As we all know, 2020 has been an exceptional year. For all the negatives that the year has resulted in, it has also demonstrated how essential the port and shipping sectors are to global commerce as well as their resilience in the face of numerous challenges. One major impact of the pandemic has been to highlight the increasing need for ports to not only do more work with fewer resources but also the requirement to carry it out remotely. Now more than ever, the need for information sharing across the sector is of critical importance to stakeholders and, as a consequence, we have seen port digitalisation accelerating.

This hasn’t been brought about by the pandemic only, of course. Initiatives such as the IALA S211 and the Sea Traffic Management have been gaining momentum for a number of years now, and 2020 has seen those standards begin to bear fruit. There have been two major developments this year that have highlighted this trend. First, in October, the Digital Container Shipping Association (DCSA) launched a set of standard data definitions for just-in-time (JIT) port calls. It includes 17 timestamps covering the JIT port call process and benchmarking the core dataset within it. While this builds on the existing work – such as that of the International Taskforce Port Call Optimization, the International Maritime Organization, and the International Organization for Standardization – it is important to note that the DCSA represents over 70% of the world’s container shippers, giving a single critical voice in support of the development of these standards.

Where are we today with port digitalisation?

by Graham Howe, Business Development Director, Operations Optimisation, ION

On the one hand, we have large ports that have a clear interest in joining a platform like TradeLens. Engaging with this kind of large-scale initiative ensures that these ports remain competitive with their peers in a sector that needs efficiency to maximise profit margins and reduce harmful emissions. These ports tend to have well-funded IT departments that are able to remain up to date with the latest developments in the tech field.

For the medium-to-small port market, on the other hand, the capacity to stay ahead of the game in the technology race is more constrained. These multi-use ports are required to divide their resources among a broader range of needs: running efficient ferry operations does not require the same skill set as a port specialising in, say, barley, wheat, and other such crops. The IT resources that these ports have are often required to address a very wide range of solutions, from number plate recognition systems to document EDI. Not surprisingly, their resources are spread thin, and it’s difficult for the port managers to know where to turn for trusted advice.

That said, it is also important to note that these two port classes face similar challenges. All of them need to address issues across both ports and shippers, numbering market leaders such as Maersk, MSC and numerous major seaports around the world as users. The adoption of a single platform of this type, combined with the emergence of commonly agreed standards, have enabled the container port sector to move forward with digitalisation at a rapid pace.

Differences and similarities

These developments, however, have tended to exacerbate the growing divide between large and small ports in terms of digitalisation. If we use the EU characterisation of ports as Core and Comprehensive, we can see that the advancements noted above will immediately appeal to the former, enabling them to move TEUs seamlessly between themselves with maximum efficiency. Yet, the same cannot be said for those listed as TEN-T Comprehensive Ports, which tend to be more diverse in nature, covering a full range of multi-purpose activities from the international and local ferry to tramp cargo traffic. It is a bit of a simplification to break down ports in this way, but it does enable us to summarise the two separate approaches to digitalisation.

The pace of adopting modern technologies by big(ger) and small(er) seaports
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created by vessels waiting to come into port and their idle time before and after unloading. The solutions adopted by the larger ports have, therefore, the capacity to benefit small and medium ports, too.

**Trickle-down digitalisation**

There are two main drivers that will encourage small-to-medium ports to adopt digitalisation. The first is regulation: as the focus on areas such as the reduction of emissions intensifies, ports will find themselves facing increasing levels of paperwork, leading them to find more efficient ways of keeping ahead of their administrative load. The second factor is the need for greater efficiency that will enable them to optimise the use of resources. If a port can halve the time taken to administer a port call, they will be able to free up resources to focus on other areas that are of benefit to their operations.

Now that we see digitalisation initiatives gaining pace in the large port sector, we can expect to see these concepts trickling down to smaller ports as solutions become more trustworthy and reliable. There will also be growing pressure on the medium and small port sector to adopt standards in order to comply with the requirements of global shipping. It is important, therefore, that small and medium ports are given the tools to be able to adopt these standards at a pace that is suited to their capacity.

Initiatives such as the EU-funded Connect2Small Ports project, focussed on the Baltic Sea, are developing means that enable ports to share information with peers regarding digital initiatives. These tools help resource-constrained ports to be kept in the loop on these large-scale developments and help them to find ways in which they can affordably upgrade their operations to ensure that they remain efficient and competitive in the post-pandemic environment.

**Critical mass – achieved, more to come**

Indeed, the year 2020 has by far been exceptional, and the port and shipping sectors can be justifiably proud of the role they have played in keeping the logistics chain unbroken and vital supplies moving around the world. It is also a year in which port digitalisation in the cargo container market has achieved a measure of critical mass. This development will change the way the sector as a whole works as new technologies trickle down across the market.

While none of us knows what 2021 will bring, I think that we can all agree that extreme change is now a constant in our lives, and we can expect to see more exciting developments in port digitalisation to meet that challenge.