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## **The Tools to Cope with Uncertainty in Logistics and Supply Chain Management**

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### **ABSTRACT**

The global pandemic has impacted almost all parts of the world economy. The way everyone working changed completely. One industry that has seen predominantly noticeable changes over the past few months is e-commerce. Since most customers prefer online shopping, a new domain as e-commerce emerge and it put lots of stress on logistics industry, which expected to be cope with recent trends. Though staying on top of these developments can be tough for supply chain managers and business leaders, it is critical if you want to ensure the integrity of your supply chain and see your business succeeds. Companies are trying to meet the customer demands in real time. In this article we are going to see the recent trends in supply chain management which enable companies to cope with this unprecedented situation.

Keywords: Post pandemic, Supply chain trends, e-commerce, and digitization.

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### **Introduction**

In the history of logistics it was military department who used logistics in a new way by maintaining army supply lines while disrupting those of the enemy, since an armed force without resources and transportation are defenceless. Military logistics was already practiced in the ancient world. Logistics officers in the military manage how and when resources are moved to where they are needed. The transfer of commodities from one location to another via road, air, sea, and train was the next step in the history of logistics. Air cargo, or air freight, is collected from shippers and delivered to customers by companies. In 1911, aircraft were employed for the first time to transport mail as freight. Such large aircraft employ quick-loading containers known as unit load devices (ULDs), much like a containerized cargo ships. The ULDs are located in the front section of the aircraft. Next is transportation by means of rail route, and trains are able to transport cargo between shipping ports. Marine cargo ships are used to transport material like oil, coal, salt, auto parts etc. It was a very much useful for countries which have harbour and countries as islands. In India, Andaman-Nicobar Island receives goods like petrol, oil, dairy products and vegetables by means of marine cargo. Many firms, like ABC India Pvt Ltd, Chartered logistics, FedEx and R+L Carriers transport all types of cargo transport goods by means of road.

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### **Is this way of logistics efficient?**

Absolutely no. Right after the World War II, each and country concentrated in improving their GDP. The Logistics service is the only service that is the major contributor to GDP of a country. Day by day the traditional logistics cannot move further for any improvement because of some cons in it. Which is Order placement, Cost of transport, Coordination, destination and warehouse configuration? Order Placement deals with the producer who predicts the need of the customer, which changed later on to variable/ fluctuating order. This resulted in immediate production of goods and which lead to the producer who cannot unable to track the shipments. Destination and warehouse configuration are inter related to the order placement, where the producer sent their good to destination and they manage at warehouse. Since day by day the products got increased, it is difficult for warehouse to manage the goods.

Especially in cases of international logistics, there may be some failures in international coordination, usually the most frequenting problems are: language, schedule, cultural change. Cost of transport – ‘the greater the distance to travel, the greater its cost’. This makes it is difficult to get a competitive price. So these cons lead to improvising logistics management by integrating technologies and logistics concepts. Mismanaged Implementation – Changing a supply chain management system takes financial investment, time, and human resources. If not executed properly, there will be wasted labour, service redundancy, and missed deadlines, all of which will cost a lot of money. High-quality logistics providers usually do a thorough research before implementing supply chain improvements to avoid these avoidable costs. This ensures that they fully understand the client’s freight schedule, consolidation opportunities, and last-mile logistics needs before developing and implementing a new system. The new worldview in logistics will help in sparing a great many dollars of working costs, accomplishing better production network mix, and expanding market power through a client centred satisfaction.

With growing digitalization and ever-changing client needs, the logistics industry is undergoing a remarkable transition. When compared to even half a decade ago, technology has completely transformed every aspect of logistics operations. Many technologies are promoting higher levels of competency and more collaborative working styles. Delivery logistics and a part of Supply Chain Management are continues to be pushed in new directions by E-commerce. E-Tailers of all sizes are looking to “Disruptive Technologies in Logistics” – a combination of delivery speed and radial technologies – as a way to add value, distinguish themselves, and keep the customer under their banner. Some of the new technologies as follow:

### **1. Supply Chain Digitization**

Supply chainDigitization, including all efforts to incorporateall the departments and process into unified whole as well as implementing new digital technologies, will continue to be a priority. It foresees a digital environment that does away with manual processes and provides a single view of the organization. It encompasses initiatives for creating paperless systems right through to techniques for modelling supply chain networks and creating what-if scenarios.

### **2. Block chain**

As data becomes more and more crucial to optimize logistics operations, so do the security risks and efficiency challenges associated with processing data through the 3PL industry. To meet this demand for solutions, logistics technology developments in 2021 will most likely be defined by the success of organisations like Koopmans Logistics, a Dutch firm that regulates the logistics of vehicle deliveries using the bit coin block chain. Koopmans is the first company in the world to distribute automobiles using a paperless, data-driven approach (Daley, 2019).Expect more logistics organisations to use block chain processes to reduce waste in 2021.

### **3. E-Commerce Logistics**

Before the COVID-19 crisis accelerated online purchase, the e-commerce boom that has been altering the logistics business in 2021 had been evolving for several years. By 2025, e-commerce logistics is expected to be valued US\$ 524.1 billion (Business Wire, 2019). According to Peerless Research Group (PGR) research, ten percent of respondents have seen their company's e-commerce channel expand by 60 percent or more since the epidemic began. In addition, a total of 28% of respondents saw e-commerce growth of 40% or more over the same time period (Michel, 2020a).

### **4. Artificial Intelligence**

In the supply-chain business, artificial intelligence (AI) has emerged as the key propellant for automation. AI algorithms can conduct fundamental tasks automatically by crunching data from previous actions. This saves a significant amount of time and reduces the risk of human error, resulting in more efficient operations. It also redistributes human capital to more difficult jobs. AI, on the other hand, has a lot more promise. Artificial intelligence (AI) can be used to spot patterns in data and provide useful insights. This might be used to estimate demand in the near future, for example. Supply chain operations can become more efficient and accurate with the help of AI.

### **5. Internet of Things**

It appears the Internet of Things (IoT) is coming of age According to data, the number of enterprises employing IoT devices has increased from 13% in 2014 to 25% in 2019. According to IDC, growth will average 13.6 percent every year through 2022. Organizations may use the Internet of Things to track inventory, automate stock reordering, and track delivery in real time. Sensors can predict equipment wear and tear, allowing spare parts to be ordered in a timely manner. The Internet of Things improves supply chain transparency.

### **6. Growth in Circular Supply Chains**

Manufacturers are moving away from the old linear supply chain and toward the circular supply chain, in which they refurbish or recycle components into raw materials to reuse and rework abandoned and worn out items. Customers clearly prefer businesses that recycle materials, and many prominent organisations are discovering additional value through circular supply chains, aside from regulatory requirements for the proper disposal and reuse of wasted products.

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