are increasing fastest close to the main shipping lanes

Annual increase (%) ● 20 ● 13 ● 9 ● 7 ● 5 ● 3



# Advantages in ports

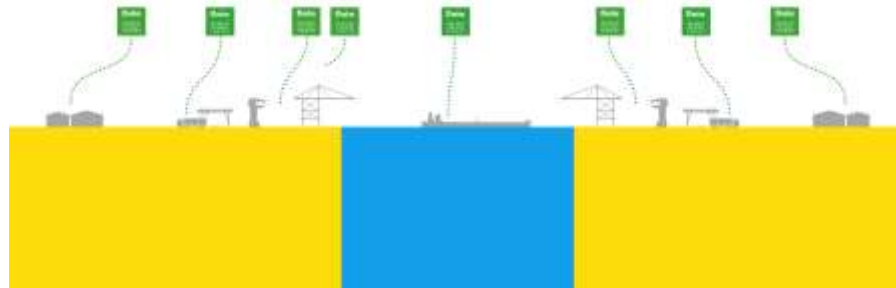
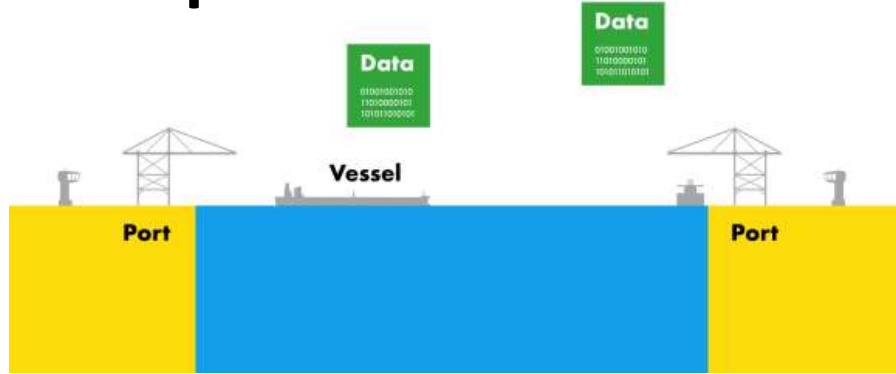


