



Future of Last Mile Delivery

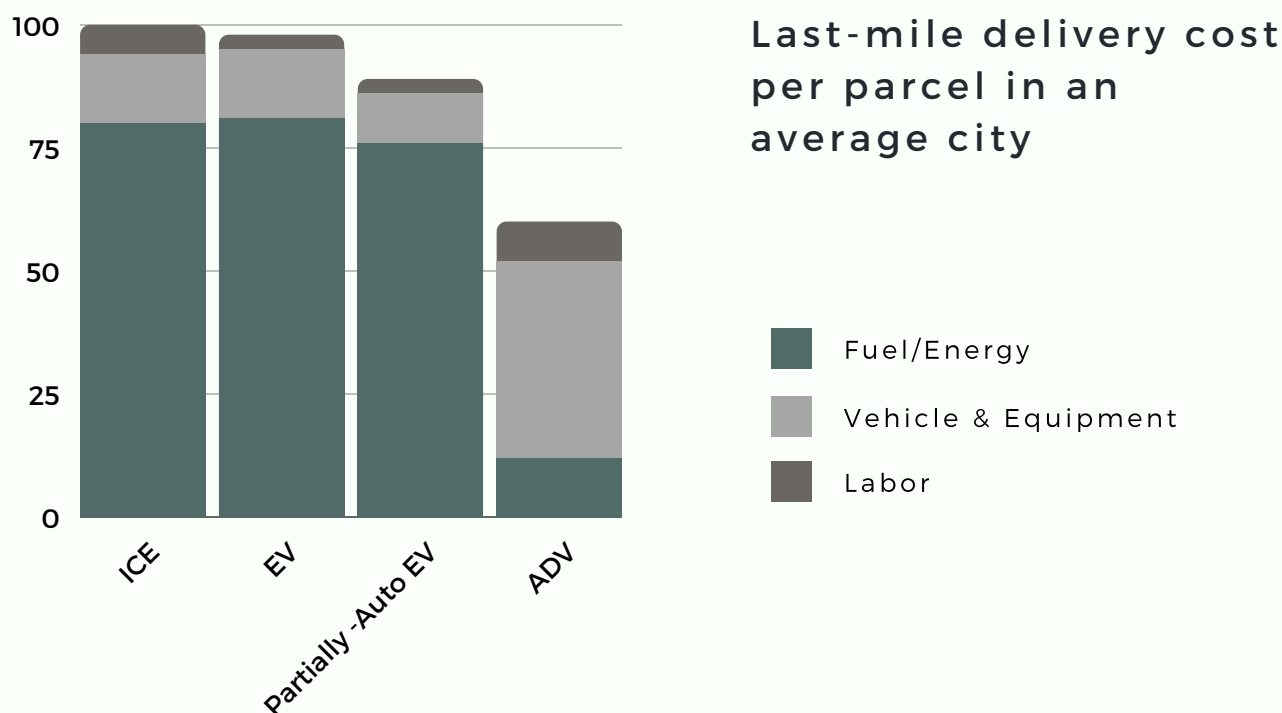
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HOME DELIVERY, REVOLUTIONIZED

With smartphones and even smarter applications that masterfully utilize the burgeoning technology boom, the home delivery business has never been more lucrative. People enjoy the convenience of ordering food, medicines, and everything in between from the comfort of their homes. App-based delivery services came in handy particularly during the COVID pandemic when people couldn't step out to buy essentials. The rapidly growing popularity of online shopping and home delivery services can be traced back to their immense utility. A home delivery business allows people to get what they want to their doorsteps without having to do more than a couple of taps on their phones.

AV technology holds promise of increasingly reducing the per-parcel cost of last-mile delivery



The supply chain process has undergone quite a transformation over the years. Initially, goods were produced in manufacturing plants and distributed to retail outlets where they could be sold to customers. Home delivery, as a concept, wasn't really in the picture then due to logistical and financial constraints. Even postal mails and pre-ordered courier packages were delivered over several days.

What are all the steps in the supply chain?



