

WHERE IS DIGITALIZATION IN THE TRANSPORT AND LOGISTICS SPACE LEADING TO?

Some years ago, digitalization was the future of fast-paced, forward-looking organizations. Today we live in the era of the 3Cs. The era of increasing **complexities**, overwhelming **competition**, and accelerated **change**. Dynamics of technological innovation are rapidly overtaking the old normal. This phenomenon is not less true within the trilateral space of logistics, transport and supply chain as we change process and practice to improve value chain, beat our best traditional approaches to business and gain a competitive advantage in modern competition.

In recent years, transportation has been characterized by the emergence of new market participants, changing consumer demands towards transport services, creativity in commerce, trade and industry as well as noticeable shift in supply chain methodologies. While we may not take out the aspect of physical delivery in logistics and transport services, the sector is being transformed, albeit slowly as some have observed, by digital revolution along the supply chain spectrum. Although these disruptions come with certain challenges, it is increasingly clear that digitalization is already the now of general business and industry. To think digital processing as a feature of the near future is to proceed in error. The new normal is already here. The opportunities far outweigh the challenges. And the neo-difficulties of digitalization will fade by getting used to.

Scope of Digitalization in Transport and Logistics Services

Introduction of technology must be intensive, ubiquitous and extensive for all-round effectiveness of logistics and transport, a far-reaching component of national economic growth and development, particularly at a time like now when Logistics Performance Index (LPI) is the main yardstick for measuring the economic rating of nations. Ruosi Zhang, in making a case for data flow in transport and logistics services, validated this by identifying the following areas where digitalization is transforming the subsector: Vehicle/ship design; Infrastructure including road, bridges, tunnels, rail, airports and seaports, terminals; Transport operation including capacity allocation, cargo management, shipment tracking and tracing, customer services, etc; Intermediary services; Supporting services including warehousing, monitoring and inspection; Maintenance and repair of transport equipment; Information and documents transmission among multi-players (shippers, shipping lines, port authority, the Customs, terminal operators, etc.) (Digitalization in Transport and Logistics Services: --- A Case for Data Flows. (Ruosi Zhang Geneva, 9 September 2020).

Other prospects of digitalization are seen in the coming up of driverless autonomous vehicle and intelligence traffic management, automated warehousing, autonomous handling equipment, drones, robotics, IoT, AIs, which will all reduce human interface and manual effort. Since information is the base of all modern supply chain management processes, large volume of data handling management is inevitable. Automation of data transport is becoming a regular feature in addition to the automation of cargo movement management. It is, therefore, obvious that in making over logistics and transport for market satisfaction, the digital wave will be incorporated in such a way as to transform the entire value chain continuum.

Transportation is no longer simply transporting goods from one point to another; it is a more active and distinctly developing economic subsector. Modern transport organizations have to be easily adaptable and use creative decision-making approaches in management processes in order not just to remain competitive for survival but to thrive in the constantly changing market. Thus, with the

advent of the digital new normal in the logistics, transport and supply chain space, the initial industrial challenges may be easily perceptible in trying to make logistics smart, simple and safe. The infinite advantages and many positive opening vistas, however, are unbounded and inestimable. This is because firms strive to offer new and innovative decisions whose main purpose is to fully optimize the work process and facilitate the work of all participants in the logistics and transport chains. The drive towards satisfying the needs of customers who use logistic services and reacting to market changes becomes possible through the incorporation of digital innovations in the logistics and transport sector.

CHALLENGES OF DIGITALIZATION IN LOGISTICS, TRANSPORT AND SUPPLY CHAIN

The challenges of digitalizing the industry are clearly multi-thronged. In addition to the general issues of digitalization expenses, searching for qualified personnel, high cost of energy, job losses, lack of digital data transfer standard, high expenses on skilled employees, high road taxes from investment in traffic management intelligence, etc, there is a whole troubling case of cluelessness on the part of industry players. While digitalization has aided development and rapid innovation in some other industries, firms in the Logistics and Supply Chain (L&SC) industry seem to be lagging and playing catch up on many fronts. This is not to conclude that certain enterprises in the industry have not taken steps to innovate digitally. In fact, some have been successfully revolutionized in terms of shifting digital-ward. Sadly, a major part of the logistics and supply chain ecosystem seems to be grappling with even the concept of process digitalization, as established in the following work of David M. Herold, Marek Ówiklicki, Kamila Pilch and Jasmin Mikl, titled: **The emergence and adoption of digitalization in the logistics and supply chain industry: an institutional perspective.**

