



E-COMMERCE LOGISTICS

Industry Report

Industry Overview

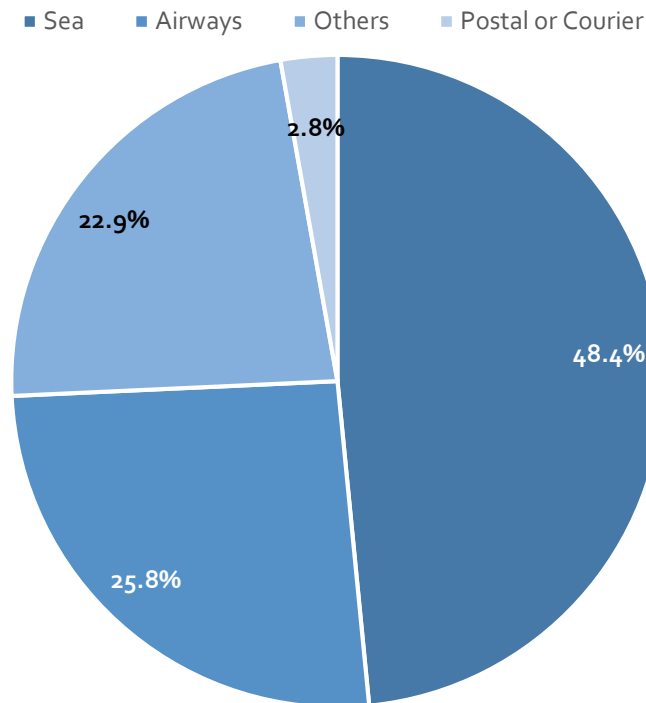
The pandemic had a beneficial effect on the e-commerce logistics market's expansion by enabling businesses to meet the extensive capacity demand of supply chain

- E-commerce Logistics involves packaging, value-added services, transportation & warehousing ;expansion of digital technology led to a rise in demand for e-commerce logistics
- Consumers desire to compare prices & product availability online encouraged them to make purchases of goods through online channels and hence need for e-commerce logistics services grew as a result with rapid growth in technology
- It is projected that the market would grow considerably during the course of the forecast year due to factors including increasing smartphone penetration, drone delivery, digitization, and digital payments; expansion of the sector is also fueled by the growing use of hardware technologies like GPS, portable data terminals, barcode technologies etc.

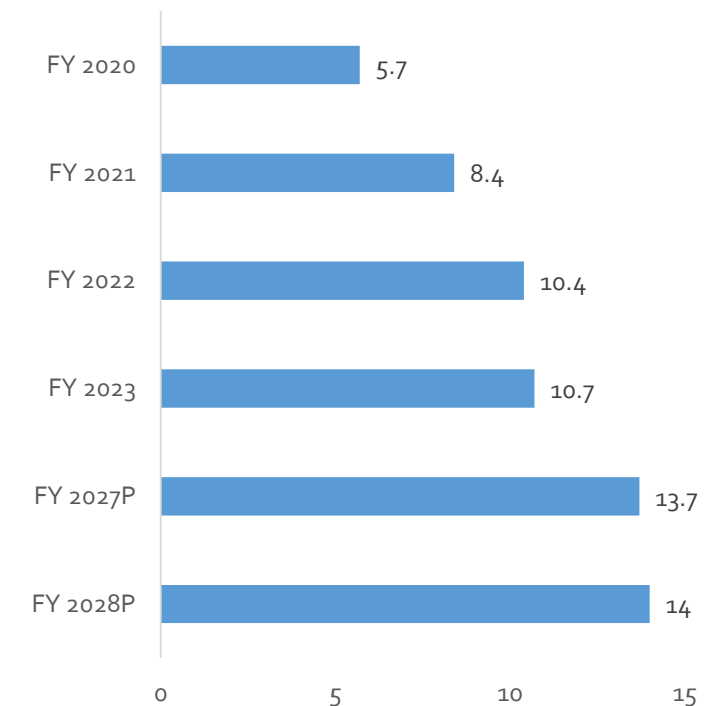
Impact of Covid-19 on E-commerce Logistics

- ▶ Customers were compelled to switch to online shopping for the most basic daily necessities, such as clothing, electronics, groceries, and furniture, after traditional stores closed
- ▶ The unsold inventory of those non-essential commodities blocked up space in warehouses and fulfillment centers, making room for more in-demand necessary goods
- ▶ Challenging to continue operating efficiently during a crisis particularly considering that demand at that time was skyrocketing for some products while absolutely collapsing for others
- ▶ Fulfillment centers were quickly expanding their workforce in order to meet demand due to an inflow of orders, this is made worse by the large number of employees absent due to illness
- ▶ Developments in import sales, cross-border e-commerce, and rising internet penetration, especially in emerging economies, are driving market expansion

Share of Transport Modes in Global Logistics, 2022



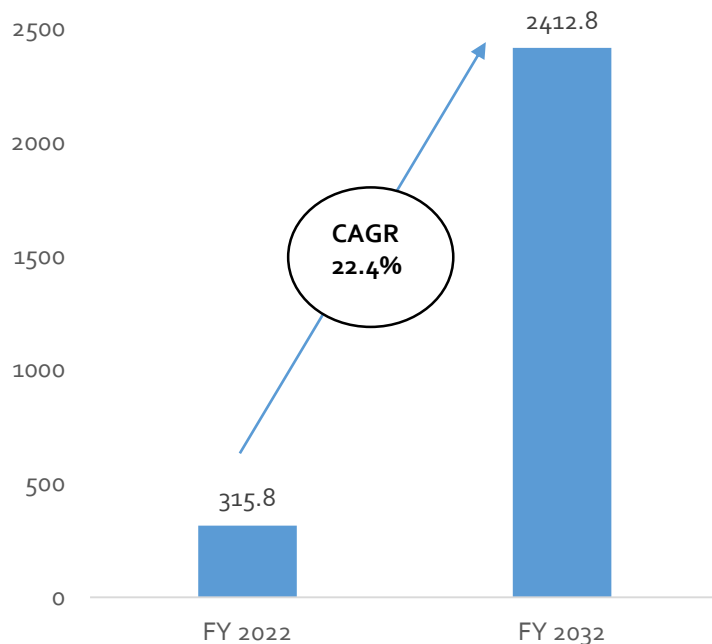
Size of Global Logistics market in trillions



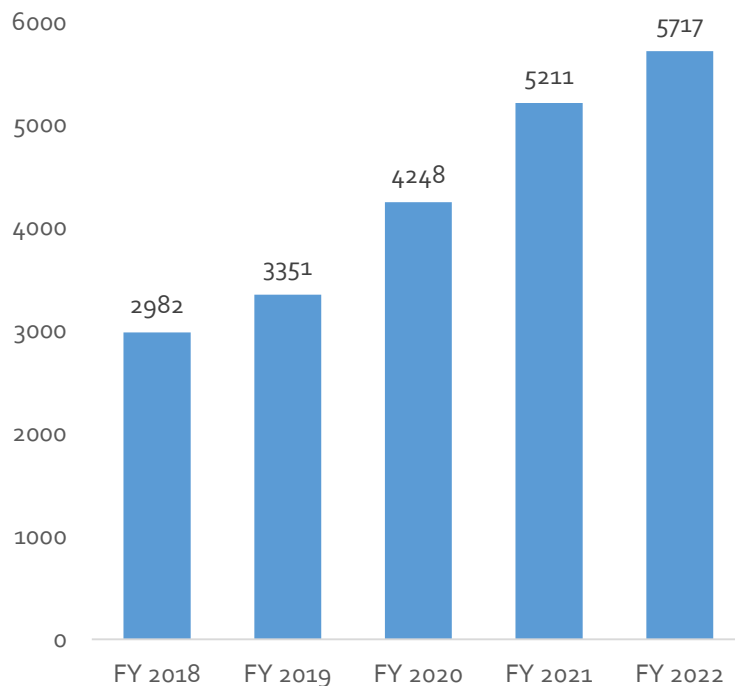
Industry Market Size

The size of the global E-commerce Logistics market is anticipated to increase from \$315.8 billion in 2022 to \$2412.8 billion by 2032 at a CAGR of 22.4% during 2022-2032

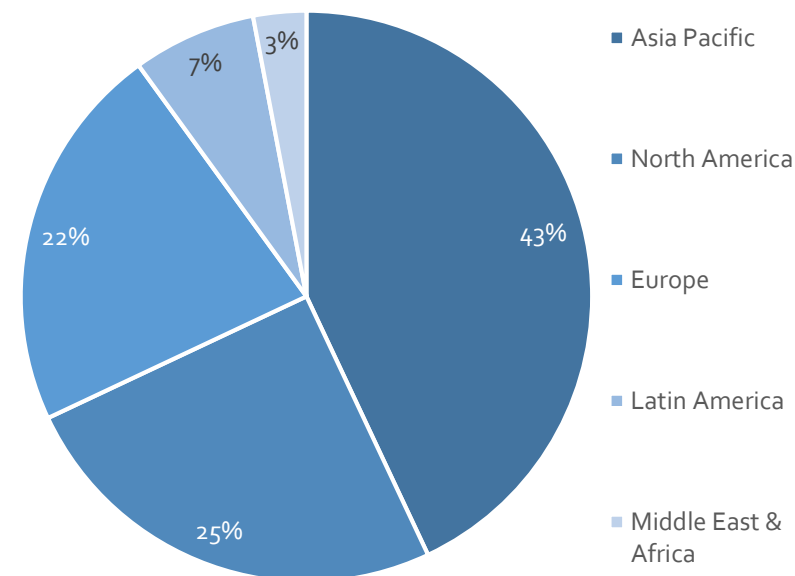
Global Market Size (in billion)



Retail e-Commerce Sales worldwide(in billion)

