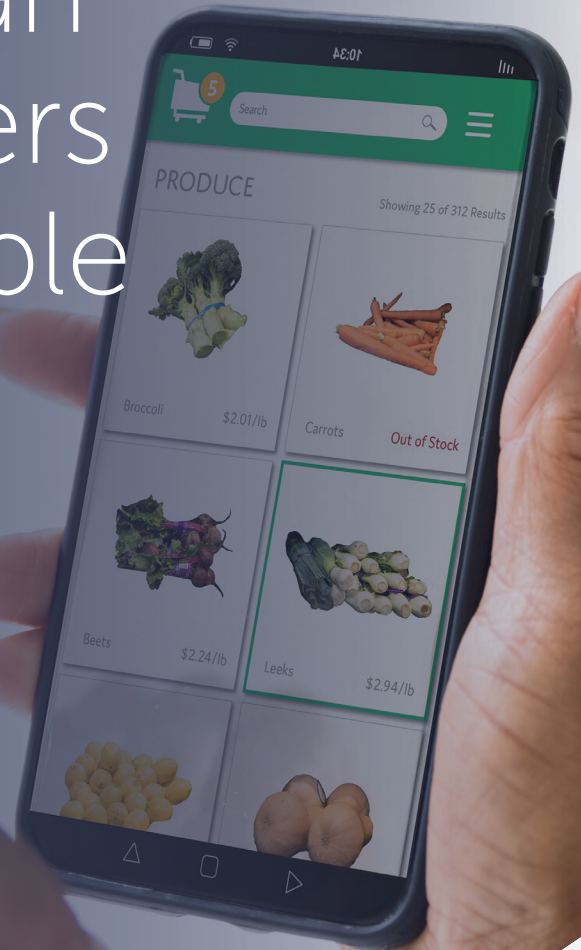


Winning the online grocery race:

# How retailers can delight customers and stay profitable



# Introduction

Until recently, the online grocery market was insignificant. In 2019, online sales of food and beverages in the US accounted for only 3.2% of total retail sales<sup>1</sup>. However, online sales in other sectors grew at about 25% per annum<sup>2</sup>.

COVID-19 changed everything. Online grocery sales tripled to 10.2% of the total in 2020. By current projections, they will hit 21.5% of the estimated annual total of US grocery sales of \$1,164 billion in 2025.

Retailers experimenting with online sales in the pre-COVID era had to scale by any means possible to meet growing demand. Often, these means were neither profitable for retailers nor satisfactory for customers. But there are now solutions for both of these problems.

This whitepaper will explain how grocers can better fulfill orders, and their customers' expectations, with the right technology. To increase the efficiency of online services operated from existing stores, Trax's Computer Vision-based technology increases visibility into inventory levels thereby ensuring high levels of on-shelf availability (OSA), and increases picking productivity — a perfect recipe for preserving the bottom line and keeping customers happy.

1. eMarketer February 2020, <https://www.emarketer.com/>
2. Mercatus in collaboration with Incisiv, 2020 <https://www.incisiv.comhttps://www.mercatus.org>



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# Online grocery fulfillment challenges

Providing online grocery services presents retailers with a few challenges, two of which are – to protect profits through high productivity and limited costs; to retain customer loyalty by meeting their demanding expectations.

