



LAST-MILE DELIVERY

An Era of Being Fast & Convenient



INDEX

Introduction

Chapter 1 - Last-mile Delivery & Challenges

1.1 What is Last-mile Delivery?

1.2 The Last-mile Challenge

Chapter 2 - Trends in Last-mile Delivery

2.1 Same-Day Delivery

2.2 Last-mile Visibility

2.3 Delivery Automations

2.4 Last-mile Delivery Gig

Chapter 3 - Making Last-mile Delivery Faster & Convenient

3.1 Auto-allocations/ Auto-dispatch

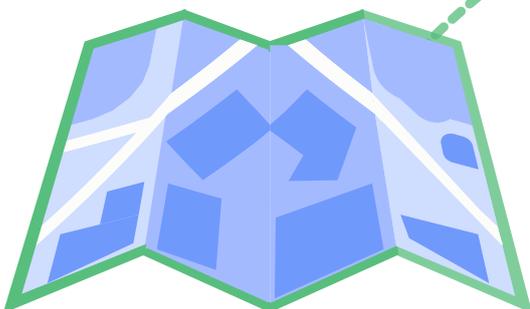
3.2 Auto-scheduling

3.3 Route Optimization

3.4 Last-mile Tracking

3.5 Last-mile Analytics

Conclusion



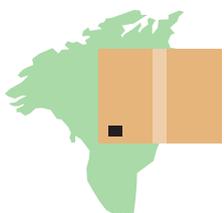


The last-mile delivery market is growing at a CAGR of **8.9%** to reach **\$66000** million in revenues by 2026
(PRNewswire)

The global autonomous last-mile delivery market will reach **\$84.72 billion** in revenues by 2030, growing at a CAGR of **24.42%**
(AlliedMarketResearch)

In the US, the last-mile delivery market is about **\$417 billion** in revenues (Friehtwaves)
70% of consumers prefer the cheapest form of last-mile delivery while **23%** opt for same-day delivery (McKinsey)

With **27%** share, groceries is the topmost category of goods that people avoid buying online due to the long duration of delivery
(McKinsey)



INTRODUCTION

The proliferation of eCommerce and rising demands of express delivery push the supply chain ecosystem to be more efficient. The focus on last-mile delivery optimizations is evident for many organizations to cope with a radical shift in the customer's expectations.

Identifying the touchpoints in a customer journey and enhancing them is the only way for some businesses to stay amidst stiff competition. The last-mile delivery approach can help you enhance the customer journey by optimizing critical touchpoints like ordering, tracking, and online payments..

The integration of a last-mile delivery approach needs analysis of the existing model, future requirements, the realization of challenges, and finding reliable solutions. Let's first understand the last-mile delivery approach and the challenges that come with the integration.



1 Last-mile Delivery & Challenges

1.1 What is Last-mile Delivery?

Any business's supply chain has multiple phases right from the manufacturing plant to a customer's doorstep. The journey of deliveries takes three different stages,