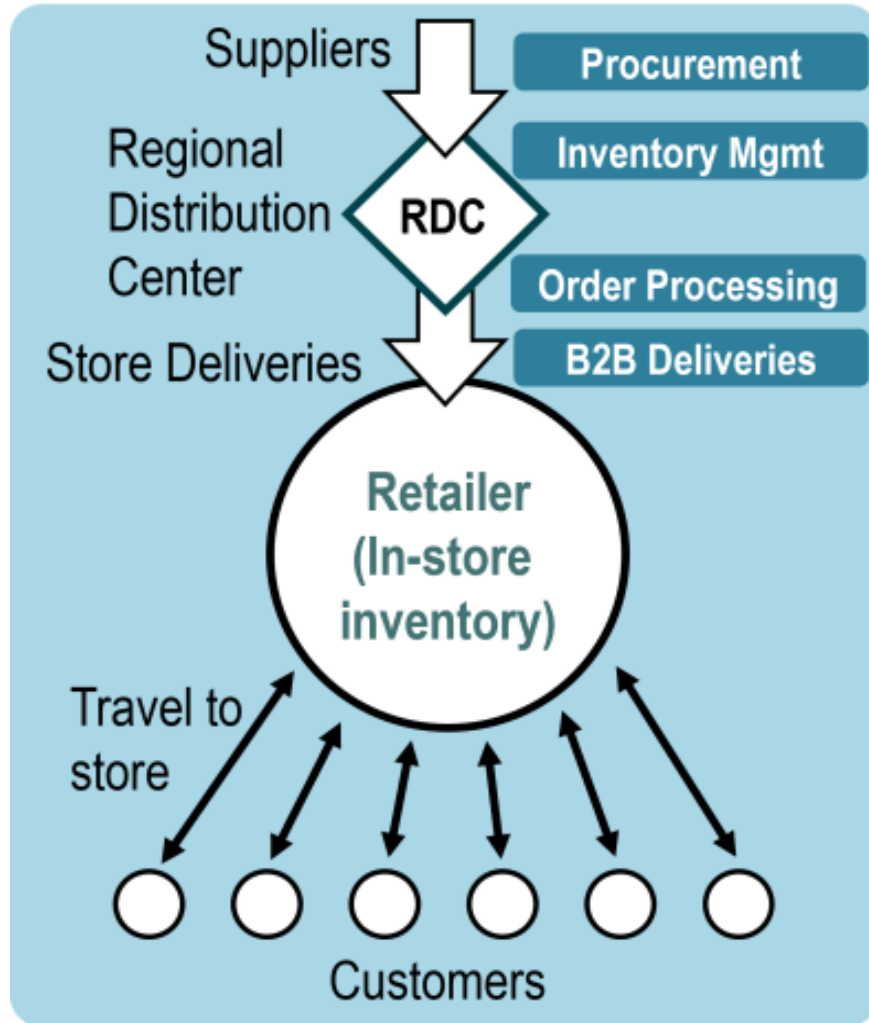


Global E commerce logistics market share 2022

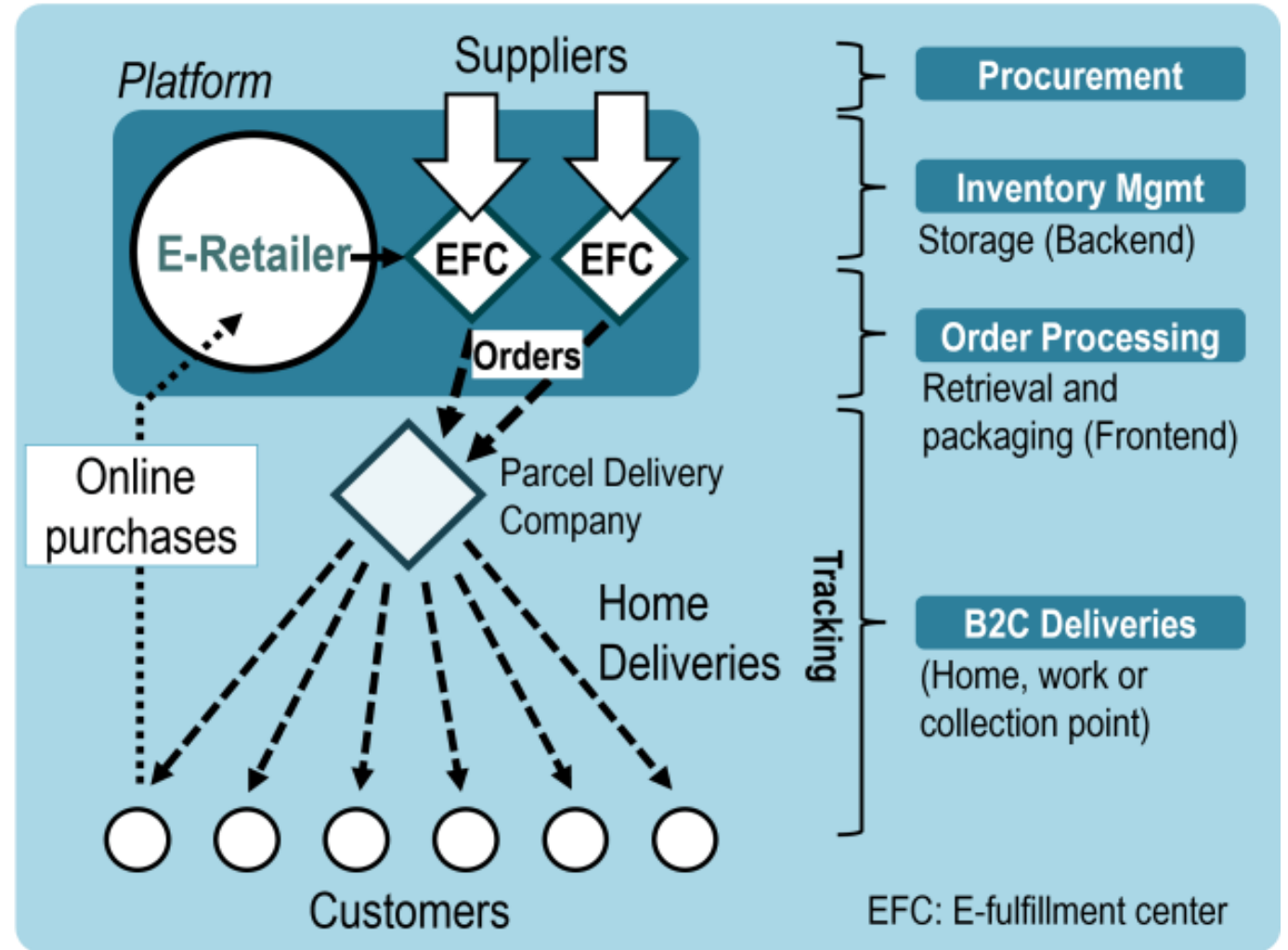


- ▶ E-commerce companies and logistics service providers are always coming up with new ideas to satisfy the changing expectations of consumers which made the industry dynamic and competitive, with a focus on customer-focused strategies, operational efficiency, and technological developments
- ▶ Among the main drivers are the growing online retail industry and the rapid urbanization of the country; in addition, people's growing reliance on online shopping sites is accelerating the need for effective logistics solutions to satisfy consumers' demands for prompt and dependable deliveries
- ▶ Over the course of the projected period, the US e-commerce logistics market is expected to rise rapidly at a CAGR of more than 6% due to the advent of automation, robots, wearable technology, drone technology, self-driving cars, cloud computing, and IoT in logistics technology
- ▶ Logistics companies are being forced to satisfy these expectations by optimizing routes, implementing cutting-edge technologies, and providing faster delivery choices

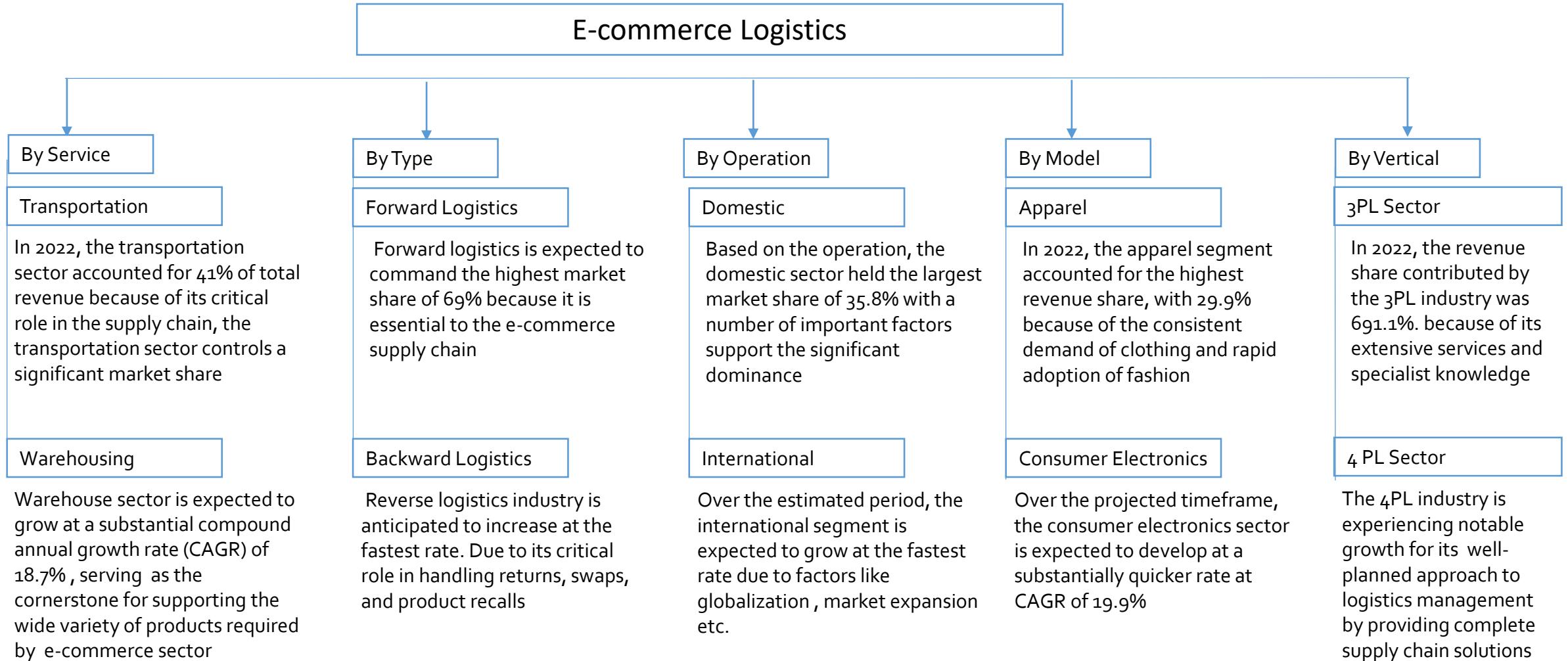
Conventional Retail Logistics



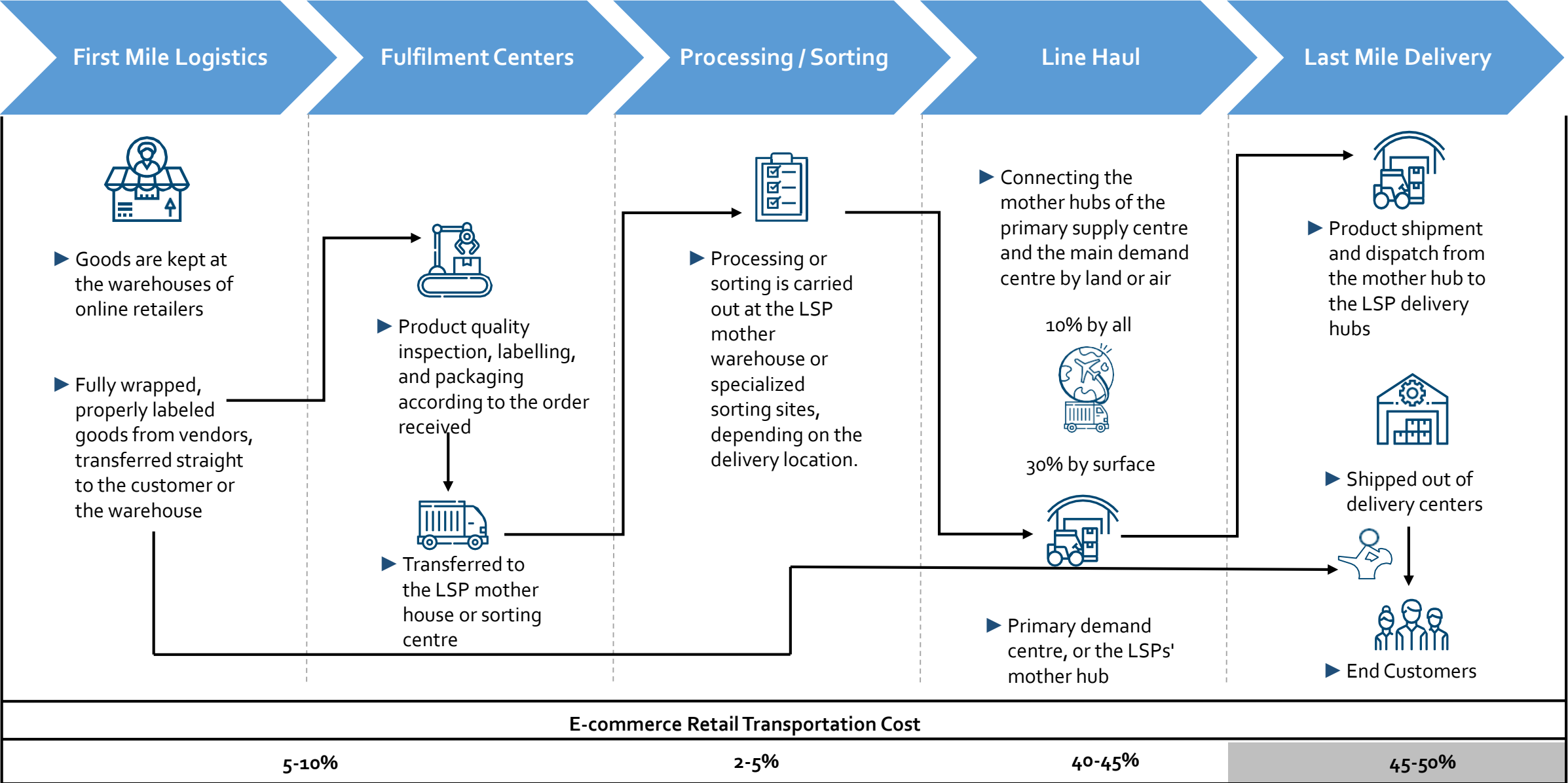
E-commerce Retail Logistics



Logistics methods have changed as a result of the industry's crisis-time adaptation and resilience, which has created the conditions for long-term growth and evolution



