

E-Commerce Fulfillment from Stores by Third Party Personal Shoppers

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Abstract:- In-Store fulfillment of online orders is a multi-step process involving Picking items from shelves into containers/totes, staging totes in an area to keep it ready for Dispensing to the customer/driver.

In store associates were dedicating substantial time in dispensing online orders for customers and drivers. This involves skilled labor force to satisfy customer needs and demands in timely manner. One such way to mitigate above risk and meeting customer needs is through ‘On-Demand Personal Shopper’ network where any person can register to shop and deliver orders as an independent contractor, similar to Insta cart, Shipt, and Corner shop by Uber. This service enables customers to order groceries and essential items online and have them delivered to their doorstep within a few hours. While associate picking is currently best positioned for scheduled fulfillment, Shopper is optimized for faster on-demand fulfillment, such as the following:

- **Flex hours and slot availability with extensive shopper network**
- **On-demand or urgent customer needs to get items delivered**
- **Customers needing more personalized care while shopping.**

Keywords:- Store Fulfillment, Picking, Staging, Dispense, Personal Shopper.

I. INTRODUCTION

The online grocery industry has witnessed tremendous growth in recent years, accelerated by changing consumer preferences and the COVID-19 pandemic. This presented a tremendous opportunity for businesses to tap into this growing market. With a growing need for the online order demands and the opportunities in this space in the past few years, it was a lucrative market to enter.

Typically, all online grocery orders were being fulfilled by store associates, while delivery was done with third party drivers like Uber, Doordash etc. With increase in online grocery shopping the demand increased exponentially, which in turn lead to higher slot utilization. With the fixed associate capacity, customers were not able to place orders as needed and stores needed flex capacity to fulfill the increasing demand. This resulted in the situation of looking at independent contractors(freelance) / drivers to fulfill the additional demand coming from the online space.

High level Overview of Current E-Commerce Industry in US

- US Shoppers spent \$95.9Billion on Click & Collect in 2022 (9% of overall ecommerce sales)
- Sales Forecast to \$703Billion by 2027
- One-third of US Shoppers Order online does pickup.
- 54% of Retailers offer BOPIS.
- Curbside Pickup was down from 31% to 25% in 2022 from 2021.

Here is how a typical Personal Shopper workflow looks like:

- Shopper selects the assigned order for shopping on behalf of the customer who placed order online.
- Shopper starts picking items based on optimized pick path.
- Shopper can easily find items using item details and location. The app validates item picked using barcode scan.
- Personal shopper can substitute items if it's not available.
- Shopper completes the order and heads out to deliver to customer's location.

II. ONLINE PICKUP & DELIVERY

Online pickup and delivery relied heavily on store associates to fulfill orders, with Personal Shoppers stepping in to fulfill the excess (i.e. overflow orders). It is imperative that fulfilling on-demand orders through Shoppers offered several benefits, and on-demand orders, in short, are orders that are needed by the customer on an immediate basis vs the regular scheduled delivery with pre-defined pickup/delivery slots chosen by customer at the time of order placement.

A. *Benefits of Personal Shopper Model:*

➤ *For the Customer:*

- Online Customers could leverage the option of an immediate delivery option whenever they need.
- Personalized interaction with the shopper during fulfillment especially substituting items (*if original item is not available*), adding additional item during fulfillment, removing items before delivery etc.

➤ *For the Retailer:*

- Eliminates the need for dedicated labor force, reducing overhead costs and mitigating idle time.
- Leverage existing pool of Shopper/Drivers to fulfill customer orders instead of hiring on demand.

III. VALUE PROPOSITION

Personal Shopper business model comprises of 4 main pillars:

- Capacity Operations: Ensure capacity availability for forecasted and variable demand.
- Customer Experience: Maximize final Annual Order Volume (AOV) by providing a better Shopper Experience during picking, and during delivery.

- Fulfillment Operations: Maximize initial and final AOV through better picking.
- Strategic Acceleration: Manage horizontal strategies and operating mechanisms; drive team effectiveness and strategic direction.
- Key Players in Personal Shopper Business: As stated earlier, Personal Shopper business is an upcoming trend in the market and some of the key players in this space are Instacart, Shipt, Spark Driver, Instaleap, Doordash etc.

