'D' stands for future

by Graham Howe, *Business Development Director Marlin SmartPort™, ION*

Two trends that will significantly impact ports in the coming years have markedly accelerated in the last year. While port operations are going digital, their on- and offshore environments undergo decarbonisation. The acceleration has been fuelled by several new and, in some cases, unforeseen factors, among many the coronavirus pandemic, the multi-factored strains on already fragile global supply chains, and the significant long-term consequences of the need to combat climate change.

The developments mentioned above, combined with existing modernisation trends in the port and shipping sectors, have resulted in a watershed moment of significant change for the transport & logistics industry, with far-reaching global implications. The stress that ports have recently endured will catalyse an accelerated drive for long-term change across the board, from regulations, including international standards in port call processes, to operational practices.

The situation will add pressure on its own since four-in-five of the world's ports do not currently have a digital management solution, i.e., are unable to share data digitally with stakeholders. Yet, it will also galvanise people responsible for port development to make a quantum leap given the current availability of tech solutions that don't have to cost a king's ransom. One thing's for sure, timidity against change is a surefire recipe for fossilising one's port business in the pen & paper age.

Reducing supply chain fragility

The digitalisation and decarbonisation trends aren't by all means mutually exclusive developments. Instead, they are part of the ongoing modernisation of the port and shipping sectors, which will necessitate the transparent sharing of digital data with stakeholders and regulators. Ports will be required to exchange operational port call data with shippers and fleet managers, along with emissions data and how they relate to their activities, to demonstrate how they can reduce their environmental footprint while maintaining effective and profitable port operations.

As a result of new standards and regulations, ports must begin their digital transition in a controlled and cost-effective manner. If ports wait much longer than the next two to three years, they may run out of time to make an effective transition.

Since the late 1960s, when Malcom Mclean invented the container that became the TEU, we have seen an increase in the development of just-in-time (JIT) shipping. In recent years, with the expansion of the globally interdependent economy, JIT became a crucial component of how people purchase goods, and the cliché of '90% of everything you buy is transported by sea.'

As we have seen, COVID-19 has exposed the unexpected fragility of that element of the supply chain, leaving cargo stranded at ports for a wide variety of reasons (with events like the Suez Canal jam further throwing us off the trail). As a result, we are more aware now than ever of the need to bolster the shipping of goods with digital solutions that enable us to move cargo around the world with the least friction.

In 2020-2021, there have been some significant developments in this area exemplified by initiatives such as the International Maritime Organization's focus on the FAL initiative and the use of Maritime Single Windows, ISO standards on port call processes, the Digital Container Shipping Association's centre on tools to facilitate shipping, like Track and Trace applications for cross-carrier shipment tracking, and the widespread adoption of Tradelens as a global document transfer standard. However, as per the January 2021 survey by the International Association of Ports and Harbors and the World Ports Sustainability Program, we still have a long way to go in these areas (Fig. 1). However, it is clear that these standards are gaining traction, and we anticipate that the next three to five years will increasingly focus on these areas as efforts are made to reduce supply chain fragility.