First Mile Delivery

Middle Mile Delivery

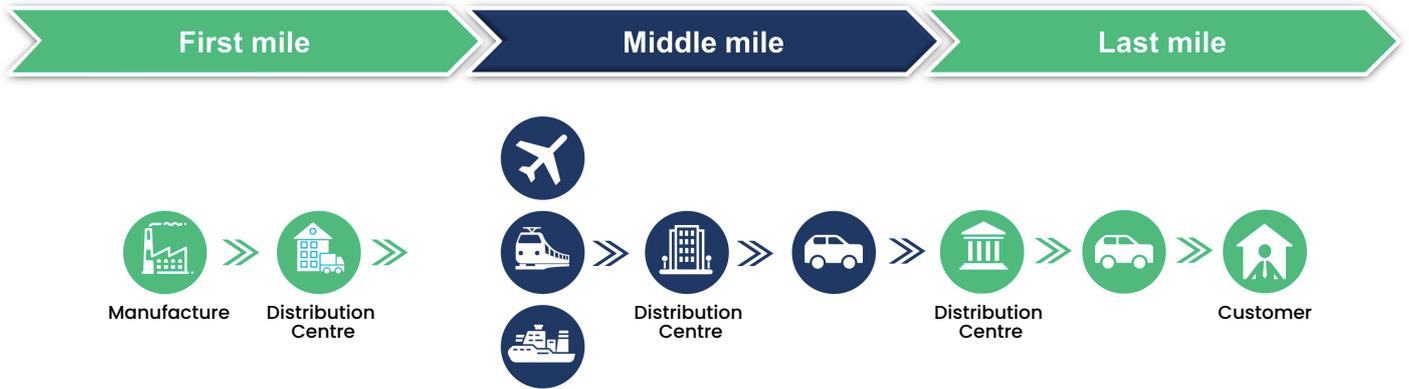
Last-Mile Delivery

First-mile delivery relates to the transition of product from a manufacturing plant to the distribution center and finally to a warehouse. Here, it is essential to understand that first-mile delivery can differ from the application approach. For example, some businesses also have sub-assembly units in the warehouse where they complete the finished product..

The Middle mile delivery relates to the product transport and supply from a centralized distribution hub or warehouse to a localized or regional distribution center. This delivery level includes the usage of different modes of transportation, like by air, merchant ships, or even by road..

Some organizations like Amazon have an in-house fleet of airplanes to handle middle-level delivery. Amazon Prime Air is a fleet of more than 80 cargo airplanes which will be increased to 200 in the next eight years.





Step1- First Mile Delivery- Manufacturing Plant ->Transport->Warehouses

Step2- Middle Mile Delivery- Warehouse->Shipping Fleet(Air, By Road, By Ship)->Local Distribution Hub

Step3-Last-Mile Delivery- Distribution Hub->Delivery Partners/Delivery Trucks->Customer's Location

Last-mile delivery is the final and most significant phase of the supply chain. It relates to the delivery of products from localized or regional distribution centers to the customer's doorstep. However, some eCommerce businesses use centralized distribution centers in last-mile delivery. The last-mile delivery services are evolving from the traditional approach of the singular channel of the supply chain to the multi-channel paradigm.

Last-mile delivery is the front face of any eCommerce business that engages with the consumers. The most significant challenge is to optimize the cost per delivery in a density-driven market.

Most of the last-mile delivery services focus on size-based costs. For example, delivery of a small package like a smartphone costs less than delivering a refrigerator. However, cost optimization needs consideration of density and not size. On average, a small package delivery costs \$10 with a higher volume of orders, and simultaneously a heavy package with lower density costs \$50(2). So, the higher density of orders can help optimize the cost even if they are heavier.

1.2 The Last-mile Challenge



Cost optimization of the last-mile delivery process is a significant challenge, and while organizations recognize the importance of order volumes, fulfillment of these challenges need reliable solutions. Last-mile delivery services need to have robust service partners, tracking tools, and a strong delivery network. Some of the major challenges that last-mile delivery services face are as follows:

Finding a Service Partner

Last-mile delivery services need a strong network of delivery providers. While many eCommerce firms have their in-house delivery service, others prefer third-party logistics or 3PL services.

The first thing while selecting a delivery partner is to check whether they have a straightforward pricing structure or not. The second step is to verify the delivery network and whether they have a proof of delivery policy. Another most crucial feature that can help you decide on a service partner is real-time tracking.

While selecting a service partner, organizations should also check on the availability factor. Management of orders needs higher availability of delivery providers to avoid failure of fulfillment.

The Speed Problem

Speed of delivery is another significant problem. As consumer behavior is eccentric towards expedited deliveries, the need for faster deliveries becomes evident for most of the eCommerce business. According to a survey, 55% of consumers believe the delivery services' speed is one of the most important aspects of online customer service. The survey also indicates that 45% of customers believe that returns/exchange policy's flexibility is essential.

Last-mile delivery services relate to both first-time deliveries and returns. So, the problem of speed lies with the entire last-mile service paradigm.

Delivery Failures

Delivery failures account for different lapses in services like failed attempts, wrong location, product replacements, and product damage. The eCommerce industry suffers from losses of around 1.82 million euros annually due to failed deliveries.

Bringing efficacy in deliveries and reducing errors needs reliable solutions.

Organizations need technological assistance to cope with the efficacy issues in last-mile delivery.

The Scheduling Problems

Failed first-time attempts are often driven by wrong locations or scheduling issues that occur due to the absence of a receiver. eCommerce organizations use standard scheduling features that allow users to schedule deliveries.

In reality, these enterprises need automated scheduling solutions that automatically redirect the deliveries in case of the user's absence to the nearest possible alternative. Efficacy in scheduling solutions can also mean more on-time deliveries and better user experiences.