x7

more orders will be picked and delivered by retailers in 2025 compared to 2019

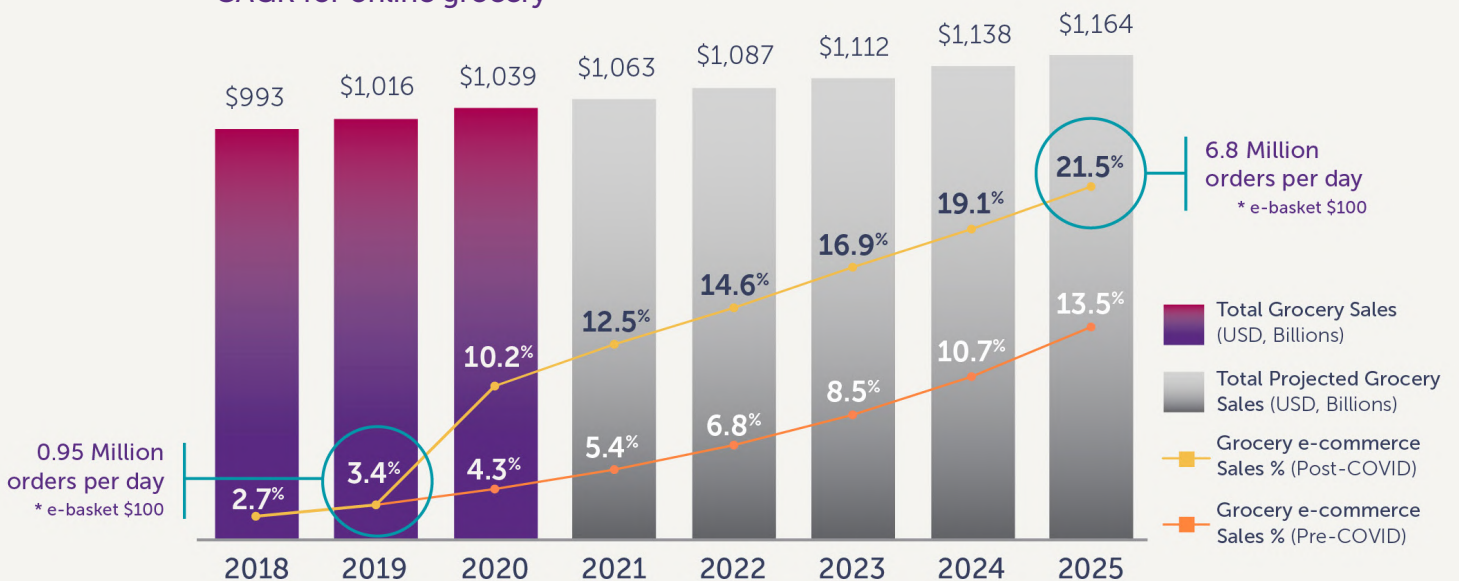
## The profitability challenge

When online grocery sales took off, most retailers adopted fulfillment models that they could rapidly implement with minimal investment. But these models struggle to cope with surges in demand. Online grocery orders in the US are expected to rise from 0.95 million per day in 2019, to 6.8 million by 2025. The current models will be unable to handle this projected future growth unless retailers adapt some fundamental changes.

6.8M

orders will be fulfilled every day in the US by 2025

## CAGR for online grocery



Source: Mercatus in collaboration with Incisiv, 2020

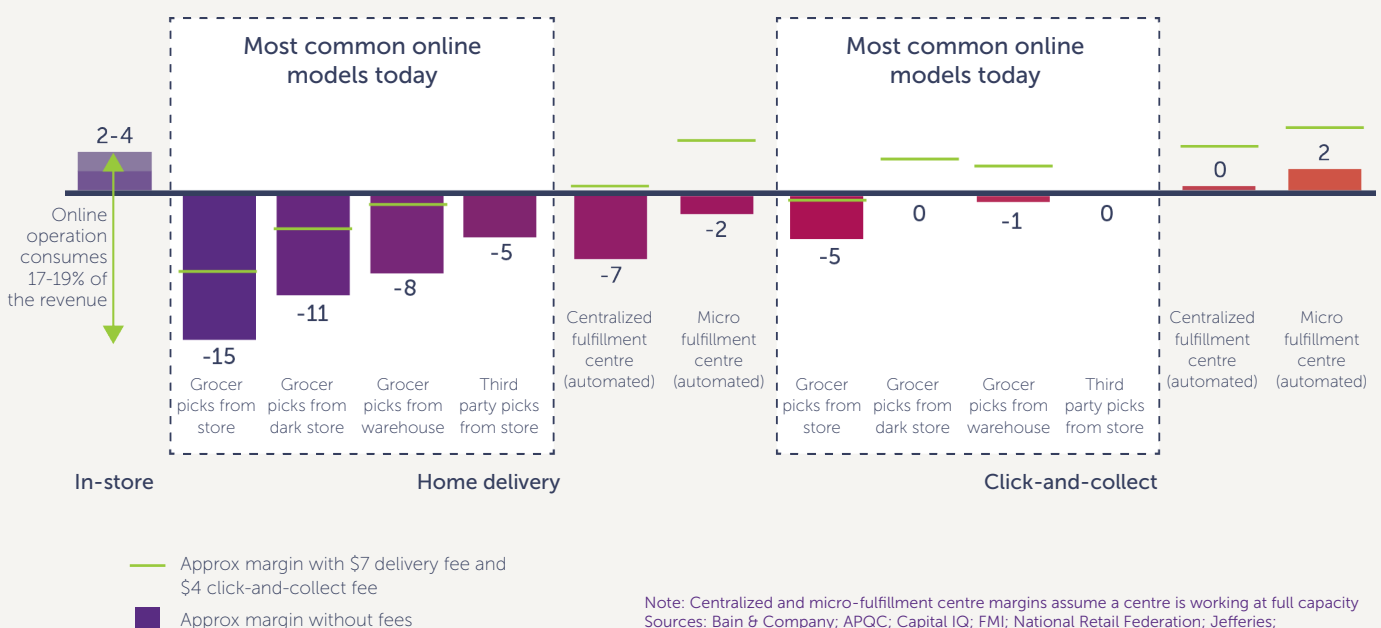
To address this growing demand, retailers make significant investments in infrastructure in the form of micro-fulfillment centers (MFCs), large-scale automated centralized fulfillment centers (CFCs). While these means are likely to play an important role in order fulfillment in the future through automation, they are a while away from becoming the norm. In the meantime, online fulfillment costs continue to harm retailers' bottom line. At the same time, retailers should consider **an easier, and more cost-effective solution at hand: optimizing in-store picking.** Today, store picking accounts for most online grocery sales. In five years' time, other fulfillment models are expected to become significant, but in-store picking will remain a dominant method while becoming more efficient and economical for retailers.