# Advantages in hinterland



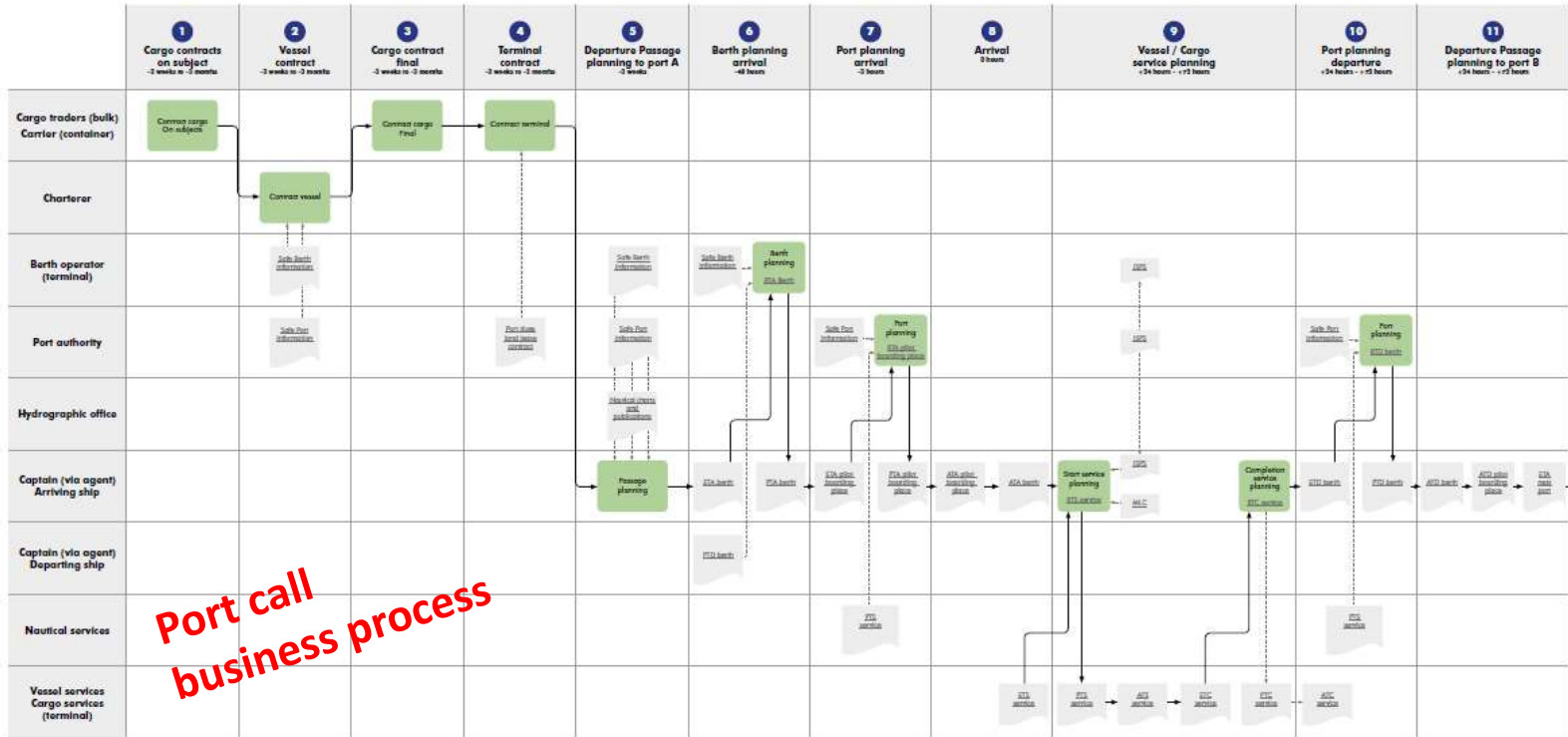
# Starting points

## Respect current standardization bodies



# Starting points

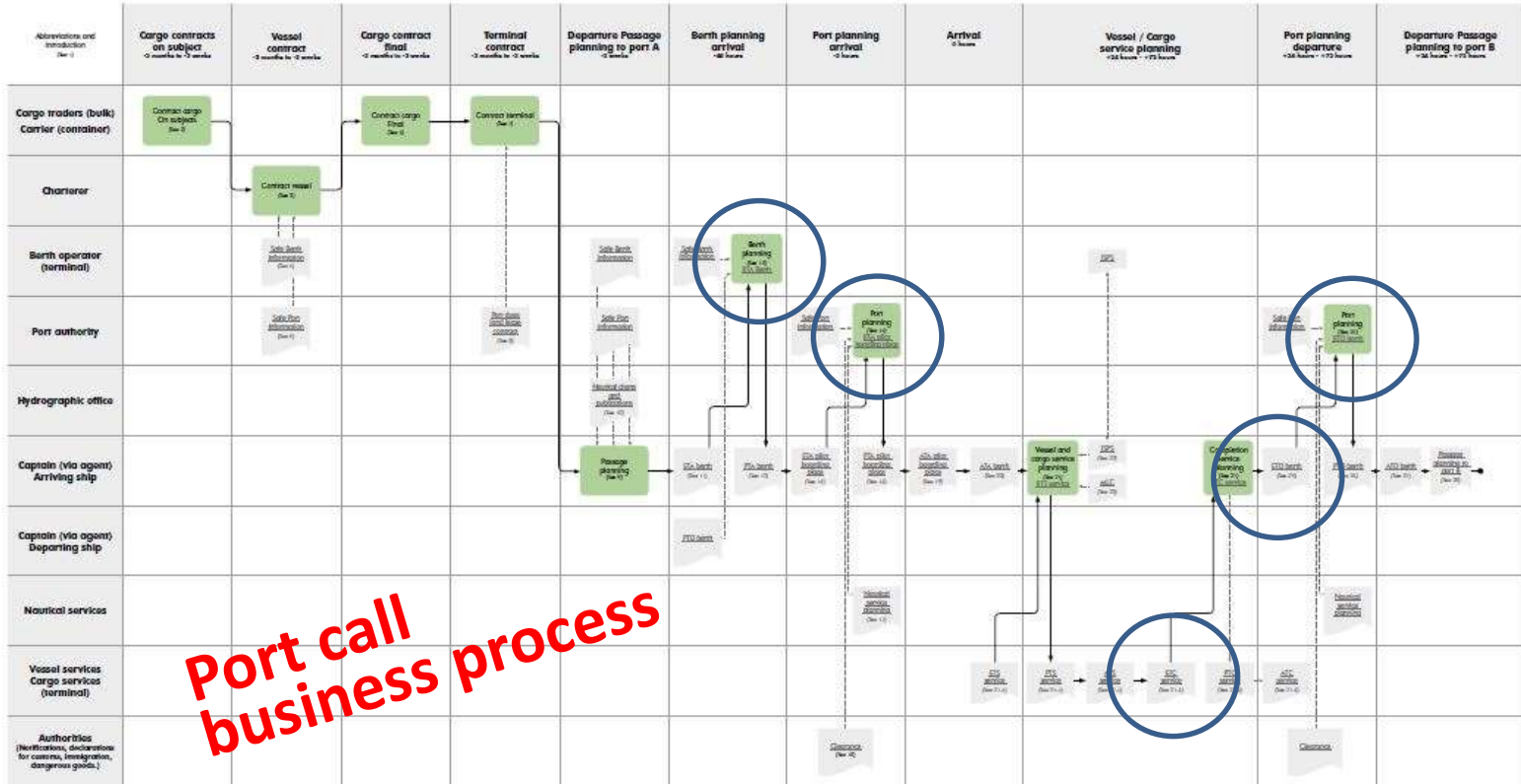