IV. HOW TO BECOME A PERSONAL SHOPPER

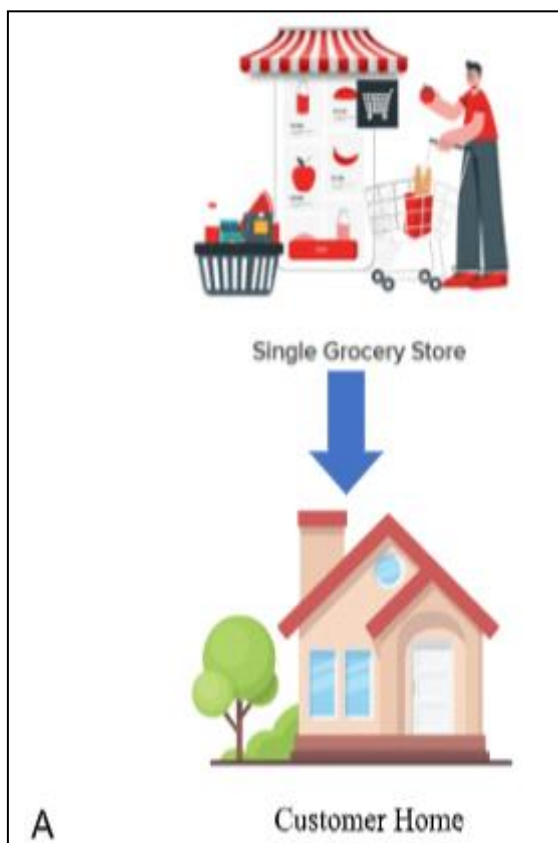


Fig. 1: Single Store to Customer

A personal shopper can be dedicated to a ‘**Single store**’ like Walmart, Target, Amazon Fresh etc.

Customers shop groceries online with a click of a button and big box retailers’ on-demand grocery delivery app ensures more sales by driving more customers using advanced features as explained in fig 1.

Personal Shopper, by definition, is a person who shops on behalf of their customer. A career as a personal shopper comes with no shortage of perks as they have flexible schedule on their own terms and needs.

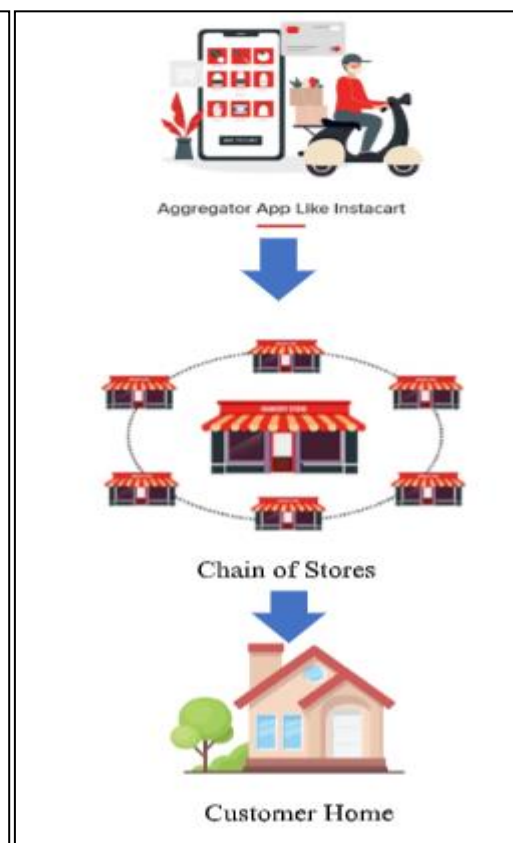


Fig. 2: Chain of Stores to Customer

Customers can shop products across any store and with the help of an ‘Aggregator App’ all the purchases can be linked together, shopped & fulfilled faster by Personal shoppers as explained in fig 2.

A personal shopper can be dedicated to an ‘**Aggregator App**’ like Instacart, Instaleap etc as above

V. CAPABILITIES OF A PERSONAL SHOPPER APPLICATION

For a Personal Shopper App/product to work effectively & seamlessly, below are some of they key capabilities it should possess.