To balance the investments, some retailers pass the costs on to customers as picking or delivery fees, which could render the service unattractive and, given the high level of competition, unviable. In fact,

research from Bain & Company shows that even after charging delivery and pick-up fees, retailers can't seem to close the gap and margins remains negative.

Today, costs are highly dependent on the picking efficiency. Inaccurate online inventories may cause pickers to go chasing after products that are not available in the store. Some stores then contact customers to confirm a proposed substitute for the unavailable item, often through a chatbot. This means the picker has wasted time discovering a product is missing, then looking for a substitute, and finally waiting for customer feedback to find out if they would accept that substitute product. For stores that pay by the hour, this racked-up clock-time adds substantial costs. Online grocery store pickers testify that out-of-stocks (OOS) are one of the top reasons that slow down the picking process. It is estimated that in the absence of outs and substitutions, pick rates would be two times faster.

Example grocer margins (earnings before interest and tax) by channel and by model (%)





### The customer satisfaction challenge

In an increasingly competitive space, customer loyalty is everything. Yet grocers face major challenges in providing a good customer experience through their online channel, especially when it comes to unavailability and the resulting substitutions.

### Dissatisfaction due to product unavailability

Trax engaged research company Lucid for an online survey of 1,500 e-grocery consumers in the US to study the impact of availability throughout the customer's journey when ordering groceries online. According to the study, availability issues — OOS items, missing items and unacceptable substitutes — cause dissatisfaction throughout the online grocery shopping journey.

Four out of the top seven factors influencing shoppers' choice of where to shop for groceries online in the Lucid research related to availability. These included 'having all the products I want available on the website', 'variety of products available online', 'minimum missing items and substitutions', and 'proper substitutions when needed.'

While one might think that in-store shopping is more likely to cause dissatisfaction, the study found that 65% of consumers sometimes or often don't find a specific product available online. In fact, 40% of surveyed shoppers perceive physical stores to have better product availability than online stores.

Shoppers also see a complete basket as being more important than delivery costs and will switch stores if dissatisfied. In fact, the survey respondents listed cost of delivery below variety, availability, and the quality of fresh produce when ranking the most important factors in choosing

an online grocer. Of those surveyed, 41% reported abandoning online carts because of too many missing products, while 40% said they would go to a different physical store, and 33% said they would buy at a different online grocer.



Overall, this means 49% of customers will switch retailers if they can't find the goods they want. In a physical store, a shopper might upsize, downsize or find an alternative if they cannot find the product they want in the size or packaging they seek. When they find their own substitute, it's likely to cause less dissatisfaction than a substitution made without them being able to see and evaluate the options. And they become even more dissatisfied when the unavailable product is excluded from the order.

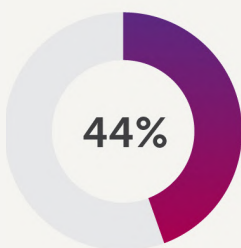


**Substitution may not be the best alternative — for customers or retailers**

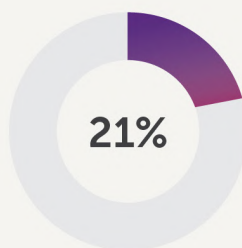
Even when shoppers can find everything they are looking for in the online inventory and complete a checkout, retailers cannot guarantee they will deliver the whole basket. To mitigate these availability problems, retailers offer substitutes to customers. Not only that, but as mentioned earlier, substitutions are also a significant factor contributing to slow picking rates, and therefore they are not the ideal strategy for pleasing customers. Moreover, often when retailers provide substitutes, they match prices, which is yet another factor that eats away at what's left of their margins. Of the surveyed individuals, 44% said that order delivery with minimum outs and substitutions is a deciding factor for them when choosing an online grocer.

Moreover, only 21% of respondents from the Lucid research were happy to let the store pick a substitute; 54% would accept substitutes if the store had sought confirmation; 21% would not accept any substitutions.

