

The impact of the pandemic on the shipping and logistics industry has been far-reaching, with enterprises compelled to re-visit their supply chain strategies. Fresh COVID-19 outbreaks continue to further jeopardize already strained global supply chains. China's efforts to curb the spread of Omicron resulted in the closure of shipping terminals, in turn, leading to a logjam of container ships. Similar scenes were witnessed across US and European ports that experienced congestion arising from a massive cargo surge.

Furthermore, the severe labor shortage in the US has exacerbated these challenges. While job openings have exceeded pre-pandemic levels, the labor force has contracted by about four million.<sup>1</sup>

Problems aside, the pandemic has triggered a mindset shift among enterprises that are

now looking to adopt digital innovation to improve internal efficiencies and navigate through a difficult external environment. A research report from WNS and Corinium Intelligence, evaluating the state of digital transformation, reveals that 60 percent of shipping and logistics companies have accelerated their automation projects by at least two years due to the pandemic.

At the same time, 50 percent believe client-facing business processes will be fully digital within the next two years. With funding for digital solutions in shipping and logistics only set to increase, the period through to 2025 will see capabilities grow even further.

Here, we explore four trends that will define how global shipping and logistics companies function in 2025 and beyond.

# Real-time Visibility Driven by Big Data & Digital Twins

Consolidating and centralizing globally dispersed operations while maintaining country-specific nuances represents a significant challenge for the shipping and logistics industry. However, it's a challenge that enterprises, led by digital and automation capabilities, can meet.

Big data analytics is a case in point. It can, amid increasing complexity and accelerated change, help logistics companies achieve increased agility, efficiency and profitability. Connectivity also sits at the heart of this future. As more elements of the infrastructure are brought into the Internet of Things (IoT) fold, shipping and logistics companies can begin to achieve real-time visibility into their operations.

Armed with digitization and automation, one of the leading shipping companies gained a real-time view of all operations, reduced costs and eliminated errors. Shipping and logistics enterprises will take such innovations further and build hyper-immersive digital twins of their

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operations that offer a real-time view of the entire value chain and an understanding of the impact of each action. The Port of Antwerp is digitizing its radar infrastructure to complement its digital twin technology. This will see capabilities evolve from situational awareness about the port to predictive behavior.<sup>2</sup>

As connectivity enables real-time visibility across the entire value chain, enterprises will soon deliver relevant insights to their customers too. By 2025, each customer will be provided with seamless, real-time updates on the status of their orders and to-the-minute accuracy on when they can expect to receive deliveries.

Last-mile innovations such as self-driving trucks and drones will contribute to this future, generating real-time data that will be directly communicated to relevant customers.

Meanwhile, freight tracking software, devices and sensors will do the same, creating greater supply chain visibility and transparency for both enterprises and customers alike.

## 2 Human-Machine Collaboration for Automated Planning

While Artificial Intelligence (AI) has been leveraged to smartly transform transportation and route planning, we expect to see an increase in the application of augmented intelligence in logistics planning. Gartner predicts that by 2030, AI augmentation or augmented intelligence will leapfrog other kinds of AI implementation to constitute 44 percent of the overall AI-derived value.<sup>3</sup>

A highly specialized activity such as logistics planning requires the inputs of experienced human planners while being backed by the ability of AI to automate manual and repetitive tasks. For instance, carrier selection is a repeatable but complex process that requires a

close analysis of several hundred routes and schedules.<sup>4</sup> Al can automate the analysis to identify the ideal candidates and pass this on to human planners to finalize. The integration of human intelligence and Al can help eliminate manual errors, improve efficiencies and reduce costs.

One of the biggest advantages of augmented intelligence is predictive alerting. Human planners can use predictive analytics-based intelligent alerts to accomplish a number of important activities, including calculating the arrival time of vehicles, anticipating equipment repair and goods damage, and planning for a spurt in demand.

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### 3 Hyper-local Logistics

The next five years will see enterprises shrink and onshore their supply chains, welcoming a new era of hyper-local logistics. It's a shift driven by two converging factors: the need to build resilience in the face of global disruptions and growing consumer demand for same-day — and even faster — delivery.

The unavailability of suppliers during the pandemic forced companies to look for local supply chains to augment shipments from overseas. To eliminate single-source dependencies, product integrators, sub-system suppliers and component suppliers will have to

develop in-house sourcing and delivery options moving forward.

At the same time, consumer expectations are on the rise. The global same-day delivery market had a valuation of USD 5.78 Billion in 2019 and is expected to reach USD 20.36 Billion by 2027, registering a compound annual growth rate of 21.1 percent over the said period.<sup>5</sup> In line with this change, a new generation of hyper-local logistics services is emerging. For example, a Swedish retailer recently invested in a logistics platform, Urb-it, which provides last-mile deliveries across Europe from hyper-local hubs.<sup>6</sup>

### 4 Sustainable Solutions

Underpinning the next five years of digital transformation in the shipping and logistics industry will be a shift towards sustainability. Next-generation connectivity will enable improved decision-making, helping enterprises strike the right balance between humans and machines for ultimate efficiency.

Already, innovations are helping this era emerge. Amazon recently co-founded The Climate Pledge, a decisive step in its pursuit of achieving net-zero carbon emissions by 2040.<sup>7</sup> A North American freight company recently invested in a battery-powered locomotive as a part of its sustainability strategy to reduce emissions.<sup>8</sup>

Within shipping specifically, the need for sustainable innovation is growing, with several ports launching initiatives to encourage companies to reduce the carbon footprint of their passages. The Panama Canal, for example,

recently launched a Greenhouse Gas (GHG) emissions tariff, ensuring that sustainability is placed front and center of the shipping industry in the years to come.<sup>9</sup> Similarly, Maersk is one of the 60 commercial groups to have launched an initiative to achieve zero carbon emission by 2030.<sup>10</sup>

The turbulence caused by the pandemic has compelled shipping and logistics companies to fast-track their digital adoption and build resilience through insights-led innovation.

Companies are now gearing up for the future by building real-time visibility, harnessing collaborative intelligence, embracing hyper-local logistics and enhancing sustainability.

Know more about WNS' digital solutions for the shipping and logistics industry

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