



Vehicles waiting to take on containers loaded at the foreign trade container terminal in Qingdao, east of China's Shandong province

# Going on a journey together

International Taskforce Port Call Optimisation chairman **Captain Ben van Scherpenzeel** talks to WPSP communications partner **Victor Shieh** about the stumbling blocks that need to be removed to make just-in-time arrivals possible and efficient

Following the subject-matter expert meetings of the International Task Force Port Call Optimisation (ITPCO), held between 30 June and 9 July, and the latest

workshop of all stakeholders that took place online on 22 July, the task force has published its latest *Port Information Manual* for shipping and port authorities.

It features comprehensive updates on processes, data elements, and definitions to provide a better understanding of the data exchanged in the ship-port interface.



The manual also identifies existing international standards that connect ships and ports.

The aforementioned workshop played a key role to define the next steps to be taken at industry level, including a review of the hurdles to overcome to achieve a consistent and sustainable approach, berthing, stay, and departure to and from a port or harbor of a vessel.

Every port is dealing with the same International Maritime Organization (IMO) regulations, BIMCO contracts, and processes, which are now clearly defined in the *Port Information Manual*.

The first real "D" barrier ahead is therefore

to agree on a minimum scope of data elements, who has the ownership to deliver them, and an agreed minimum standard of data definitions and data models that can create an efficient system-to-system exchange model for the industry.

"Data quality is the key to unlock port call optimisation," said task force lead, and director of Nautical Developments, Policy, and Plans at the port of Rotterdam, Captain Ben van Scherpenzeel.

"The decisions taken to optimise will always depend on the quality of the data available at the time. Administrative data will allow authorities to provide clearance to the vessel for operations. Nautical data advises

charterers and operators whether the port is safe and advises captains on berth-to-berth navigation," van Scherpenzeel said.

"Operational data advises when and where the berth is available to the ship's crew and the port entities servicing that vessel," he said, adding that, "Administrative and operational data should connect to the supply chain industry standards to address where and when the goods of the cargo will be available to complete shared end-to-end visibility in the supply chain." Van Scherpenzeel added, "However, such a simple premise is complicated by the number of actors involved, the data they provide, and how they interact with each other." Because the common

interpretation of the information by different actors is crucial, the focus of development was first on the functional definitions to ensure adoption of common semantics

**Unlocking the potential**

The subject-matter experts of the task force and relevant IMO and non-governmental organisations (NGO) have now prioritised the improvements in a group of data elements, defined within three data sets, with relevant standards, ownership, and electronic interchange in several vital areas touching every port call process:

**Administrative data**

- For notifications/declarations in port to be compliant with authorities and IMO objectives
- Update information in the IMO Global Integrated Shipping Information System data base
- Accept ship data with IMO Facilitation Committee Compendium data format and structure
- Planning of clearances

**Nautical port data**

- To be compliant with Safety of Life at Sea (SOLAS) berth-to-berth navigation and safe port clauses
- General port information as per IMO BLU Code
- Maintained depths and soundings
- Terminal; berth positions, locations, and identifications

**Operational port data**

- To be compliant with rest hour planning as per Maritime Labour Convention, International Ship and Port Facility Security Code (ISPS), and ambitions of IMO to reduce emissions in shipping
- Planning of arrival times at berth/pilot boarding place and departure times from berth
- Planning of start and completion times of ship and cargo services
- Notifications of ISPS clearances of ship and cargo services

Without exception, the subject-matter experts concur that the availability of timely, consistent, logically formatted data in each of these vital areas is lacking in many ports. Evidence of this issue has come to light in several projects to optimise port calls, including the recent initiative

co-ordinated by PortXchange and other projects such as the work of Sea Traffic Management, Hamburg Vessel Coordination Centre, or the Valencia Port Foundation.

**Creating a harmonised approach**

“Despite excellent efforts of many port authorities to promote data transparency and their efforts to standardise data, enable application programme interfaces between multiple systems and persuade previously reluctant parties to share that data for common benefit, creating a harmonised approach will not happen solely through a coalition of well-intentioned port community partners,” said van Scherpenzeel. “It has to come from both shipping and port stakeholders adopting and respecting applicable international standards that are maintained by robust standardisation bodies.”

Since the beginning of 2020, the task force has worked closely with UN-recognised maritime NGOs, including the IAPH, as well as IMO member states to encourage the development and widespread adoption of internationally recognised data standards.