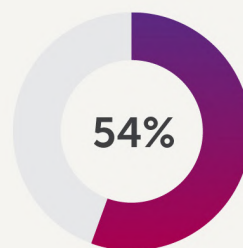
If online shoppers can't find the products they want, or don't receive the goods they ordered, they are more likely to shift their allegiances. Shifting loyalties is easy when a competitor is only a mouse click away. And if enough customers flee from an unfulfilling store, the retailer's market share will slowly reduce. The key to reducing dissatisfaction with the substitute is not having such occurrences in the first place, and reducing friction with the shopper. This will be win-win for both the shopper and the grocer.



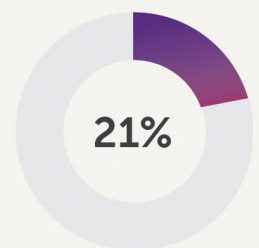
of respondents said orders with minimum OOS and substitutions is a deciding factor when choosing an online grocer



of respondents were happy to let the store pick a product substitute



would accept substitutes if the store had sought confirmation



of respondents would not accept any substitutions

# Solutions to online grocery fulfillment challenges

Increased labor costs for picking and unhappy, disloyal customers add up to a significant threat to profitability and continued growth. However, there are more cost-effective ways to optimize online grocery fulfillment than building expensive warehousing facilities — improved availability and picking efficiency.

Grocery retailers can achieve considerable savings and cement customer loyalty if they can increase OSA for all items they offer, and if their online catalog reflects true stock availability at all times.

By having accurate data about the store's on-shelf inventory, retailers are able to take corrective actions to efficiently restock empty shelves, fix price and promo tags, and ensure planogram compliance. The data is also upstream for taking actions that prevent such OOS events from occurring in the first place. Having this additional data set improves the efficiency of picking online orders. Precise product location data enables optimization of picking routes, further boosting picking efficiency and reducing costs.





# How Trax can help



Trax offers solutions powered by Computer Vision (CV) and AI to maximize OSA, improve visibility into inventory levels, as well as price, promo, and planogram compliance.

## Seeing is believing: Trax Retail Watch

Trax Retail Watch is like having a team of people permanently employed to check errors and fix them, and trigger replenishment orders and raise alerts to store staff – all through automation.

Trax Retail Watch collects data through various types of devices like miniature wireless shelf edge cameras, dome cameras or autonomous robots that monitor all shelves and other goods display areas in a retail store. These feed images to Trax's image recognition and machine learning software, which

detects when items are missing, misplaced, mispriced or quickly selling out. The aggregated data is fed into the replenishment flow as a true demand signal to increase forecasting accuracy at store/SKU level and optimize inventory.

It can be integrated with ecommerce systems to provide real-time inventory information to online shoppers, as well as guide pickers to items in an online order.

Within a few months of deploying the solution, one Trax customer, a leading retailer in Europe, improved OSA by 3%, decreased price anomalies by as much as 75%, and improved workforce productivity equivalent to having more than two additional full-time employees in the store.

With current labor shortages in the US and nine million unfilled positions, how can brands ensure they have the right reps to execute their in-store strategies?

**Leveraging the gig economy:  
Trax Dynamic Merchandising**

Trax Dynamic Merchandising powered by Flexforce ("Flexforce") uses CV and AI to inform and support a large, localized,

on-demand workforce across the US. This workforce can be in stores within hours of a request being received, and can help fulfill online orders and deliver essential retail tasks such as restocking, resets, and building displays.





Trax and Google Cloud Platform (GCP) are in partnership to help customers leverage data to improve customer experience in omnichannel retail. Together, we connect Trax's continuous, real-time shelf availability data seamlessly with other data signals in GCP using GCP's ML/AI capabilities. This enables us to tailor capabilities for major retailers such as e-commerce fulfilment and leverage shelf signals to improve demand forecasting and order management.



**Google Cloud**

**Paul Tepfenhart,  
Director of Global Retail Solutions, Google**

“Maintaining on-shelf availability for the thousands of products in every store has always been a significant problem to solve. The shift to online ordering has made the availability issue even more significant as the shelf is also now the fulfilment centre for the majority of online orders. For e-commerce, out of stocks present two major issues for retailers. First, the impact of out-of-stock items is even more noticeable for online shoppers as they do not select their own substitutions. Additionally, out of stocks cause inefficiencies in the item fulfilment process, which is already a costly and margin-diluting practise for retailers.

The good news is that through a partnership between Trax and Google Cloud Platform, and the power of GCP's AI/ML capabilities, these challenges are addressed. The granular, real-time data at scale to enable picking efficiency and the data transparency to unlock a better shopping experience are now a reality which benefits both shoppers and store associates.”

# Conclusion

Before spending vast sums on infrastructure, simply optimizing OSA and picking efficiency will allow retailers to improve both profitability and customer satisfaction. Thus, the online buying journey can be elevated simply by fixing OOS occurrences.

To learn more about how Trax can be your always-on partner, book a meeting with our sales team at [www.traxretail.com/contact/](http://www.traxretail.com/contact/)



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