E-commerce Logistics Industry-Value Chain Analysis



Risks and Mitigation Strategies

Risks in the Industry

► Supply Interruption Risk

If the e-commerce firm be inventory-driven, then product supply may be disrupted by regional or worldwide events such as fires, floods, cyclones, or economic downturns

► Demand and Supply Planning Integration Risks

In the event of a typical surge in demand, there exists a possibility that the supply, which is determined by demand forecasts, may not be able to satisfy the additional demand and could lead to a decline in customer satisfaction and sales

► Information Privacy and Security Risks

Important consumer data, such as shipping addresses and contact details, is held by e-commerce businesses. It is necessary to safeguard this data from unauthorized access and misuse

► Employee and Third Party Fraud Risks.

Both consumer and vital business information are always at risk of being leaked; risks associated with third-party fraud include suppliers, sellers, and third-party logistics providers breaching agreements and engaging in actions that could damage a company's brand and reduce revenues

Mitigation Strategies

► Pre Purchase Stock

An online retailer assumes inventory risk by buying all of the stock that is anticipated to be in demand. Although there is less chance of a stock out for the customer, carrying inventory has greater expenditures

► Just In Time Strategy

Since the online retailer buys as soon as it receives an order, this reduces the inventory risk. Every day, retailers and suppliers will need to collaborate closely to make sure that supply and demand are met

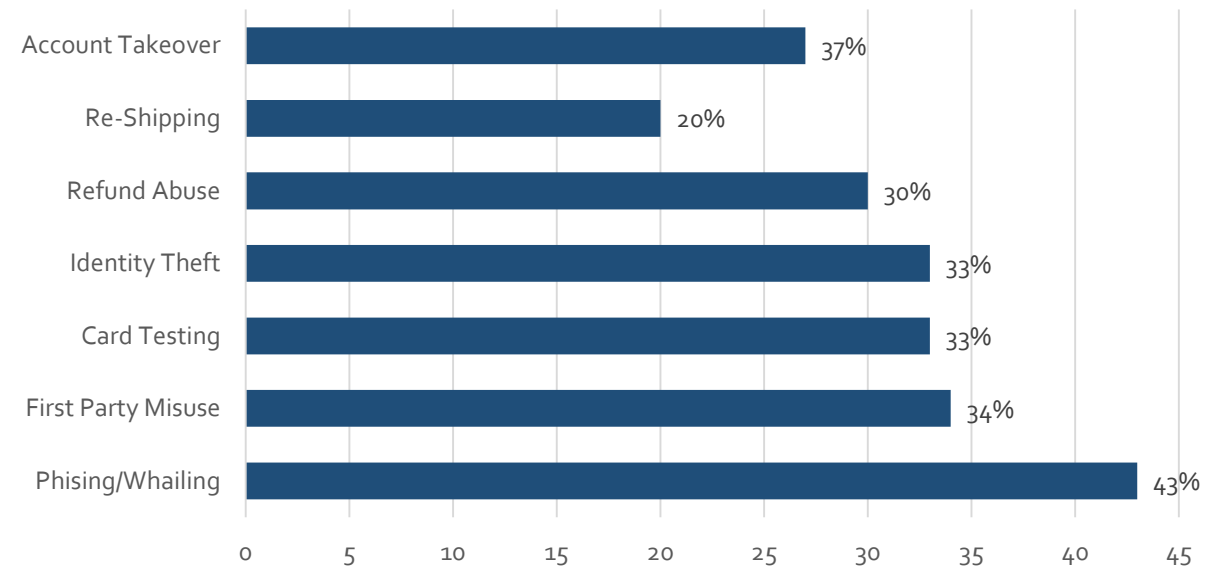
► Drop Shipping

Under this arrangement, the store just serves as a front company for other suppliers or retailers who handle order fulfillment; they do not hold any inventory. This is also strongly tied to the marketplace concept, in which an online store only serves as a platform for transactions between buyers and sellers

► Implementing Hybrid Model

Under this model, the shop keeps inventory of infrequently sold items to a minimum and only stocks items that are often bought, ensuring prompt delivery

Types of Fraud attacks on Online Retail, 2022



The intricate procedures that underlie each "add to cart" click have evolved in recent years making e-commerce a success with scalable logistics and technological advancements

Technological Trends

Technology Integration

The integration of advanced technologies like artificial intelligence (AI), machine learning, Internet of Things (IoT), and blockchain is transforming logistics operations

Local Drop Points

Several businesses are allowing customers to pick up their products at drop locations nearby, such as retail kiosks that give security and adaptability, rather than having them delivered to residences

Real Time Tracking

The anxious days of anticipating the delivery are over. Customers can receive real-time updates and schedule their day around delivery thanks to real-time tracking

Automated and Localized Warehousing

Warehouses are now overrun with automation and robots, which help with storage space and expedite the dispatching process. Some businesses are starting to consider smaller local warehouses nearer dense client areas for more flexible inventory management and faster delivery times

Sustainable Trends

Green Logistics

Reusable containers and electric delivery trucks are just two examples of how businesses are looking for methods to reduce their carbon footprint

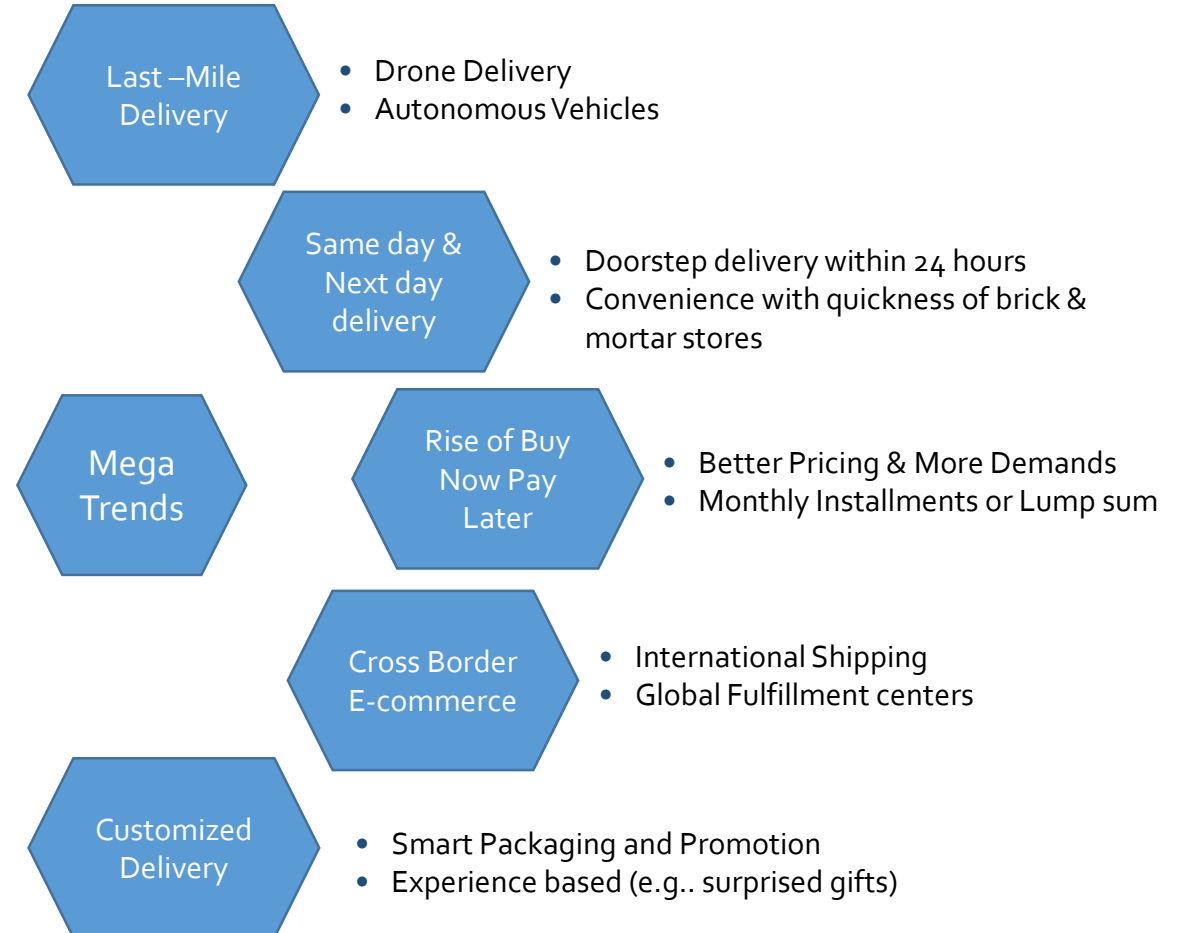
Sustainable Packaging

Businesses are switching to products that are easily recyclable, compostable, or biodegradable instead of utilizing a lot of plastic or non-recyclable materials

Circular Economy Practices

This entails creating goods that are long-lasting, repairable, and eventually recyclable

Mega Trends



Demand Drivers

The remarkable rise in online retail has led to a growth in the e-commerce logistics business, driven mostly by the urgent demand for economical, timely, and effective delivery options

Key Drivers

E-Commerce Expansion

- E-commerce is becoming more and more popular worldwide, which raises the need for effective logistical solutions. Strong logistics infrastructure is becoming more and more necessary as a result of the growth of online marketplaces and shopping platforms

Consumer Expectations

- Consumers increasingly expect faster and more reliable delivery services. E-commerce companies strive to meet these expectations, driving the need for advanced logistics systems that can handle quick order processing and timely deliveries

Technological Advancements

- Automation, AI, and data analytics are some of the innovations that are changing the face of e-commerce logistics. These innovations improve the logistics process overall by increasing productivity, decreasing errors, and optimizing routes

Globalization of E-commerce

- Due to the globalization of e-commerce, companies are reaching out to new markets throughout the world. Complex logistics networks that can handle cross-border shipments and regulatory compliance are required for this expansion