With the arrival of e-commerce and the emergence of online marketplaces, the supply chain process further expanded to include last-mile delivery. The last mile defines the movement of goods from a transportation hub to the customer and is often described as the final journey of a supply chain. Last-mile delivery services are a crucial element in the e-commerce sales business since the timeliness and quality of delivery directly impact customer behavior. If impressed with timely delivery, a customer is much more likely to engage with a business again.

SUPPLY CHAIN MILESTONES

The supply chain process can be broken down into the following milestones:

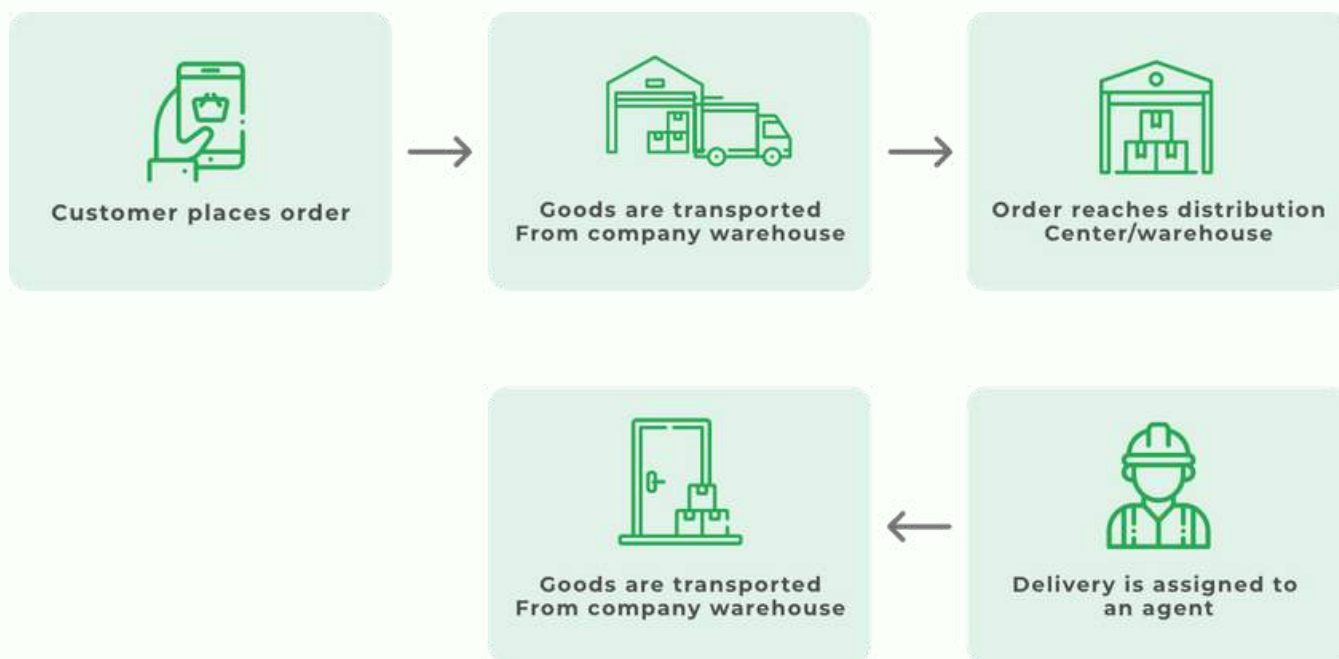
- **Raw Materials:** Sourcing raw materials is the first step in any supply chain, irrespective of the type of business. For instance, for a food delivery business, procuring raw materials would include gathering fresh ingredients to prepare the food.

- **Manufacturer:** Depending on the business, there are two types of manufacturers, intermediary manufacturers, and finished product manufacturers. The former involves creating products or materials that'll be used by the final manufacturers. Final product manufacturers, as the name suggests, are manufacturers of the final sellable product, for instance, shirts for a clothing business, mobile phones for an electronics company, and more.
- **First Mile:** Once the product is ready, it needs to reach the retailer. This process of getting finished goods from manufacturers to the beginning of the distribution system is referred to as the first mile. Businesses partner with third-party first mile delivery providers to get the goods delivered to their business hub or retail warehouse where they are stored until transported to retail stores or sold directly through an online marketplace.