## Respect current business process



# Which time stamps are needed



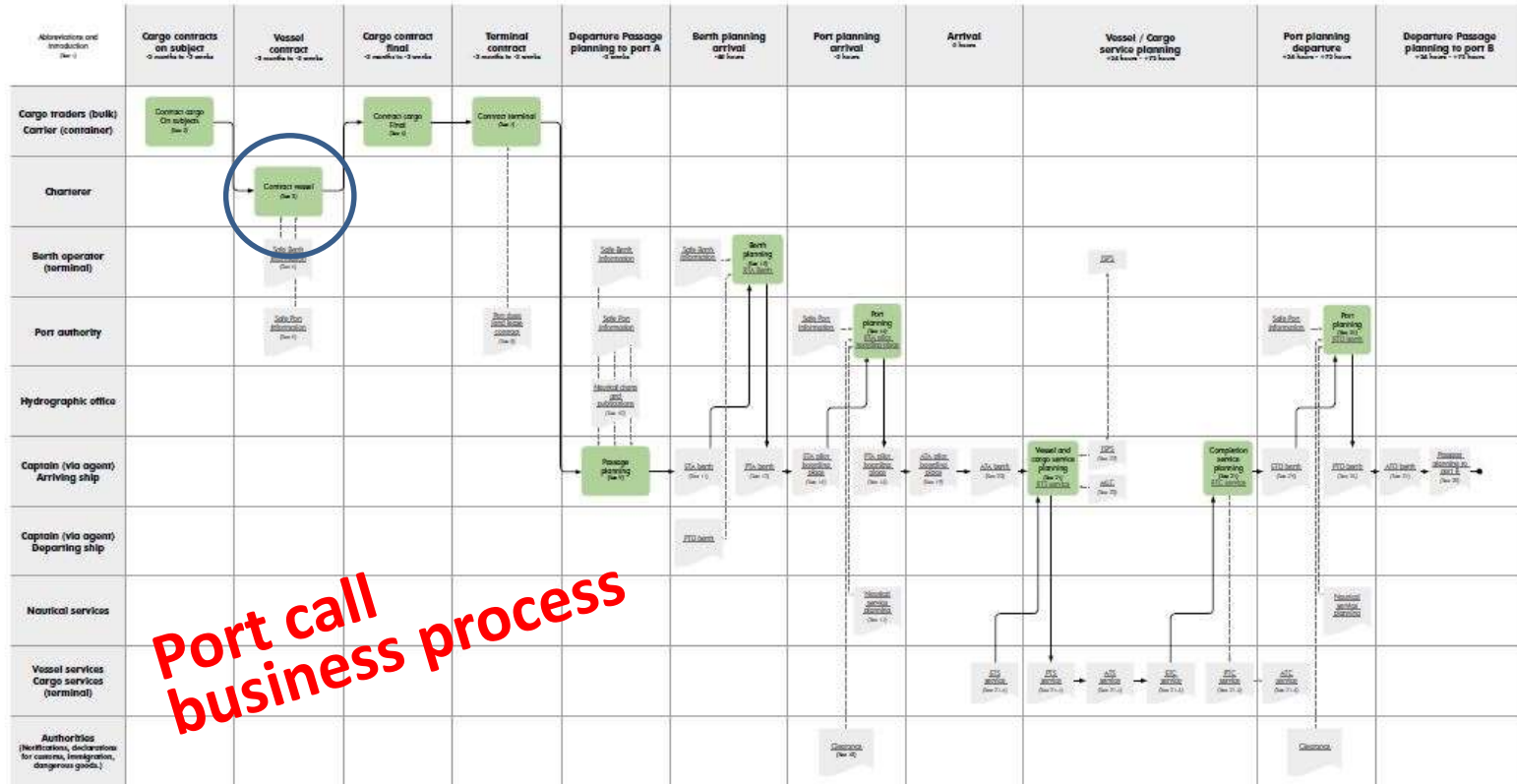
**Port Call Optimization**  
Lower costs, cleaner environment, more reliability and safety for shipping, terminals and ports.