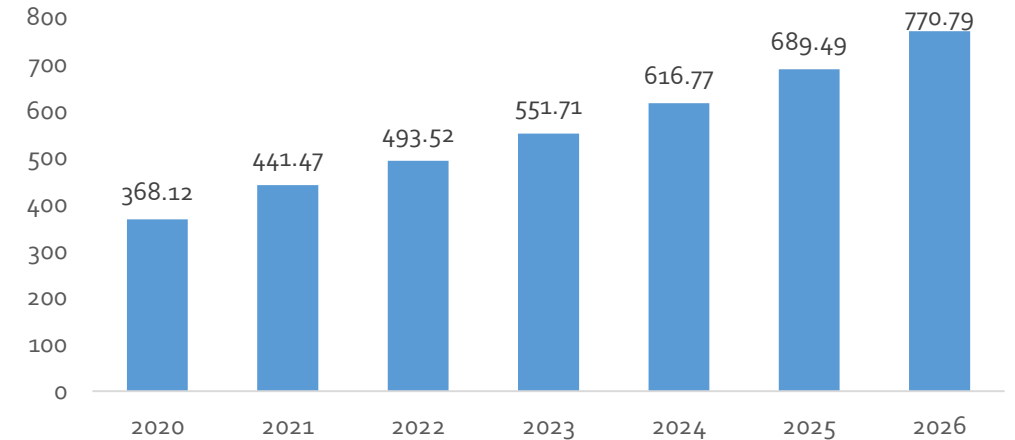
Last Mile Delivery Solutions

- In most delivery processes, the "last mile" is the most costly and intricate. To solve this issue, e-commerce logistics companies are looking into cutting-edge last-mile delivery options including drones, driverless cars, and crowdsourced delivery schemes

Collaborative Logistics

- Collaboration between the many supply chain participants—manufacturers, shipping companies, and retailers—is growing in frequency. This partnership expedites the entire logistical process, lowers expenses, and streamlines operations

Size of Global E-commerce market (In billion euros)



Market Drivers of E-commerce growth in U.S



E-commerce shoppers expect a seamless purchasing experience across numerous platforms and desire the freedom to peruse, purchase, and receive goods via a variety of channels

Emerging Advancements in the Industry

DTDC joins ONDC to boost E-commerce Logistics Capabilities

The innovative service solutions that DTDC has is developing, such as Next Day Delivery, Pick Up-Drop Off (PUDO) & QC-enabled reverse logistics, will be accelerated by DTDC going live on ONDC

CEVA Logistics, ASOS extends ecommerce fulfillment services

CEVA Logistics has extended its contract to provide fulfilment services to ASOS at its 80,000-square-meter warehouse located in Großbeeren, Germany accommodating over 25 million goods fulfillment center, which can also transport orders to ASOS consumers in 62 countries

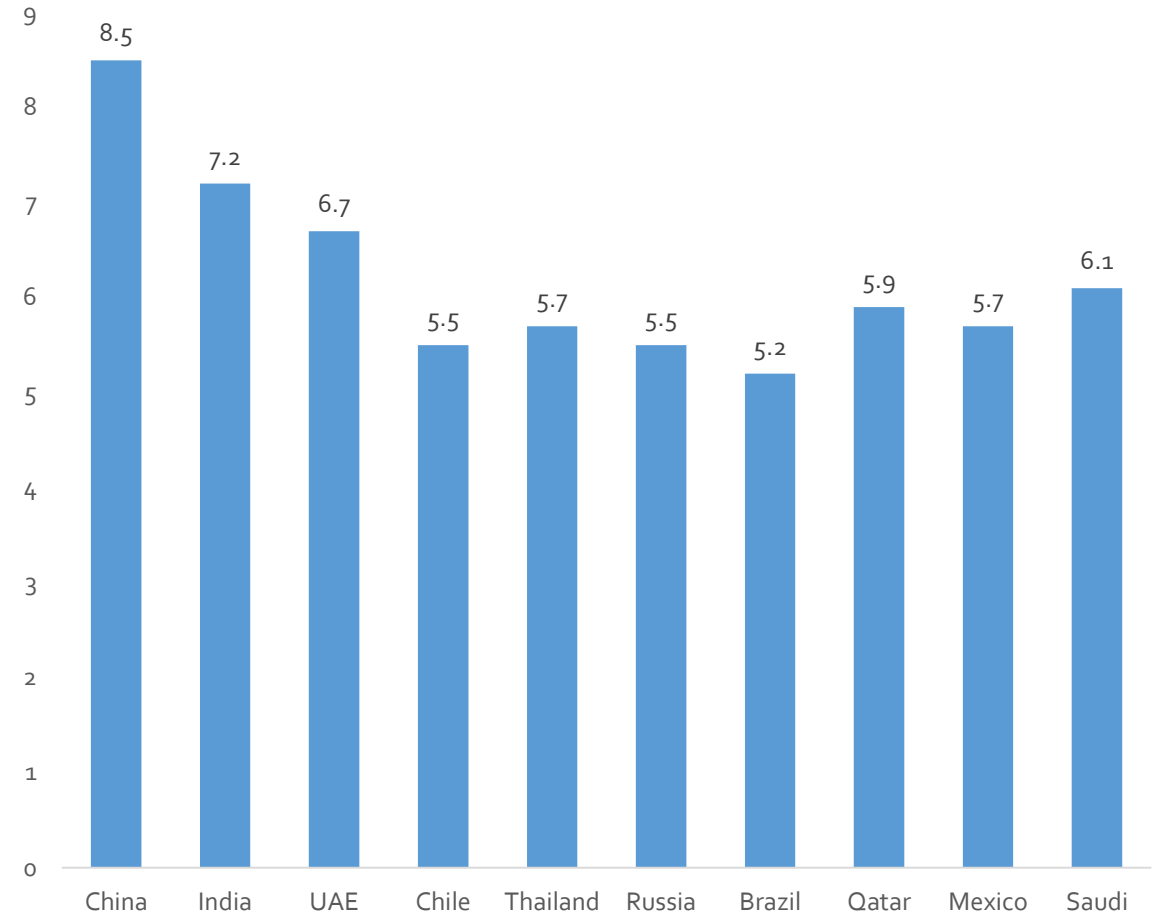
Kerry Logistics using a sorting robot to increase efficacy





The "KOOLBee" sorting robot is a clever & flexible sorting solution that raises the accuracy, productivity & efficiency of logistics operations; KOOLBee increased sorting productivity by 270%

Aramex PJSC announces acquisition of USA shipping LLC(MyUs)

Dubai-listed courier company Aramex PJSC ("Aramex") (DFM: ARMX) has acquired Access USA Shipping, LLC ("MyUS") for an all-cash transaction price of about \$265 million to strengthen cross border business

Leading Emerging Logistics Market as per Market Index, 2022



Company Name	Products & Services	Countries	Revenue(In Billions)	Fleet Size	Warehouses
	<ul style="list-style-type: none"> Express Transportation Low-cost & Low-weight delivery Less than Truck Load Freight services Support Services(Sales Marketing, IT etc.) Data Insights and Digital solutions 	200+	90.1	80k+	130+
	<ul style="list-style-type: none"> Express Parcel Warehousing Part and Full Truckload Cross Border Data Intelligence 	200+	8.6	130k+	50+
	<ul style="list-style-type: none"> LTL¹ shipping Rapid Remote Service Industry Specific solutions Freight Forwarding Truckload brokerage 	30+	7.7	40k+	70+
	<ul style="list-style-type: none"> E-commerce shipping B2B Bulk shipping Hyperlocal ShiprocketX Warehousing 1 or 2 day delivery 	200+	1.3	80k+	30+

E-commerce logistics refers to the entire supply chain process that an e-commerce business uses to get its goods from a warehouse or vendor to customers & back again

In-House Logistics

- ▶ Under a "in-house delivery" arrangement, the business is responsible for the last mile delivery to the client. Businesses that employ this strategy favour having their employees handle the deliveries. Using their own fleet of trucks, they deliver goods straight to clients from the closest warehouse or retail outlet. This simplifies and eases the control over delivery timeframes

P Complete control

- An enterprise has the ability to manage the delivery service, interact directly with clients regarding their experiences & collaborate with its own staff

R A single line of command

- Clients can speak directly with company representatives without passing via an intermediary which facilitates easier & effective communication

O Minimal miscommunication

- S** • By depending on customer care agents to interact with customers, the business can avoid communication issues with a third party

C Set-up Costs

- Most evident drawback is that this kind of upfront expenditure which requires cash and requires a quick return on investment in order to be justified

O Need of more Manpower

- In order to manage the logistics of delivery, the business would need to add employees and delivery drivers to keep up with rising demands

N Brand reputation issues

- S** • The business may be held accountable if a driver or another employee does not make a timely and satisfactory delivery with expensive bottom-line

Third Party Logistics Provider

- ▶ Using a third party or outsourcing delivery entails contracting with another business to deliver goods to clients. In order for a third-party courier to serve as the main delivery service and oversee the deliveries through third-party logistics (3PL), a corporation must pay the courier an agreed-upon rate. The third-party manages workers, clients, time estimates, and other aspects

P Less work

- Businesses can devote more of their attention to marketing their goods , core values with focus on business proceeding & less time to delivery.

R Savings on advertising

- As part of their duties, third-party delivery couriers frequently promote the partner company's goods and services.

O Less workers are needed

- S** • The organization can employ fewer people with the same level of effectiveness

C Less control

- Customer support inquiries about delivery problems are handled by the third-party provider which is convenient but loses control on operations

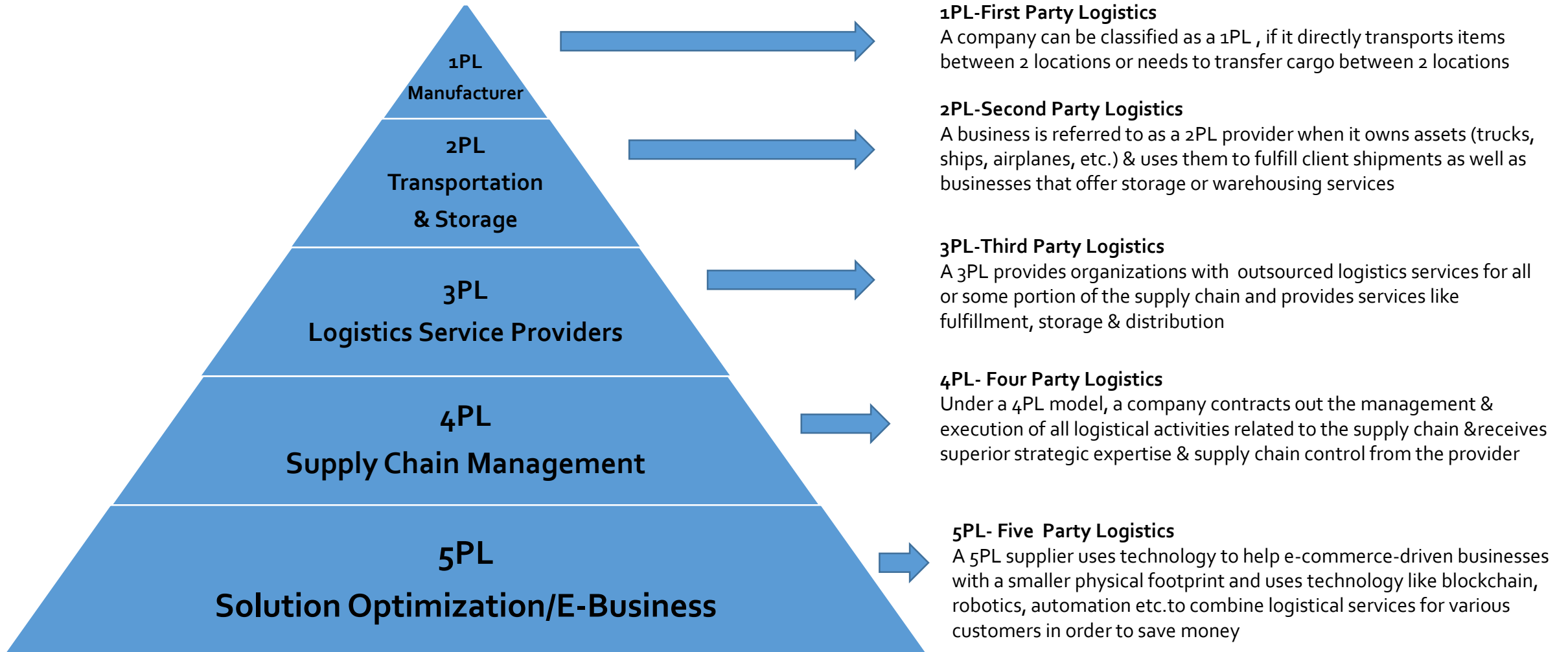
O Potential misunderstanding issues

- When two businesses must collaborate to release items, confusion is a potential along with friction between managers and partners