- **Middle Mile:** Certain industries like retail and consumer goods require an additional milestone in the supply chain process namely the middle mile. The middle mile is the movement of finished products from warehouses to retail stores so that the product can reach a wider audience particularly in small cities and rural towns that might not have access or the means to order online.
- **Last Mile:** Once a customer places an order, the last component of the supply chain system comes into play - last mile delivery. This process involves the journey of the finished product from the warehouse to the front door of the customer. With last mile services, come a lot of potential problems namely optimal route management, quick and reliable delivery services, transportation assets, and more.

THE SIGNIFICANCE OF LAST MILE DELIVERY



While the last mile has always been a crucial component of the supply chain process, its significance has increased rapidly with the introduction of technology in the retail sector. The evolving market dynamics and changing consumer behavior have also majorly impacted last mile delivery operations. Every e-commerce business and online seller is locked in fierce competition where the quality of delivery has become as important as the product itself.

The convenience that comes with getting food, groceries and anything else a consumer might need delivered to their doorsteps has fundamentally altered consumer behavior. They no longer are okay waiting for weeks for the product they ordered online and expect to be in the loop regarding the status of their order at all times. With brands like Amazon offering same-day delivery, the demand for optimized last mile operations is at an all-time high.

CHALLENGES ASSOCIATED WITH LAST MILE DELIVERY

Last mile delivery is not an easy task. The number of things businesses need to take into consideration to set up efficient and cost-effective delivery operations is staggering. Given the complexity involved, it's unsurprisingly easy for things to escalate into a full-blown catastrophe with incorrect deliveries, missed delivery schedules, and increased fuel costs. Here's a look at some of the challenges involved with last mile delivery:



ENSURING TIMELY DELIVERY

With the ever-rising demand for same day and next-day deliveries and the growing need for flexible delivery timelines, businesses have to work hard to ensure their delivery operations are seamless and time-bound. Ensuring timely deliveries while keeping the demands of consumers in mind can be too much to handle for many businesses.



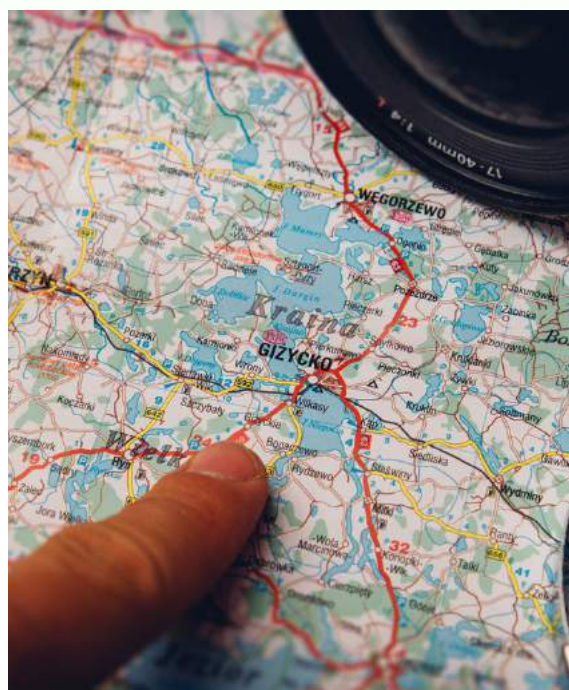


IDEAL DELIVERY TIME:

A failed delivery attempt is a big financial loss for the company. And deliveries can fail for many different reasons including the consumer not being present at the location, damaged packages, late arrival, and more. Missed deliveries aren't just a financial burden but also put the packages at the risk of theft and damage.

