

Just in time, vessel arrival system for dry bulk carriers

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Cargo conveyance onboard dry bulk carriers is contemporarily often affiliated to preoperational waiting times, which may affect the income situation of stakeholders and the sustainability of the sector. Repetitively occurring waiting problems, potentially paired with the phenomena of port congestion, thereby indicating that Just In Time (JIT) arrival potential for a distinct or a combination of reasons has not been realised, can be frequently identified.

Undesired increment of waiting times and development of port congestion is frequently responded to by an array of measures. JIT arrival concepts, Vessel Arrival Systems (VAS) and Virtual Arrival (VA) agreements thereby do not strive to eliminate waiting times but facilitate their sensible transformation into additional navigation time. In practice, VAS applications may, however, only unfold their inherent sustainability potential within closely defined delimitations, while JIT mechanisms and VA agreements may lack acceptance due to impracticability or missing alignment to underlying trade requirements. Therefore, fair but environmentally inefficient arrival mechanisms like the First Come First Serve (FCFS) concept remain widely applied.

As remedy a VAS has been conceptualised by diverting from a static to a dynamic time-, distance- and speed JIT concept wherein these parameters are defined by predicted berth- and cargo operation availability.

A circular based Reporting Line furnished with the functions attributable to the place where line up positions are customarily allocated is fluctuating in correspondence to the time to go (TTG) until the nearest berthing opportunity is becoming available. The concept does not only provide for a dynamically shifting line and corridor to obtain an often highly valued line up position but for the distance and conditions whereunder a vessel is going to arrive JIT. The FCFS concept interwoven with unbiased allocating of line-up positions is being retained as an integral part while VA applications are supported.

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