N Reduced profitability

- S** • Compared to employing internal distribution, hiring outsourced delivery services is usually more expensive and intimidating

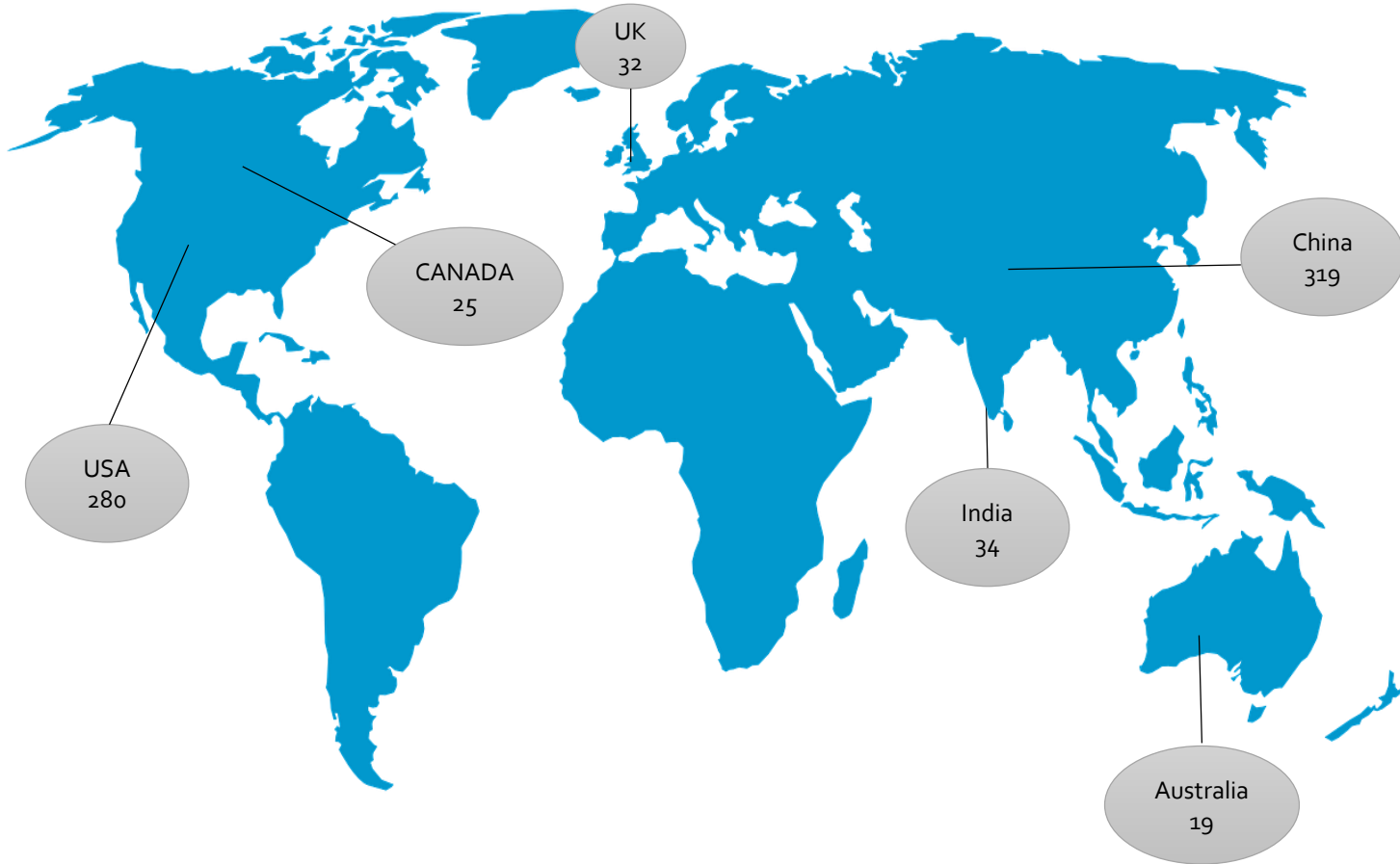
With the use of IT, logistics infrastructure is currently being modernized in several nations to facilitate the seamless transfer of information between sources



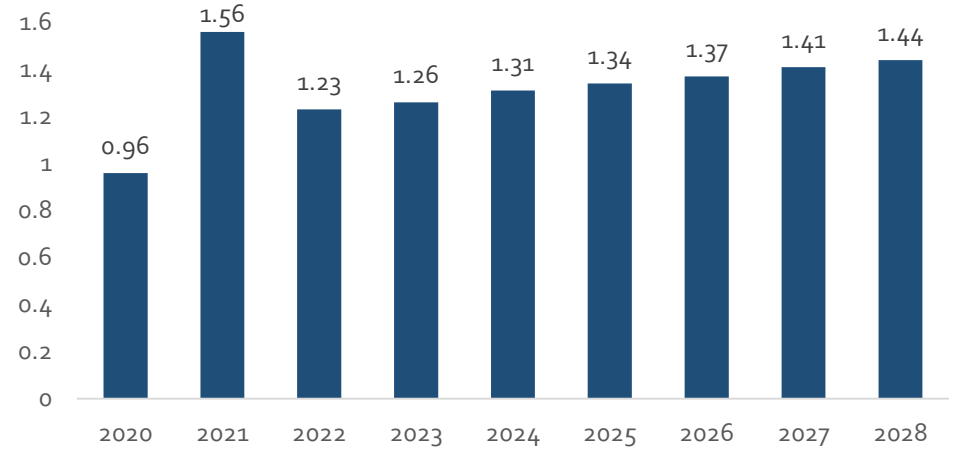
Market Size- 3PL

The worldwide Third-Party Logistics market is anticipated to increase from \$1.26 trillion in 2023 to \$1.44 trillion by 2028 at a CAGR of 2.71% during 2023-2028

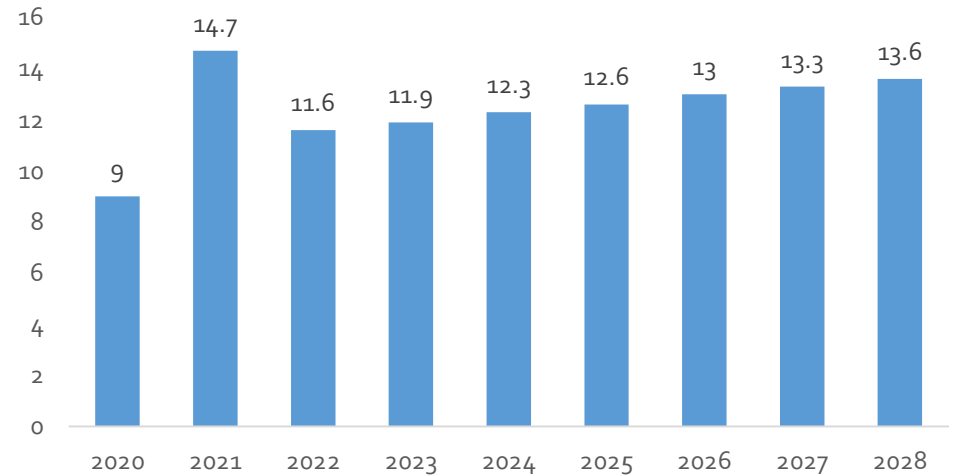
Global Revenue Comparison -3PL(In billion)



Global Third Party Logistics Revenue (in trillion)

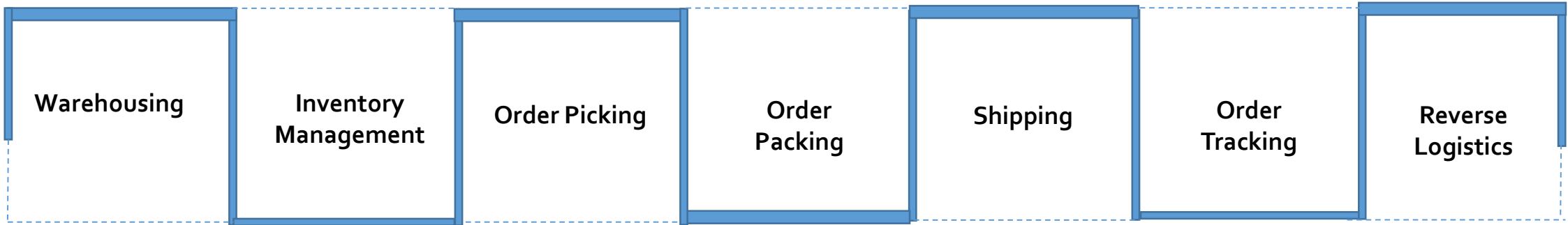


Global Third Party Logistics Costs(in trillion)

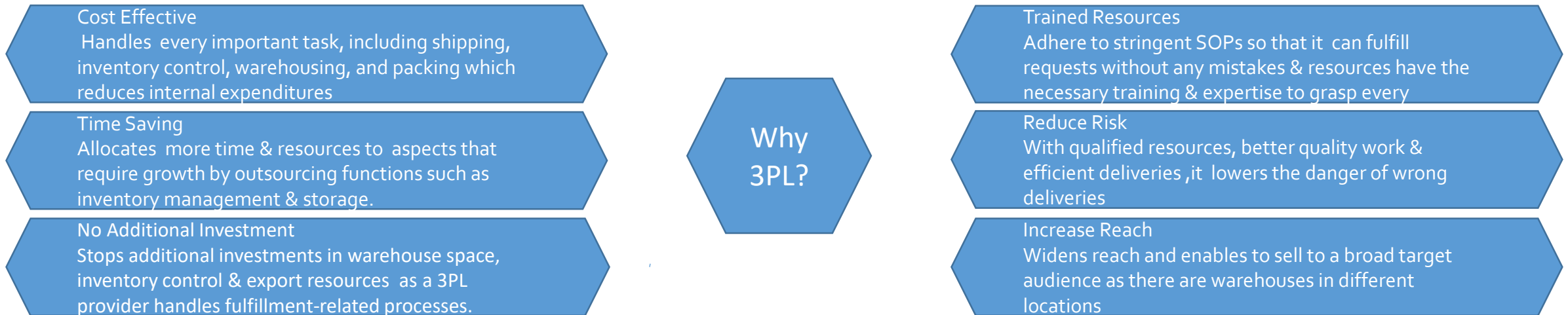


The e-retailers are partnering with 3PL providers to manage issues related to delivery, such as inventory, packaging, shipping etc. which are contributing to the revenue of logistics sector