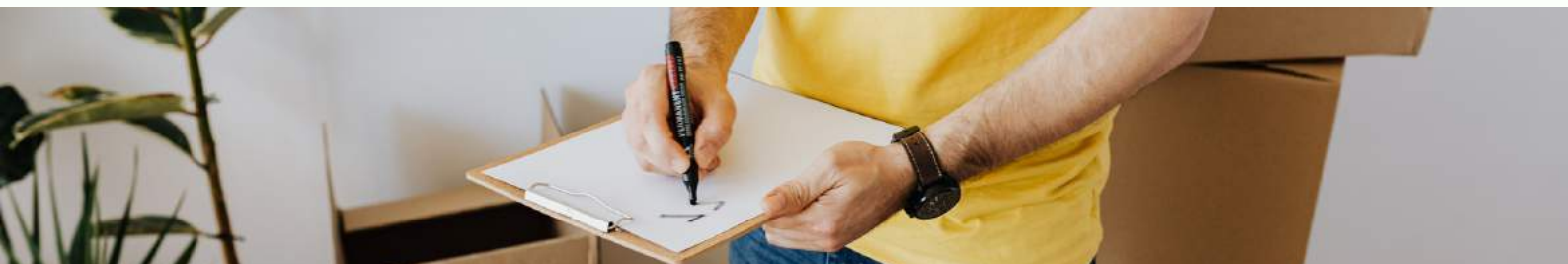
THE BEST ROUTE:

Most delivery agents complete an impressive number of deliveries per day but if these deliveries are far apart, the agent will end up completing a fewer number while using up more fuel. Route optimization is another challenge associated with last mile delivery and can majorly bring up your operating costs.



OPTIMIZING LAST-MILE DELIVERY OPERATIONS WITH THE RIGHT TOOLS

Armed with the right last mile delivery software and tools, businesses can face the challenges of consumer expectations and come out with flying colors. Some of the benefits of optimizing your delivery operations with the right last mile delivery software include:

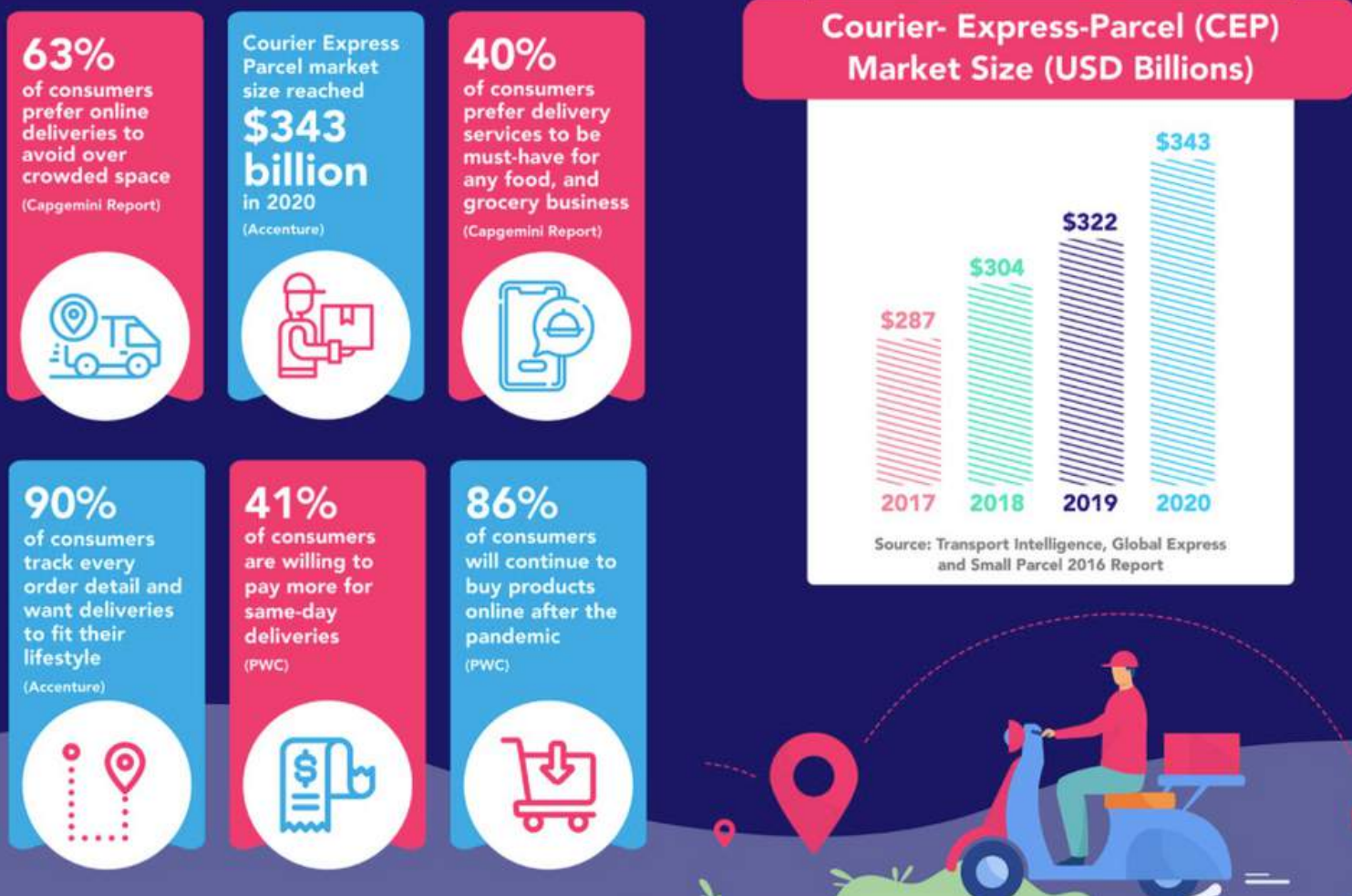


Enhanced Scalability: With the ever-rising demand for same day and next-day deliveries and the growing need for flexible delivery timelines, businesses have to work hard to ensure their delivery operations are seamless and time-bound. Ensuring timely deliveries while keeping the demands of consumers in mind can be too much to handle for many businesses.

Productivity Boost: A last mile delivery software helps businesses boost their productivity by removing unplanned diversions and idle time. Any good last mile delivery software will be equipped with a powerful route optimizer to provide drivers with the most efficient routes to complete deliveries in the least amount of time possible. With accurate route optimization, businesses can complete more deliveries in a day and increase their profits as well.

Delivery Flexibility: Deliveries aren't just about ensuring consumers receive the shipment on time. For a truly memorable and satisfactory delivery experience for consumers, businesses need to offer them certain degrees of flexibility and customization. Given the busy lives most people lead today, they might not be available to receive the package. With robust last mile delivery software, businesses can let the consumer select the time and location of delivery.

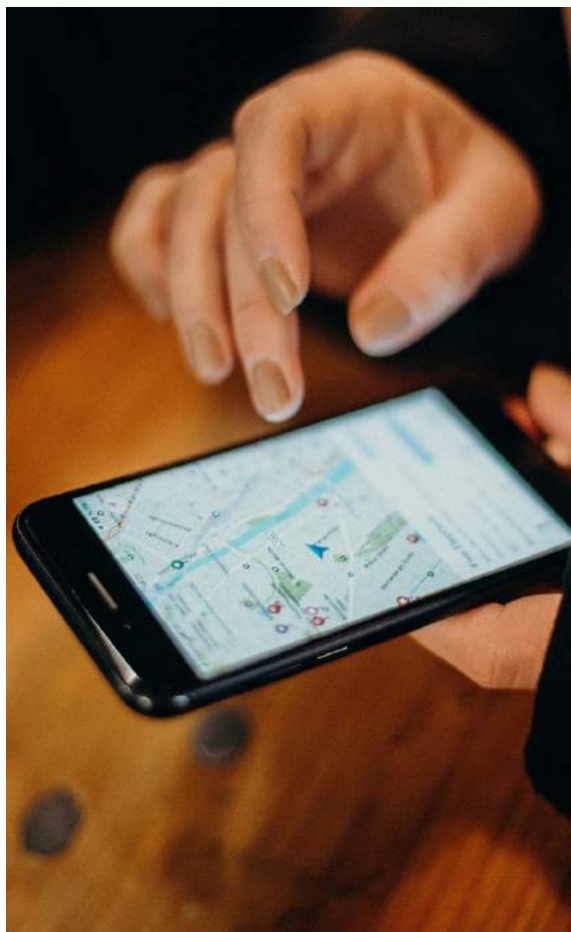
THE MAKINGS OF A LAST MILE DELIVERY SOFTWARE



With the right last mile delivery software, businesses gain access to the features they need to make their delivery operations more efficient and streamlined. Some features of a robust last mile delivery software like Tookan include:

ROUTE OPTIMIZATION:

Timing is key in ensuring efficient last mile delivery operations and route optimization can help cut down on the delivery time significantly by providing drivers with the most efficient routes. A powerful route optimization tool considers many factors to create the most optimal route, including location, traffic conditions, delivery capacity, and more. With route optimization, businesses can also share live updates with drivers about the route or re-optimize the route based on traffic or other factors.