A. Order Broadcasting

Personal Shoppers should be able to get offers from Retailers to fulfill customer orders. Offers should contain all basic information like fulfillment pickup & delivery location, items to be picked & delivered, benefits & payments etc. Based on above information, Personal shopper can accept or reject the offer. If the offer is rejected it should automatically broadcast to pool of available shoppers again.

B. Route Planning

Once offer is accepted, Personal shopper product should be able to direct the shopper to fulfillment location through an optimized route, providing information like distance, time taken etc.

C. Optimized Pick walk inside the Store.

Personal Shopper product is the one cwhich helps users to pick and deliver orders quickly without spending much time searching for items/orders. This product should take shoppers in an optimized pick pathinside the store while fulfilling the orders and ideally it should never take them back & forth between aisle locations. It is important to map and feed the fulfilment area to the product so that it takes users effectively without wasting their time. Several Machine Learning algorithm can be leveraged to achieve this capability in the product.

Lets look at below pick sequence assuming A1-1, A1-2..... D1-1 are the examples of aisle locations within the store.

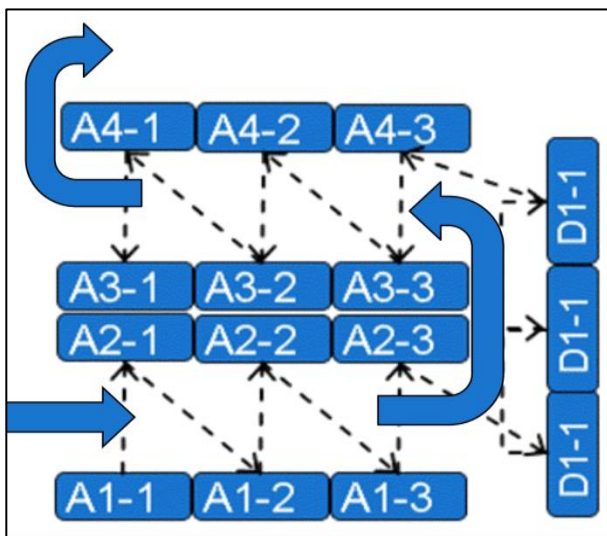


Fig. 3: Above is an Ideal Way to Pick Items from Shop Floor

D. User Experience

Shopper Product should be aesthetically pleasing to the users like any application and should give them enough information to fulfill customer orders instead of them seeking for information. Information like **color, size, quantity available on hand, product UPC** and its **location in the shop floor** etc. can help shopper pick items faster without dwelling on it. As per industry standard, average pick rate for any fulfilment product is around 100 to 120 items per hour. With advancement in technology like Augmented Reality, AI, this number is expected to increase in future. With seamless integration we can build some exciting features in our product like **customer choice of substitutions, live tracking of picking & delivery, chatting with customers during fulfilment** etc.

E. Integration & Checkout

On top of above capabilities, another key parameter is how easy or difficult is your product’s integration capability with other systems. Often, we build a brilliant product but if it cannot seamlessly integrate with other external systems then it will not pay huge dividends. It is important for your fulfilment product to integrate easily with upstream systems like order management systems and downstream like last mile delivery platforms.

VI. UPCOMING FEATURES IN PERSONAL SHOPPER APPLICATION

A. Artificial Intelligence Based Search

Algorithms surface items based on customer’s past purchases/history of their preference etc. **by Instacart.**

B. Dietary Preferences

Understanding Customer’s dietary preferences helps shoppers and improves search capabilities. **By Shipt**

C. Impulse Purchases

Allowing customers to add/remove items from their order at the last minute. This also includes adding items from other stores without additional cost. **By Doordash**

D. Preferred Shoppers

Allowing customers to mark favorite shoppers so that same shopper can fulfill their orders in future. **By Shipt**

VII. CONCLUSION

With online business going at a rapid pace of 31% since 2022 and with US shoppers spent of around \$95Billion last year, it is high time that Retailers offer BOPIS (Buy Online Pickup In Store) to their customer in order to sustain in the market. BOPIS cannot be achieved without a sound e-Commerce product platform and a fulfilment product is at the heart of it. As per secondary research, 54% of retailers offer this capability in the US. Also, in order to retain customer base and to scale up further, on-demand personal shoppers are being onboarded many retailers in the market and externalizing a fulfilment product is also something that is expected to grow in near future.

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