“Digitalization in the logistics and supply chain management (L&SC) industry is of increasing strategic importance for businesses as it impacts established paradigms, business models and industry boundaries (Barrett et al., 2015; Cichosz et al., 2020). A mounting number of companies allocate resources to exploit digital opportunities that have the potential to transform societies, economies and organizations (Cichosz et al., 2020; Hribernik et al., 2020; Mikl et al., 2020b). However, digitalization in L&SC seems to be a double-edged sword: on the one part, companies such as Amazon have fundamentally changed the L&SC landscape through digital products and services (Cohen, 2018; Liebmann, 2013), thus having embraced and pushed digitalization as a force of change, not only between institutions, organizations and companies but also as an opportunity to create completely new products and services (Loebbecke and Picot, 2015). On the other part, traditional L&SC companies such as sea or rail freight forwarder are still characterized by low levels of digitalization and manual processes (Economist, 2018), thus risking to miss out on digital advances (see, e.g. Lyall et al., 2018) that “[rewrite] the rules of business and supply chains” (O'Marah, 2017). Although research in digitalization in L&SC is an increasingly popular topic among academics (e.g. Busse and Wallenburg, 2011; Cichosz et al., 2020), little understanding exists “how the digital revolution will impact key [L&SC] concepts” (Stank et al., 2019, p. 957)” .

The need for collaboration between companies is a clear one. Data must be exchanged among participating partners. However, companies are not easily forthcoming when it is time to provide

other companies with access to transport management and their transport data. Perhaps understanding that cooperation in this aspect holds huge potentials for firms - and that it is the only approach to adopt in harnessing such potentials – will help in no small measure. According A.G. Tsonkova, infrastructure will become insufficient. Roads do not have enough space for the increasing number of trucks – a fact which has been long-known in countries like China and Brazil, she writes. She informs that forecasts show that companies will optimize their transport network in a joint effort with other companies.

It is then easy to deduct that an ideal cooperative world where everyone will benefit from the amassed transport data, a global digital data village where all transport data is collected and analyzed in real time and through a multi-layered platform, is inevitable in logistics, transport and supply chain.

So, in answering the question: where is digitalization in logistics and transport space leading to? Participants, professionals and stakeholders must first seek to grasp the value of digitalization of processes in the logistics, transport and supply chain subsector. They must also be willing to enter into close cooperation with other players in the ecosystem. Knowing the value of digitalization in the industry is the critical first step to embracing digitalization

VALUE OF DIGITALIZATION

Among other values, digitalization improves the logistics services for customers by reducing the complexity of logistics; makes intermodal supply chains more transparent and efficient both locally and internationally, gains productive speed aided by integrated digital tools; creates ease of business and product globalization via a veritable network of virtual community; effects automated business processes requiring less manual toil; yields capacity for developing new digital products and solutions; enhances organizational visibility effected by readily available data convertible to real time, ubiquitous workable logistics information. However, caution must be taken during the digital paradigm consideration. Hands on deck, people on site, the “men at work” practice should not be wholly jettisoned as organizations will always need some level of physical presence at points in space to be able to offer customers all services along the entire supply chain from specific locations. Digitalization deserves a non-digital complimentary backbone. The industry knowledge, local know-how and expertise of personnel sometimes constitute the pivotal fulcrum upon which the fortune of logistics, transport and supply chain companies revolves.

Service offering, geographic reach and aspects of physical business cannot be discountenanced in logistic, transport and supply chain relations, particularly as no amount of dependence on alphanumeric, algorithmic, digital interactive interface can take the place of the human feel that sometimes satisfies the customers, clients and consumers so pleurably beyond measure. We contest the fact that the social component is not thought of in providing innovative solutions, especially because such new products and solutions are indeed meant for human beneficiaries in the first place. But the truth is that we sometimes “underthink” this component, delighted by the elation of new discoveries. Integration of the hybrid approach, where the best of traditional forwarders and the advantage of digital innovation produce operational efficiency, is advised for logistics process optimization, and may be necessary for global recognition.

Return on digitalization investment may not be quick and certain possibilities of the traditional

processes may still hold the lure to continue such methods. Perhaps these are the factors responsible for the cautious optimism and comparative gradual embrace of digitalization in the industry. However, digitalization will no doubt improve process optimization in the logistics and transport ecosystem, leading to easier ways of executing task and increased profitability eventually. The most important resource for business is time, and this is important in transport business because good timing translates to money. One advantage of digitalization is that it accentuates the lean production process, eliminating unnecessary mid-line activity and end-line wastage, thus saving time and money. Digitalization is not just a challenge, but an opportunity. Because digitalization changes the established value chain as well as the chain for networks in which manufacturing companies, providers of industrial services and software suppliers cooperate through digital platforms, organizational structures and processes have to be flexible and adapted to the current realities. This requires deep changes in the division of work between manufacturers, suppliers and service providers, as well as all related business models.

Reynolds Shodeinde, FCILT
CILT, Nigeria.

References:

Digitalization in Logistics – Martin Kolbe

The emergence and adoption of digitalization in the logistics and supply chain industry: an institutional perspective - David M. Herold, Marek Ćwiklicki , Kamila Pilch , Jasmin Mikl .
Journal of Enterprise Information Management, ISSN: 1741-0398, Open Access. Article
publication date: 23 March 2021

Digitalization in Transport and Logistics — Modern Challenges and Opportunities - Asya
Grigorova Tsonkova