# Which contractual changes are needed



**Port Call Optimization**  
 Lower costs, cleaner environment, more reliability and safety for shipping, terminals and ports.



**Port call business process**

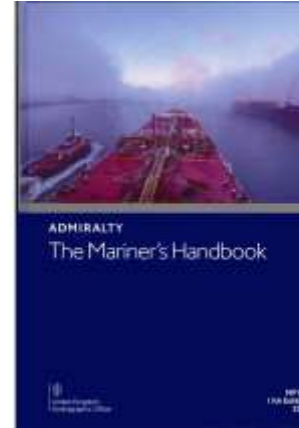
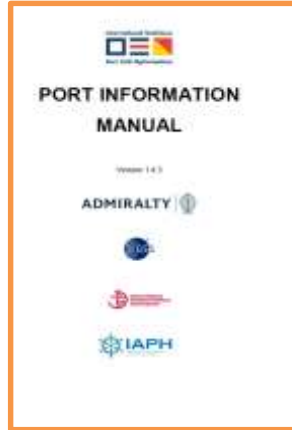
# What is needed for data quality Based on current standards

Define 4 key locations per port:

1. Pilot Boarding Place
2. Terminal
3. Berth
4. Berth position

Define 4 key time stamps per location:

1. Estimated Time of Arrival / Departure
2. Requested Time of Arrival / Departure
3. Planned Time of Arrival / Departure
4. Actual Time of Arrival / Departure





# What is needed for data sharing willingness Based on current mandates



# What is needed for data sharing easiness Based on current SOLAS equipment / practices



# No silver bullet for trades

- Charter party types
- Notice needed to make JIT effective
- Commercial sensitivity of berthing windows
- Is JIT already part of the business



# No silver bullet for ports & terminals

- Port position and organization
- Relationship with terminals
- Relationship with nautical services
- Relationship with vessel services



# Next steps before end of 2019

- Publish Just In Time Arrival Guide (IMO GIA)
- Publish Port Information Manual (ITPCO)
- Publish Mariners Handbook (UKHO)
- Encourage global implementation

# IMO Global Industry Alliance



# International Taskforce Port Call Optimization

**International Taskforce Port Call Optimization**

**Industry partners; shipping and agents**



Shell



Vopak Agents



Maersk



CMA CGM  
Line and Agency



MSC  
Mediterranean Shipping  
Company S.A and Agency



Inchcape  
Shipping Services



Oldendorff Carriers

**Industry partners; ports**



Port of Gothenburg



Port of Rotterdam



Port of Algeciras



Port of Busan



Port of Singapore



Port of Houston



Port of Ningbo Zhoushan



Port of Tanger Med



Ports of Auckland

**Standard partners**



GS1



UK Hydrographic  
Office

**Endorsers**



International Harbour  
Masters Association



International Hydrographic  
Organization



MarineTraffic



BIMCO



UK P&I Club is managed  
by Thomas Miller



Lloyd's Marine  
Intelligence Unit



The Nautical  
Institute



IALA



Green Award  
Foundation



International Association  
of Ports and Harbours



Intercargo



International  
Chamber of Shipping



Sea Traffic  
Management

**International Taskforce**



**Port Call Optimization**



**GLOBAL INDUSTRY ALLIANCE**  
TO SUPPORT LOW CARBON SHIPPING

**Thank you for your attention!**

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