Services Provided by 3PL



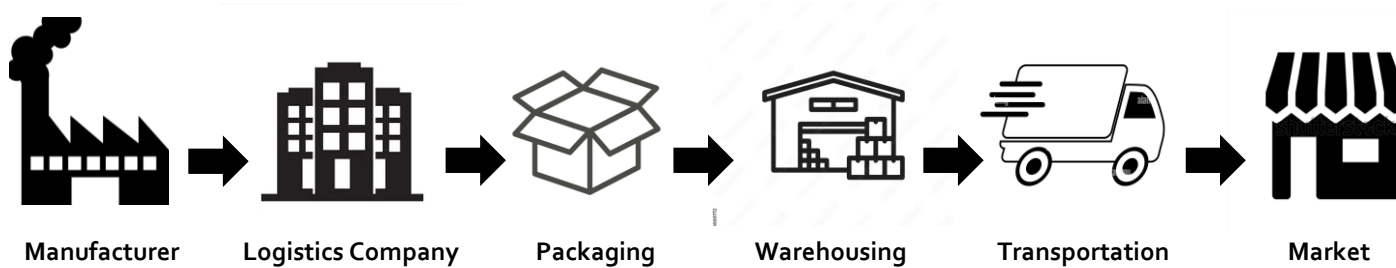
Benefits of using 3PL in business



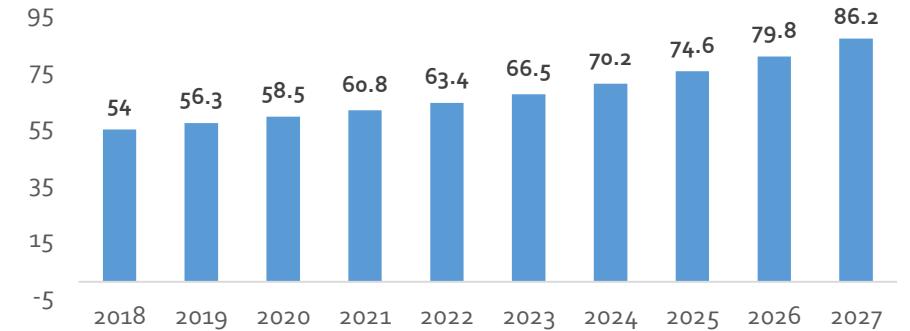
Overview - 4PL

The worldwide Fourth Party Logistics market was valued at \$54.06 billion in 2018 and is anticipated to reach \$86.26 billion by 2027 at a CAGR of 4.7% during 2018-2027

Workflow of Four Party Logistics



Global Market Size of 4PL Industry(in billions)



Components of 4PL

Under a 4PL agreement, manufacturers contract out the management of their supply chains and logistics to an outside party that serves as a point of contact for the customer between various logistics service providers and carriers, helping the customer to achieve their strategic objectives

Resource Provider

In order for the traditional supply chain solutions to operate, the 4PL supplier needs also supply a few resources, among these resources are packing and storage facilities

Supply Chain Info mediatory

The 4PL should be equipped with a wide range of tools & resources to gather & share data with different partner organizations by taking advantage of technology like GPS and GIS to improve product visibility

The Control Room

The 4PL's brain and intellect are located in the control room, which is the part that makes decisions, and it should be made up of seasoned logisticians

Architect/Integrator

The 4PL ought to be the driving force behind ongoing innovations that aid in optimizing the customer organization's usage of 3PL service providers

Benefits of using a 4PL provider

Single view

Decision making and communicating are made easier when there is a single point of contact for all supply chain management tasks

Vendor Management

In order to guarantee consistency in quality & service, 4PLs oversee connections with 3PLs & other partners

Visibility & Control

A 4PL can use cutting-edge IT systems, data analytics & reporting tools to offer complete supply chain visibility & management







Improved Customer Experience

4PL providers can help businesses increase customer happiness & experience by speeding up delivery & increasing supply efficiency.

Cost Savings

A 4PL can lower the client's total cost of ownership by negotiating better prices with 3PLs, removing inefficiencies, streamlining inventory and transportation

Logistics Cost Comparison of Ecommerce Organizations

Organization	Type of Logistics	Sector	Revenue(in Crores)	% of Logistics cost
	3PL	Beauty & Personal care	5144	6
	1 PL	Food	8690	29
	In-house & 3PL	Apparel	3610	46.5
	3 PL	Pharmaceutical	1627	12.3
	3 PL	Grocery	7434	9.1
	3 PL+ E-commerce Marketplace	Electronics	2873	1.5

Comparison: In-House vs 3PL

Business Size	Start-Up	3PL: Less resources & operational costs ; greater customer satisfaction ;leveraging services for bringing in benefits
	Small	3PL: Bridges gap between logistical demands & available resources ;enabling businesses to scale efficiently.
	Large	In-house: Immediate response to unforeseen disruptions; agile in shipping schedules; better inventory management
Cost Considerations	In-house	Need high capital investment; scale of operations effects costs ; requirement of resource like technology, land etc.
	3PL	Saves capital investment; no requirement of renting warehouses or other logistical facilities
In-house Manpower	In-house	Skilled in-house manpower; expertise in supply chain; optimized processing with improved efficiency
	3PL	Unskilled in-house manpower; specialized knowledge and expertise; equipped to manage bulk volumes
Business Scalability	In-house	Challenges in scaling up operations; highly stiff in planning for demand spikes
	3PL	Inherent scalability to grow or shrink ; utilization of existing networks; exploration of new markets
Level of Control	In-house	Total control over supply chain; beneficial for businesses to comply on standards
	3PL	Loss of control over procedures; lesser visibility to every facet of supply chain despite service agreements

<p>Customization</p> <p>In-house</p> <p>3PL</p>	<p>High degree of customization; well suited for target audience ; Less costly</p> <p>Lower degree of customization; Price Intensive; Lesser distinctiveness ; Consumer need gratification</p>
<p>Technology usage</p> <p>In-house</p> <p>3PL</p>	<p>Deployed solutions fit to customer needs; latest technologies that drive growth; cost intensive</p> <p>Cutting edge technology; constant thrive on innovation; maximized productivity.</p>
<p>Packaging</p> <p>In-house</p> <p>3PL</p>	<p>Requires a single team for supply chain; scalability as per demand; lesser shipping cost</p> <p>Appropriate for complex packaging; Integrated packaging facilities; customization on need</p>
<p>Shipping Volume</p> <p>In-house</p> <p>3PL</p>	<p>Resistant to varying demands; high investment on growing shipments; proper utilization of assets on peak times</p> <p>Consumer demand flexibility; zero investment on high volumes; saves operating cost</p>
<p>Order Volume</p> <p>In-house</p> <p>3PL</p>	<p>Suited to predictable order volumes; expensive to expand operations; doesn't favor rapidly growing retailers</p> <p>Well suited for unstable order volumes; cost effective solution; avoidable fixed cost on labor and warehouse</p>

Comparison: In-House vs 3PL

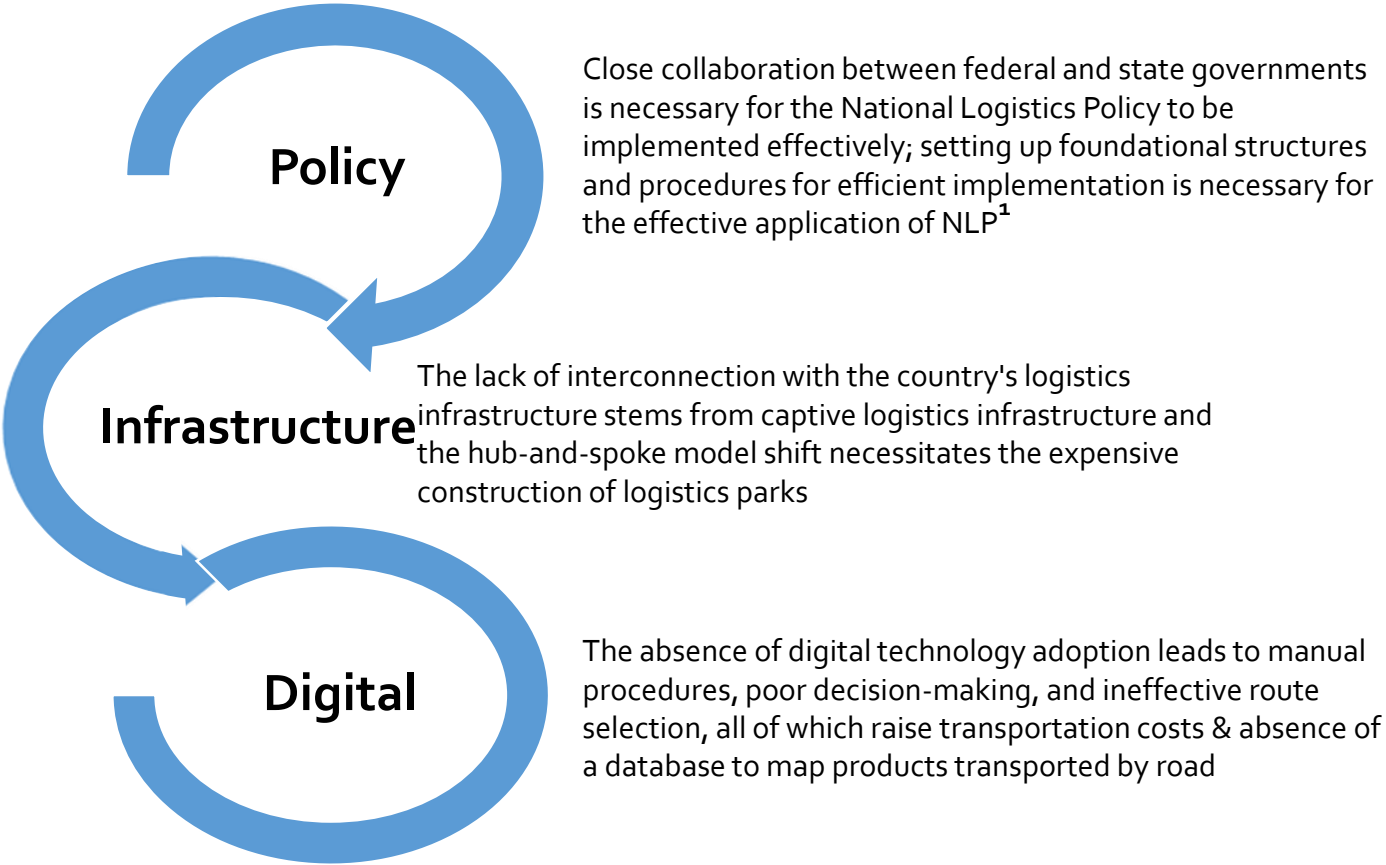
Parameters		Start-Up	Small	Large
Cost Savings				
Control over Products				
Customization				
In-House Manpower	Skilled			
	Unskilled			
Packaging	Simple			
	Complex			
Shipping Volume	High			
	Low			
Order Volume	Stable			
	Unstable			
In-House Technology	Highly Efficient			
	Less Efficient			
Scalability				

Third party logistics(3PL)