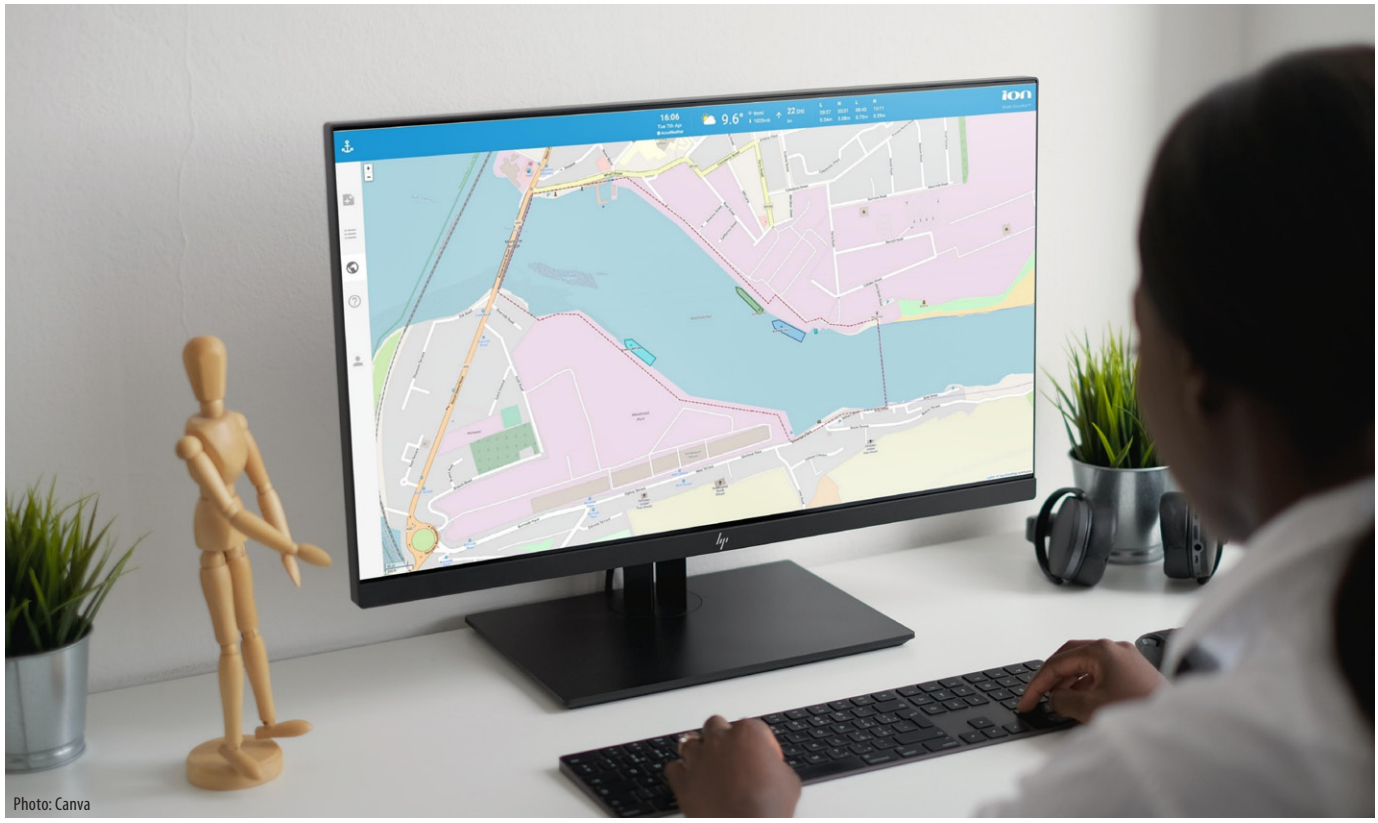
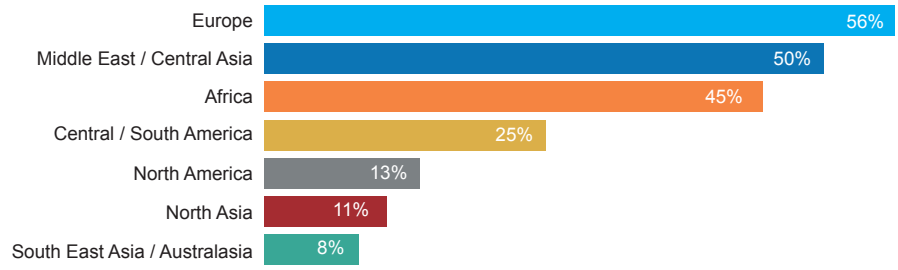


Fig. 1. Percentage of respondents where operational data exchange systems exist by region



An increasing tide of non-digitalised communications

Simultaneously, there is a growing awareness of the role that international shipping plays in carbon emissions. It was recently reiterated that shipping emissions are equal to Germany's total annual emissions. The EU has made it clear that it intends to reduce emissions from vessels, undoubtedly leading to increased regulation.

Because approximately 80% of the world's ports do not have a digital port management solution, this in practice means that ports typically manage their operations using a combination of paper and Excel. At the same time, it is clear that many ports are not receiving the data they require from the supply chain to support their transition to a digital platform. The majority of the sector's digitalisation has focused on shipping and cargo documentation. As a result, we find ourselves in a situation where ports receive documentation in a paper format or a paper analogue, such as Word and Excel-based FAL forms. These are frequently sent to ports as email attachments, adding to their workload as port controllers and personnel struggle to keep up with an increasing tide of non-digitalised communications.

The slow adoption of digital port management solutions is caused by many factors, including port budget constraints, a shortage of global standards to facilitate adoption, and a lack of understanding of what such a solution can offer. The latter is no reflection on ports. The sector is rapidly evolving, and it is challenging to keep abreast of new software developments. However, the introduction of a new generation of digital port management solutions, such as ION's Marlin SmartPort™, now provides ports with an affordable solution that allows them to scale up their port management system to meet the needs of their customers.

Much pain

The off-going year has brought about a greater awareness of the fragility of the global shipping supply chains, plus the urgent need to be aware of the changes that decarbonisation will bring (or climate change if left unchecked). Both of these market conditions require ports to share data with their stakeholders and key regulators effectively. Ports must review their management solutions and assess their capacity for port digitalisation to accomplish this effectively. Taking action today will save them much pain five years from now. ■

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