This includes the recent adoption of IMO resolution MEPC.323(74), in May 2019, which encourages voluntary co-operation between the port and shipping sectors to lower greenhouse gas emissions from ships.

The resolution also invites IMO member states to facilitate, among others, actions that support the industry’s collective efforts to improve quality and availability of data.

**Agnostic trading**

As described in the IMO Global Industry Alliance’s recent publication *Just-In-Time Arrival Guide*, global digital data standards allowing reliable and efficient data exchange between ship and shore need to be developed, which



Various cargo ships waiting to load and unload in the harbor at the busiest port of Singapore

are trade agnostic; to be used by the entire industry and across all trades.

The second real “D” barrier is an elephant that has been in the shippers’ room for decades: due despatch clauses in charter contracts are formulated in a way that obliges the ship’s master contractually to proceed to the next port with utmost despatch, regardless of whether a berth is available or not. Often, the consequence is that the ship is left either to drift or anchor beyond pilot station while awaiting delayed arrival at berth. In the meantime, the timer on demurrage is triggered, usually at the cost of the shipper or receiver, but also occasionally also at the cost of the terminal.

Work has been done on this issue, notably with BIMCO publishing a Virtual Arrival clause for voyage charter parties and also shipping companies developing their own clauses for just-in-time (JIT) arrival implementation that differ from the BIMCO clauses (such as, SHELLVOY6 and BPVOY4). However, further work is needed by the industry to incentivise parties to implement JIT arrival.

**Avoiding dockside down time**

The only group of stakeholders set to benefit – at least in theory – in the instance of queuing vessels outside the port perimeter, are the terminal operators, whose motivation is to primarily minimise the third “D”, namely dockside down time.

With multiple vessels awaiting a berth, terminals are able to maximise productivity by optimising the use of their quayside availability and materials handling equipment by serving those ships in an order based on their priorities and preferences.

In the case of container terminals, this is often further complicated by concession ownership, where one or more shipping lines have a stake in the terminal concession where the ship will arrive. In addition, competing terminals may be reluctant to share commercially sensitive information externally such as berthing windows, terminal productivity, and type or location of

commodities loaded and discharged.

“Aside from looking at prioritising anchorage governance, port authorities could look at incentivising their concessionaires or owner/operators who regularly have vessels calling to apply the concept of just-in-time arrivals. This can only be done if all stakeholders, and in particular the terminal, shipping line, and port authority, are on the same page,” said van Scherpenzeel. “Of course, they would have to govern and guarantee an absolutely level-playing field of data sharing, which is complex and difficult to apply in practice.”

However, the world is changing, and the COVID-19 pandemic is accelerating this transformation. Further consolidation of global terminal operators and the trend for them to expand into other elements of the end-to-end chain by investing in feeder vessels, inland depots, and even customs clearance outfits will motivate them further to synchronise the port call process.

“Shipowners’ impetus towards improved vessel automation and targeting autonomous vessel pilots in niche markets may herald a new openness towards achieving an integrated approach to supply chains between ship and shore,” van Scherpenzeel said.

IAPH is set to advance the cause of port call optimisation to reduce emissions under the framework of the GreenVoyage2050 project, a collaboration between IMO

and the Norwegian government.

This international project will initiate and promote global efforts to demonstrate and test technical solutions for reducing emissions. Initially, eight countries, from five high-priority regions – Asia, Africa, Caribbean, Latin America, and Pacific – are expected to take pilot roles, to pursue and undertake actions at the national level.

IAPH managing director policy and strategy Patrick Verhoeven commented, “IAPH is setting a new course to support the port industry’s increasing appetite to work alongside ship owners and other maritime organisations to resolve what were seemingly intractable issues in the past such as the digitalisation of the industry.”

He continued, “The single benefit that has emerged from the pandemic has been the acceleration of change happening in the ship-port interface today. Reducing emissions around ports, saving costs, and increasing the safety of port calls as well as improving the efficiency of sea and land legs of the end-to-end supply chain for goods can and must be achieved through better data collaboration.”

In conclusion, Verhoeven added, “We will work with the ITPCO, the Port Roundtable, as well as IMO member states so that just-in-time arrivals and port call optimisation can be applied by our members in practice.” **PH**

**“Data quality is the key to unlock port call optimisation”**

**Captain Ben van Scherpenzeel**  
Lead of International Taskforce Port Call Optimisation