2 Trends in Last-mile Delivery



Technology advancements like Artificial Intelligence, Machine Learning, Bluetooth Low Energy (BLE), Internet of Things (IoT), Speech Recognition, and others have contributed to aid last-mile delivery. Organizations need to encapsulate such technologies and tweak them according to their operations to offer rich user experiences. As technology innovations push last-mile delivery to be efficient, new trends are emerging for the logistics industry.

2.1 Same-Day Delivery

As the consumer's demand for expedited delivery increases, there is a rising trend for same-day delivery. It is a trend that amalgamates the instantaneous shopping experience of brick-and-mortar stores with the convenience of delivery at your doorstep. According to a survey conducted across European countries like Germany, France, Sweden, and the UK, 50% of consumers are ready to pay an extra 6 to 7 Euros for same-day delivery.

The last-mile delivery services need to have a reliable network of delivery partners and operational brilliance to handle same-day delivery. Most eCommerce organizations do have an advantage over brick and mortar retailers with the last-mile delivery services to offer such expedited delivery. However, offline retailers can leverage eCommerce channels to create a robust last-mile delivery ecosystem and provide same-day delivery.

2.2 Last-mile Visibility

Constant visibility for product delivery status by customers is one of the most demanding trends in the last-mile ecosystem. Customers want eCommerce firms to offer tracking links, shipping details, delivery status, estimated time of arrival, and contact details for the delivery providers.

Technologies like RFID (Radio-frequency Identification) tags, geofencing, GPS-based tracking, and real-time location sharing have helped businesses offer last-mile visibility. Though there have been issues with the accuracy of the location. Adoption of smart technologies like IoT (Internet of Things) and sensors on the packages for constant monitoring will enhance last-mile tracking.

2.3 Delivery Automation

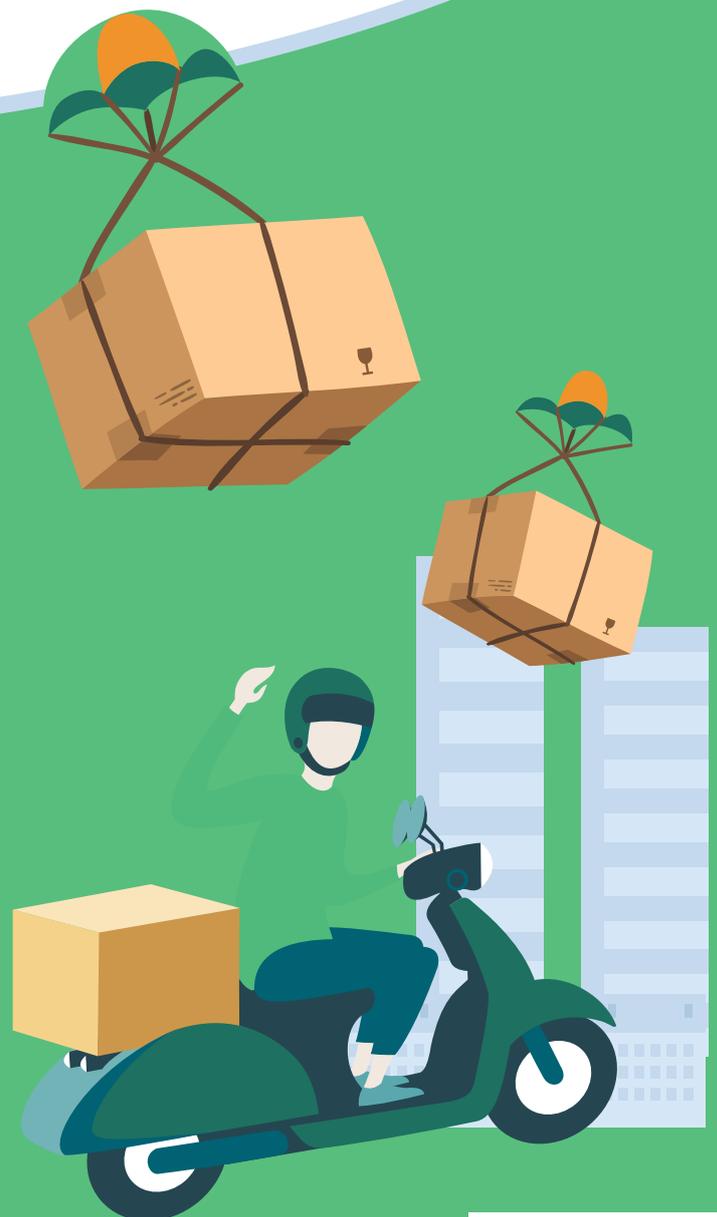
Automation has been a part of the logistics industry with the introduction of automated guided vehicles and robotics. The last-mile delivery is seeing a trend of autonomous vehicles for operational excellence. Ecommerce giants like Amazon and Google have already deployed drones to deliver services across different locations worldwide. With automation, last-mile delivery services can offer faster delivery, reduce failures, and enhance the customer journey.

