Global Industry Alliance to Support Low Carbon Shipping

Summary of Discussions
Roundtable on the Just-In-Time Operation of Ships

Held on 29 June 2018, IMO HQ
Presentation overview

• Objectives of the IMO-Global Industry Alliance to Support Low Carbon Shipping (GIA)

• Main objectives of roundtable discussions

• Proposed GIA study on “Just-In-Time arrival and services”

• Discussion on the Just-In-Time arrival of ships:
  - Advantages and disadvantages
  - Main stakeholders
  - Barriers to uptake
  - Existing / new solutions

• Input into proposed GIA study
Launch of the GIA

- Officially launched in June 2017
- Initially established for 2 years period
GIA membership
Objective of the GIA

• Tackle challenges of decarbonizing the shipping sector
• Addressing key barriers that are impeding shipping’s transition towards a low carbon future

Through the implementation of selected projects which fall within the scope of the chosen priority areas.
Key areas of collaboration

- Energy efficiency technologies and operational best practices
- Low- and zero-carbon fuels
- Digitalization
- Human element
- Ports
Selection of projects

• Promoting R & D efforts and initiating pilot projects
• Showcasing advances in technology development and positive initiatives by the maritime sector
• Initiating industry fora to encourage a global industry dialogue
• Implementing capacity-building and information exchange activities
Contribution by GIA membership

• Technical expertise / data (GIA Task Force)
• Financial capital through a yearly membership fee (GIA Fund)
• GIA Fund provides the necessary financial resources for implementation of selected projects
On-going activities

• E-Learning course on the energy efficient operation of ships
• Guide to alternative fuels
• Protocol for validation of performance of energy efficiency technologies
• Ideas generation workshops
• Study on Just-In-Time (JIT) arrival and services
Objectives of roundtable discussions

Why is JIT not common practice in shipping?
How can we support overcoming existing barriers?

Discussion:
- Common understanding of the port call process
- Which stakeholders need to be involved for JIT to succeed
- Barriers to the implementation of JIT
- Existing solutions: tools/mechanisms that enable effective implementation of JIT
- Gaps and what further solutions are required for increased uptake of JIT

Seek inputs into proposed GIA study on the “Just-In-Time arrival and services” from first hand industry stakeholders
Just In Time Arrival - GIA study

Proposed study aims to:

1) Summarize emissions saving opportunities both from speed reduction and idle time considering GHG saving potential as well as local air quality impact from waiting vessels

2) Identify barriers to implementation as a function of shipping segment

3) Main focus of the activity is to propose solutions to remove barriers

Expected outcome:

• Authoritative document highlighting benefits of Just In Time arrival to all parties in the maritime business focusing on opportunity to reduce emissions (GHG, air quality improvements, fuel/cost savings) by quantifying potential savings using relevant examples

• Identification of barriers and proposals on how to address them
Just-In-Time (JIT) Operation of Ships
Emissions saving opportunities

- Absolute emissions reduction for the voyage
- Reduction of emissions in port areas (local air quality improvements)
Additional advantages

- Improved cooperation between ship owners/operators and charterers may also have benefits associated with overall voyage planning
- Reduction of waiting times and periods at anchor (→ improve safety within port)
- Reduced crew fatigue
- Reduced bunker and lube oil consumption per voyage (lower cost)
- Less hull fouling, especially in tropical waters
- Maximized terminal utilization
- Optimized delivery of nautical / other port services (e.g. crew exchange, ship repairs) (less time wasted)
- Enhanced supply chain visibility for shippers
- Optimized stock management for traders
- Reduced transport risk mitigation cost
- Maintenance work at anchor can be better planned if agreement with terminal on a fix berth window
- Ships can avoid taking unnecessary risks (e.g. steaming at full speed through fog) to meet a berth slot that is not available upon arrival
Disadvantages

- Owner loses demurrage due to less waiting time at port (this could be considered an advantage though as the ship is freed-up for other business)
- Possible lost time for maintenance work on ship or other in-port activities while waiting for berth
- Speed to maintain JIT may be in conflict with critical speed of the main engine or the min. load for the shaft generator / exhaust gas boiler
- By changing the way shipping operates, incentives may also change (e.g. no additional income for delays or reduced speed but rather a shift to income from cleaner shipping)
Identification of barriers and solutions – Start by:
Have we all the same understanding of a port call process?
Identification of barriers and solutions - contractual

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Contractual – stakeholders involved

• Cargo seller (bulk)
• Cargo buyer (bulk)
• Consignor (containers)
• Carrier (container)
• Ship owner
• Ship charterer
• Terminal operator
Contractual – what barriers exist

General
• Currently contracts are not explicit enough about when/how updates should be provided (lack in provisions on communication exchange). E.g. no timely communication of changes in time of departure of ship (e.g. update may only be available to the ship agent and not the ship)
• Traders have no incentive for sustainable shipping: they want to fix the cheapest ships
• Link/alignment between all contracts is required (barrier is not the individual contract, but the harmonization of contracts)