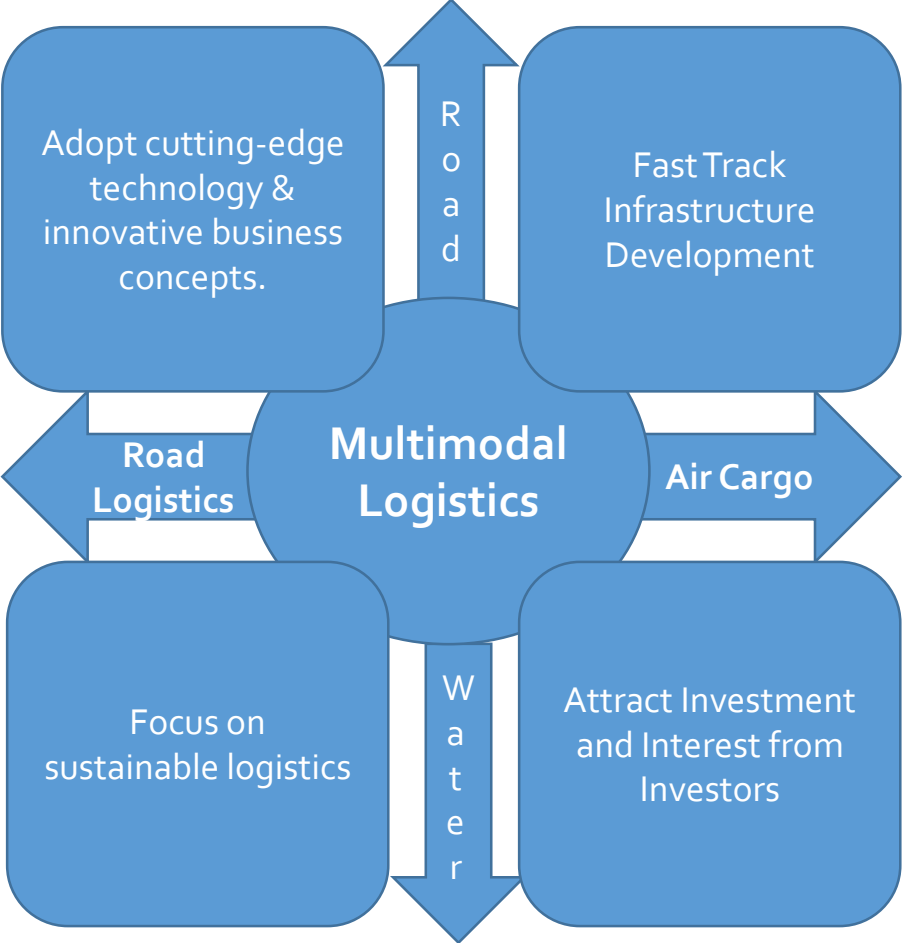
In-House logistics

India is expected to grow at a rapid rate over the next 25 years & the country's transportation & logistics industry provides the backbone for this growth through rail, road & air

Opportunities areas for India's Logistics Sector



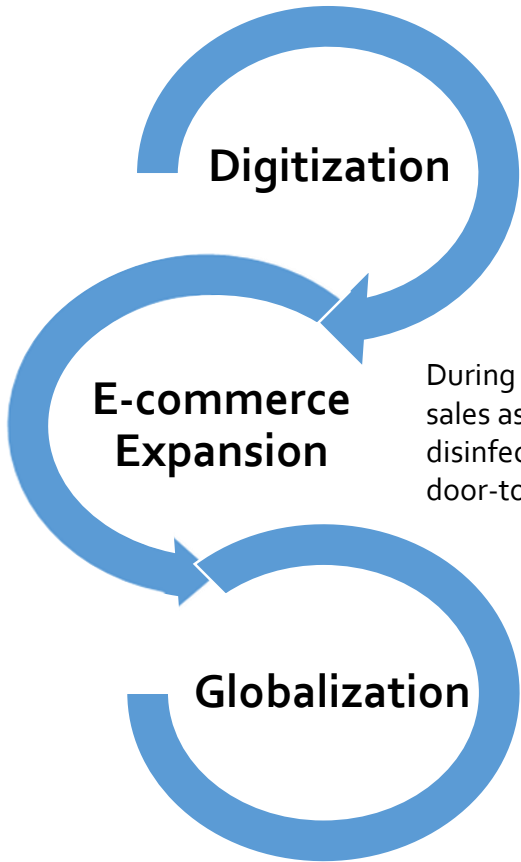
Strategy to address the challenges in Logistics sector



The main factor driving the industry is growing international trade, which necessitates effective distribution and transportation networks to move commodities across borders

Market opportunities for US Logistics Sector

Challenges in Logistics sector



In order to improve efficiency, cut costs, and streamline operations, logistics organizations are progressively implementing technologies like robotics, machine learning, artificial intelligence (AI), and the internet of things (IoT) including warehouse automation, autonomous vehicles etc.

During COVID-19, online retailers in the USA experienced a surge in sales as customers stocked up on necessities like hand sanitizers & disinfectants and a number of new businesses have sprung up offering door-to-door delivery services for packaged goods, groceries etc.

Organizations can divide up steps of a production process among several nations with the help of logistics while lowering the overall cost of production and also enhances an organization's competitiveness in terms of flexibility, delivery, quality, and cost



The efficiency & speed of transportation have increased notably due to digital technologies, more transparency & end-to-end visibility are still required throughout the supply chain

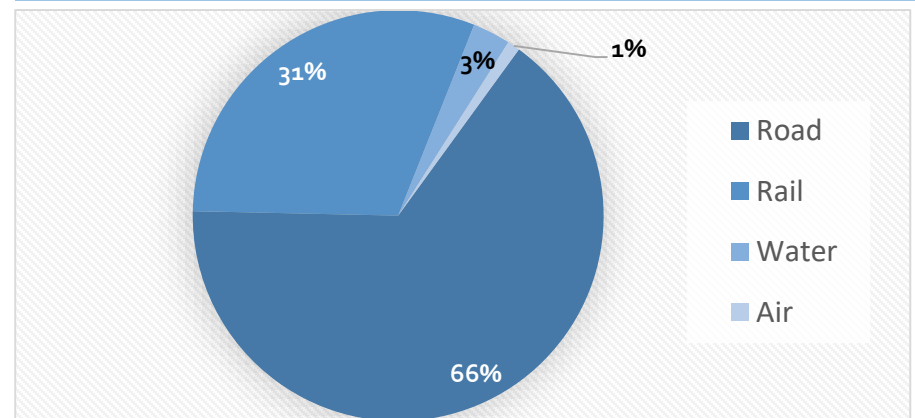
'Xtreme' – Zomato's intra-city logistic services for merchants

- ▶ Zomato has launched 'Xtreme', a logistics solution that will let retailers ship & receive small packages that can weigh up to 10 kgs within a city, and at the starting cost of Rs 35.
- ▶ Xtreme streamlines the delivery procedure, enabling businesses to send packages to their clientele
- ▶ According to information on the Xtreme app, Zomato already has over 3 lakh delivery partners under Xtreme & will enable merchants to monitor their shipments in real time, as is the case with its food
- ▶ Zomato with Xtreme, will compete with Dunzo's B2B (D4B) division, LoadShare, Wefast, Blowhorn, Swiggy's hyperlocal delivery service Swiggy Genie & few others
- ▶ According to information on the Xtreme app, it already has over 3 lakh delivery partners
- ▶ Zomato's aspirations to diversify are evident in this initiative, which goes beyond the food and shopping delivery services it offers through Blinkit & it may reduce costs by venturing into other verticals like dining and Hyperpure

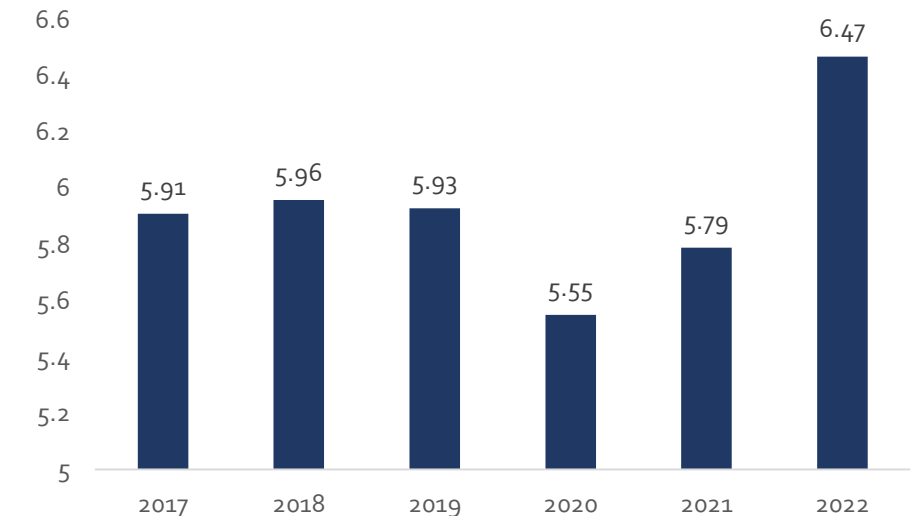
Key Findings of the US Logistics Industry

- ▶ **The Growing E-commerce Sales**
The eCommerce market in the United States increased by 8% in 2022, reaching \$1.03 trillion (from \$871 billion), currently it accounts for 14.5% of the whole retail market in the U.S.A.
- ▶ **3PLs seek investments in Tech offerings**
According to the survey, 3PL firms are investing more money in their technological capabilities than shippers. 96% of 3PLs, according to respondents, have moved to the cloud; 86% of shippers said the same. Additionally, 80% of 3PLs are investing in IoT (77% of shippers)
- ▶ **Continuous Reshoring Movement**
Reshoring now appears to have shifted from a strategic possibility to a market reality for many businesses resulting in 26% increase in Mexican goods imports into the United States
- ▶ **Drop in warehousing demands**
There is overstock in 2022 as a result of the once-soaring demand for warehouse space cooling off. Warehouse vacancy rates dropped as low as 2.9%, which is 41% lower than the peak of 4.9% in 2021

Modal-Split of Logistics in India, 2022



Share percent of Transportation sector in GDP, USA



The effectiveness and success of the operations can be greatly impacted by choice of service provider in the fast-paced world of supply chain management and logistics

Third Party Logistics

- The effectiveness and success of the operations can be greatly impacted by choice of service provider in the fast-paced world of supply chain management and logistics
- Acts as a middleman between the shipper & logistics service providers, streamlines the logistics procedure
- 3PL companies are professionals in supply chain logistics, and they help their clients by streamlining procedures with their knowledge and contacts

Four Party Logistics

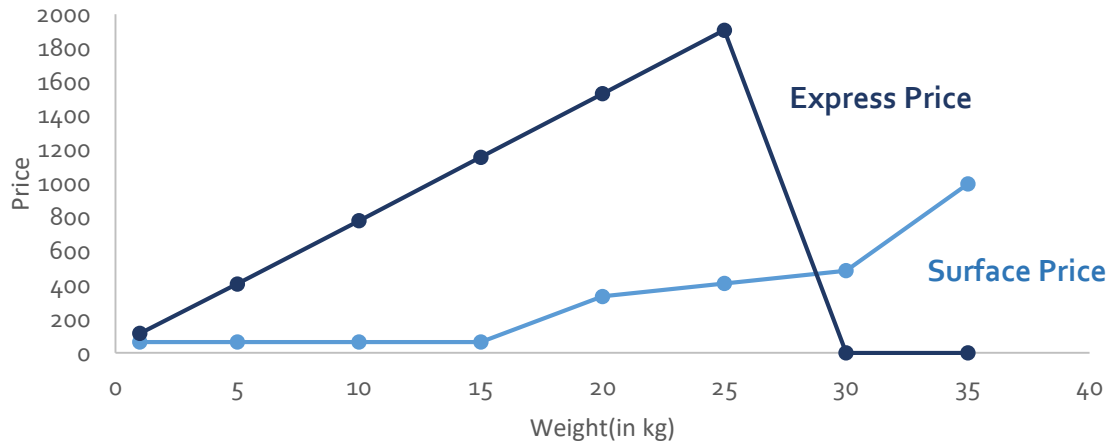
- 4PLs manage several 3PLs to guarantee smooth operations while concentrating on long-term supply chain strategy and optimization
- 4PLs use cutting edge technologies to streamline decision-making and logistics procedures
- By handling every aspect of your logistics operations, suppliers help to save money, time & resources