PROOF OF DELIVERY:

Tookan's last mile delivery software allows businesses to verify deliveries by having agents scan barcodes, add notes and images, and collect digital signatures from customers at the time of delivery. This ensures that the shipment reaches the correct destination and minimizes the possibility of customer dissatisfaction.

GEOFENCING

With Tookan's exceptional geofencing capabilities, businesses can mark the operational areas for each agent. This ensures that the agents deliver only in the assigned areas and don't waste time and resources traveling through the length and breadth of the city. Apart from increasing operational efficiency, geofencing also helps elevate safety and security levels.



THE FUTURE OF LAST MILE DELIVERY

- **Contactless Delivery:** The COVID 19 pandemic has made contactless deliveries the new normal. According to a Salesforce report, approximately 40% of consumers in the US prefer contactless delivery due to safety concerns. Currently, delivery businesses are hard at work figuring out ways to provide consumers with a safe and satisfactory delivery experience. Tookan's last mile delivery software offers convenient digital solutions like electronic proof of delivery and digital payments to minimize physical contact. With social distancing and limited physical contact being the new normal, businesses will have to continue finding ways to ensure both delivery agents and consumers are safe.

- **Increase in Urban Warehouses:** Typically, warehouses are located in the outskirts of cities due to a lack of space and exorbitant rates inside the city. But with more and more customers demanding same-day deliveries, businesses will have to build warehouses and fulfillment centers closer to the city. With urban warehouses, businesses can take advantage of their convenient location and complete deliveries much faster by reducing transit times and making access to delivery agents easier. One popular option many businesses are toying with to set up an urban warehouse is using physical stores as fulfillment centers and delivering orders directly from these stores. For instance, many news outlets have reported that Amazon is planning to turn Sears and JCPenney stores into fulfillment centers.
 - **Insourcing Last Mile Deliveries:** Instead of outsourcing their last mile delivery operations, many businesses are using their vehicles for last mile deliveries. Insourcing delivery services allow businesses to better manage their expenses and cut down on the costs if needed. A few businesses have even developed their fleet of vehicles featuring a mix of their fleet and a hybrid fleet. Many e-commerce businesses are even using their trucks for local deliveries.
 - **Drones and Delivery Bots:** The latest addition to the last mile delivery innovation drive is the use of robots and drones for deliveries. From self-driving vehicles to autonomous delivery bots, e-commerce businesses are actively working towards experimenting with robotic deliveries. Leading the charge is Amazon, which invested over 500 USD in Aurora, an autonomous technology developer. Alphabet, Google's parent company employed wing delivery drones to deliver parts to ships away from the shore. Many companies are also looking into the delivery bot as a solution for last mile deliveries, while others are engaging with autonomous robot delivery providers. Before any of these new-age delivery solutions are put to use, they'll need approval from the local government and other relevant authorities.
 - **Smart Tracking with Location Intelligence:** Last mile delivery providers are increasingly relying on new technologies like location intelligence to optimize their operations. With features like route optimization and real-time tracking, businesses have a much better grip on their delivery operations while managing their fleet well. Location intelligence can also be employed to analyze weather patterns and identify optimum delivery routes.
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- **Delivery Salesman:** By studying consumer's buying patterns, businesses can anticipate the needs of a customer even when they don't order. This development has also triggered the need for mobile warehousing allowing drivers to load up on products that weren't ordered by the consumer but are quite likely to be sold. The driver, apart from delivering the ordered product, can also sell and pitch products that weren't ordered. also tries to pitch for the product which was not ordered.

Last mile delivery will always remain the most crucial component of the supply chain process. The last mile logistics market is set to witness some exciting times ahead with smarter technologies that will broaden the horizons for both first and last mile deliveries.



Tookan