Read More about drone delivery with- “How drones prove to be an optimal solution for last-mile delivery.”



2.4 Last-mile Delivery Gig

The gig economy is not new, and the rise of the Uber X model made sure that there is a new approach to service delivery which was on-demand. The more recent adoption of the gig economy and crowdsourcing methods for last-mile delivery has offered more flexibility to the logistics industry. It is helping with the higher availability of delivery providers at optimized costs and strong delivery networks.



3

Making Last-mile Delivery Faster & Convenient



Last-mile delivery challenges are complex and need reliable solutions. Organizations can choose technological solutions with features that can help overcome these challenges. One of the most significant challenges is management of delivery partners and personnel. Allocations become key here and if not done right, it may result in bad user experience.

3.1 Auto-allocations/Auto-dispatch

Improving the efficacy of allocations will allow businesses to manage priority orders, and enrich user experience. For example, the priority of same day delivery and next day delivery will be different. Auto-allocations or auto-dispatch features can help you allot the delivery order to the right personnel at the right time. So, the efficiency of last-mile delivery increases, reducing delays, and errors in delivery through auto-allocations.

An auto-dispatch feature uses technologies like Artificial Intelligence, and Machine Learning algorithms to improve efficiency of delivery allocations. auto-allocations.

The algorithmic engine takes into consideration, order priority, proximity of customer's location, and nearest possible delivery personnel to fulfill the order request.

3.2 Auto-scheduling

Ecommerce and on-demand businesses often suffer scheduling errors. An automatic scheduling feature will help organizations schedule deliveries based on the customer's location and transport time. Auto scheduling also enables rescheduling of delivery tasks in real-time to cope with sudden changes due to absence of delivery receiver.

For on-demand businesses like home services or food delivery, scheduling of order requests becomes easy with automatic scheduling features.

3.3 Route Optimization

Route optimization feature allows organizations to deliver faster. It helps delivery partners and personnel to find optimal navigational routes for faster delivery. Especially in urban areas where there are problems of peak hours, route optimization can be of great help.

Most businesses look for cost optimization in last-mile delivery as it accounts for 53% of total shipping expenses. Route optimization can help reduce fuel costs, and transportations costs for last-mile delivery.

3.4 Last-mile Tracking

Real-time tracking of delivery is becoming a standard demand among consumers. So, having last-mile tracking capabilities is more than just an accessory for eCommerce businesses. It allows organizations to track movements of shipments, derive ETA (Estimated Time of Arrival), and offer tracking codes to users.

With smart tracking features, businesses can track their shipments and offer vital information in real-time for efficacy in last-mile delivery.

3.5 Last-mile Analytics

Tracking business KPIs (Key Performance Indicators) and performance data is essential to optimize operational capabilities. With data analytics, identification of crucial touchpoints, and issues to optimize operational activities becomes easier. For example, last-mile analytics can help you determine delivery per driver, average fuel used for each delivery, average time taken per delivery, and even number of return deliveries.

Analyzing such data will help organizations to improve the processes and last-mile approach for better performance.



Conclusion

Countering the challenges of last-mile delivery and its execution enhances the customer journey. It is not just about being fast, and convenient, but the organization has to keep evolving its operational capabilities to stay relevant to consumer demands. Here, solutions like Tookan can be leveraged by eCommerce businesses to modernize their last-mile delivery and create a great customer journey.

It is a smart delivery management software that will work as an extended part of your organization, optimizing the last-mile delivery. So, if you are looking to create a reliable last-mile ecosystem for your business, get in touch with our team to be faster and convenient for your consumers!