Five Party Logistics

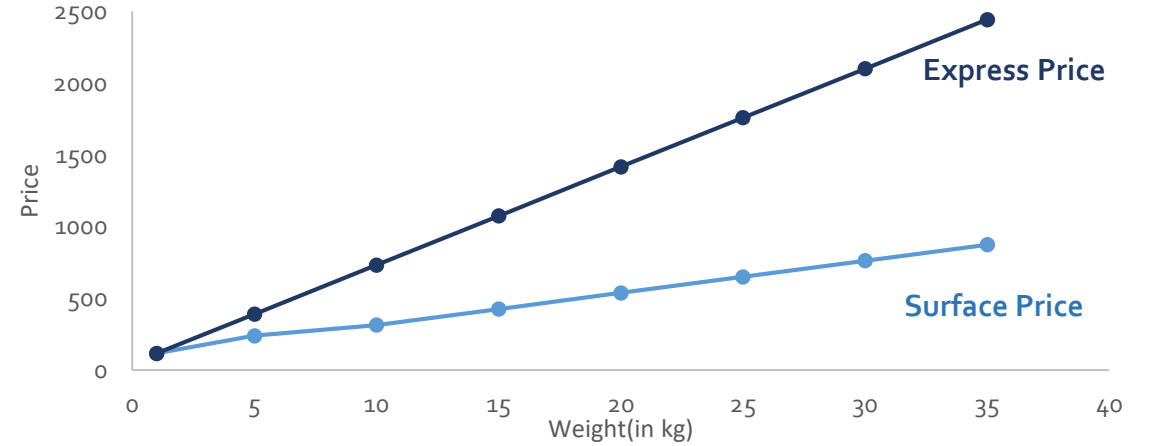
- 5PLs offer a complete picture of the supply chain, including procurement, logistics & strategic business choices.
- Instead of merely acting as a service provider, they develop close relationships with their clients, turning into an extension of their business
- 5PLs use cutting edge technology to promote innovation and improve supply chain performance

Carrier Specific Cost Comparison

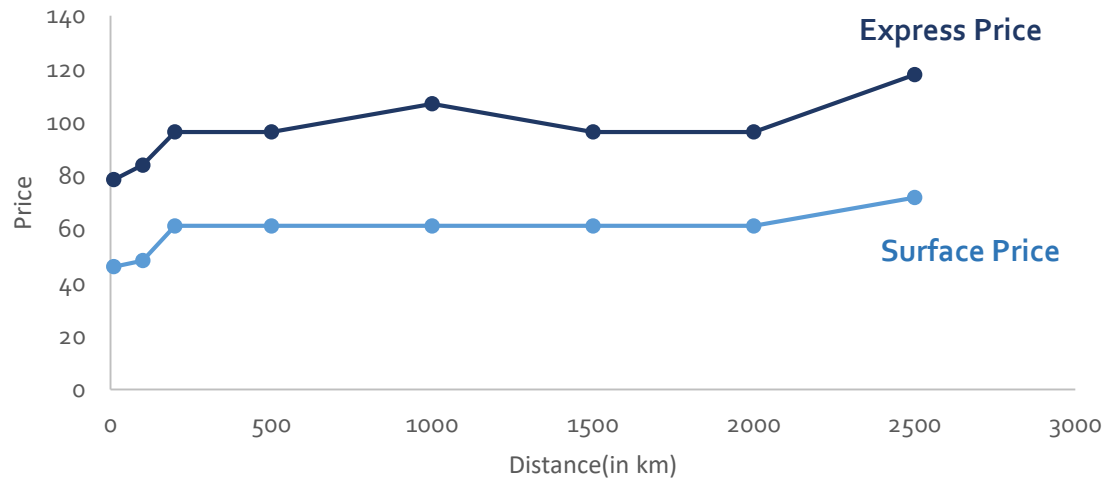
Shiprocket: Price vs Weight¹



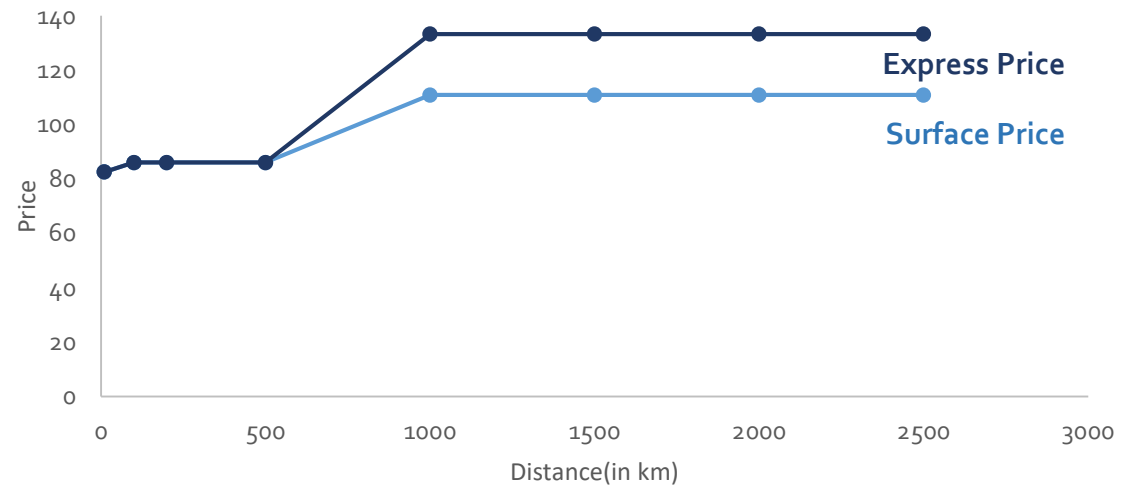
Delhivery: Price vs Weight³



Shiprocket: Price vs Distance²

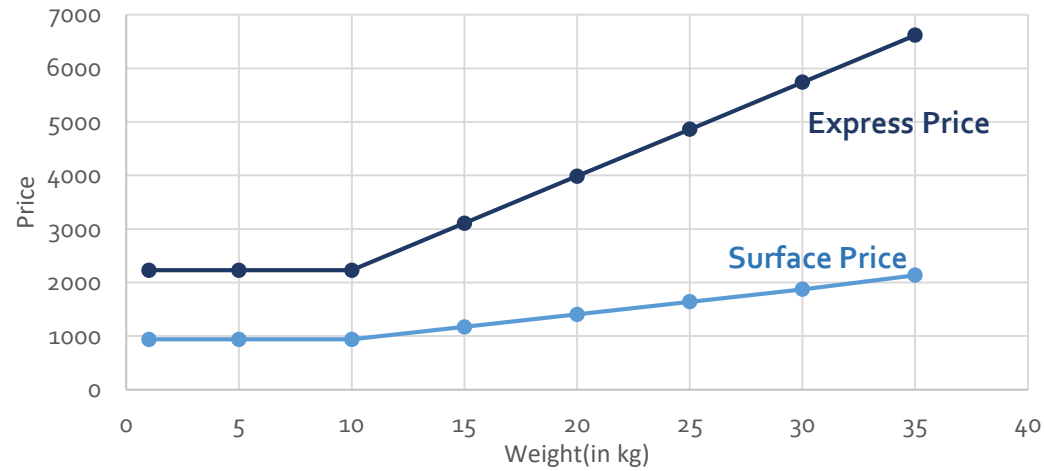


Delhivery: Price vs Distance⁴

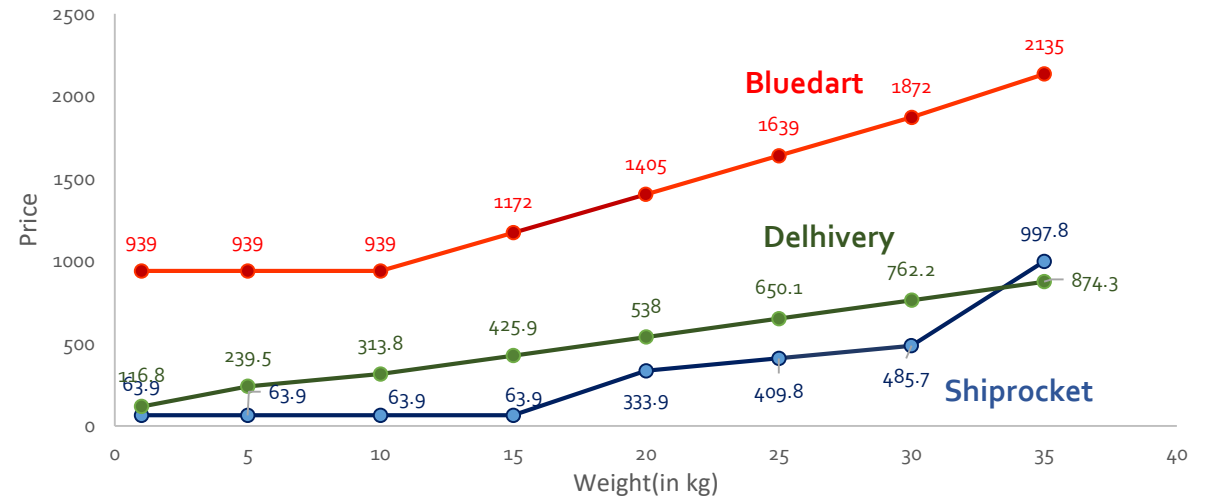


Carrier Specific Cost Comparison

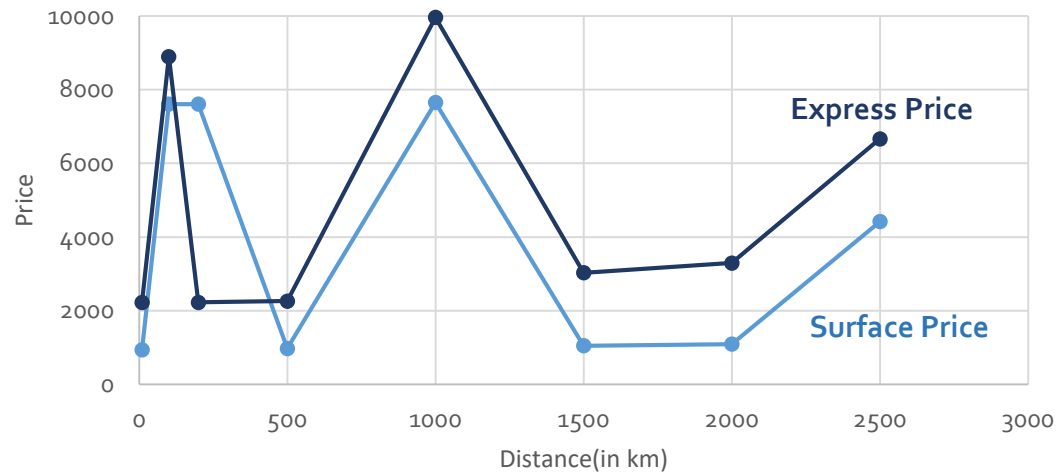
Bluedart: Price vs Weight⁵



Comparison of Surface cost vs Weight⁷



Bluedart: Price vs Distance⁶



Comparison of Surface cost vs Distance⁸