Terminal Service Contract
• Existing terminal service contracts do not stipulate proper communication procedures to ship about cargo completion time

Voyage Charter Party
• Existing voyage charter party does not allow variation in speed - > proper weather routing measures cannot be applied
• Existing VA clauses:
  - too complex to activate (in rel. short time frame)
  - do not contain enough detail to make JIT work (e.g. what if sth goes wrong?)
  - have not yet been invoked (not much experience in application of clauses)
  - have not been tested in court/in front of judge: would VA really override due dispatch?
Contractual – what solutions exist

• Existing VA clauses from BP, Shell and Bimco
Contractual – new solutions needed

General
• Contracts should require proper real time data exchange (between ship, terminal and port). So when a delay occurs, there is no delay in the communication

Voyage charter party
• Contractual solutions (legal clauses) exist. However, lack of best practices/case studies of parties using existing clauses (BP, Shell, BIMCO) and testing in courts. Who has invoked? Which sectors? With success? If not, why?
• Increased understanding is required of potential impacts on legal agreements between trading parties (including liabilities of late delivery)
Identification of barriers and solutions - operational

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Operational – stakeholders involved

- Charterer
- Owner
- Berth operator (terminal)
- Port authority
- Captain (via agent) – Arriving ship
- Captain (via agent) – Departing ship
- Nautical services
- Vessel services / Cargo services (terminal)
- Hinterland (and involved stakeholders)
- Other services (e.g. weather routing companies)
Operational – what barriers exist

**General**
- Working hours not aligned (everyone should be awake at same time) - otherwise labour could delay port operations
- Great number of stakeholders that are involved
- Lack of communication between service providers, ship and port authorities
- Communication through ship agents can be delayed (e.g. overnight)
- Improper planning of man power for cargo operations in port (e.g. staff hiring/scheduling not on time)

**Port Authority**
- Current port regulations do not allow ships to update departure times to port authorities (this causes delay in updates)
- Current VTS systems do not allow to inform the ship outside VHF range (30 nM range) on the arrival window – delay in communication

**Nautical services**
- Pilots/ tugs are globally organized in different ways (not always under the control of port authority) - > level of direct control makes it more/less easy to advise ships about exact arrival time

**Vessel services**
- No updates of e.g. bunker barges or waste collectors when they will arrive or when they will complete their service
Operational – what solutions exist

- Connectivity between ship and ship management for updates of logbook (Maersk)
- Connectivity between terminal and ship for updates of completion time of cargo (Port of Rotterdam)
- Connectivity between bunker barge and ship for updates of completion time of bunkers (Port of Rotterdam)
- Connectivity between ship and Port Authority for departure times (Port of Rotterdam)
- Connectivity between Port Authority and next ship for updates of pilot boarding place time – beyond the 30 nM range (STM)
- Forcing actors to provide updates and to act according to JIT by priority management as a Port Authority (Port of Newcastle)
Operational – new solutions needed

Global app allowing:
• Ships to connect to each port to exchange arrival and departure times
• Local services to connect to each ship to exchange starting and completion times, and get arrival/departure times

Global platform allowing:
• Business to business data to remain closed
• Business to government data to be open under conditions
• Authorization of access
• Cyber security
Proposed GIA study on:
“Just-In-Time arrival and services”
Proposed GIA study on “Just-In-Time arrival and services”

Draft Terms of Reference:

• Identify for which shipping segments JIT can/cannot be applied and why
• Gather experience (e.g. through anonymous questionnaires) from stakeholders that have successfully/not successfully implemented JIT
• Summarize potential emission (air pollutants and GHG emissions) and cost saving opportunities from the effective implementation of JIT
• Identify barriers to implementation of JIT, as a function of shipping segments, and propose concrete solutions for the removal of barriers
• Identify JIT areas that require further R&D, if any

Potentially combine all findings/tools/solutions into a single “Practical Decision-Making Toolbox”
Proposed GIA study on “Just-In-Time arrival and services”

Additional stakeholders to include (Ideally through individual interviews + questionnaires):
• Terminal operators as they have most impact on JIT
• Include miners (e.g. Rio Tinto) as on bulk side closest to liner shipment in terms of operation
• Brokers (e.g. Institute of Chartered Shipbrokers) for clauses being used

Study should consider:
• How Terminals can be incentivized to support JIT
• How JIT can help terminals’ reputation (CSR) and local population
• Highlight potential advantages for terminals (for this purpose, study existing legal clauses as they provide insight into the benefits to terminal operators)
• How can use of legal clauses be incentivized to increase practical experience
• Clear guidance is needed that JIT will not result in a profit loss for any stakeholder