



**FRESH FORECASTING
& REPLENISHMENT:
RUNNING AN EFFICIENT
OMNICHANNEL GROCERY
RETAIL OPERATION**

WHITE PAPER

ONLY A FEW YEARS BACK, many senior grocery retail executives were looking at the world of eCommerce and saying, more or less, “it’s not for us”. Oh how times have changed. With Amazon growing its grocery business with the acquisition of Whole Foods, e-grocery only retailers emerging, meal delivery services, like Blue Apron, gaining market share and some established traditional grocery chains giving it a go – eCommerce is here to stay for grocery. At the same time, discounters, such as Aldi and Lidl, are aggressively pushing down prices.

As the number of sales and fulfillment channels increases, retail operations become increasingly complex. Amidst this increasing complexity, it is imperative for grocery retailers to find ways of reducing costs, especially in the big cost areas of labor and waste, to stay profitable. Accurate forecasting is at the core of increased operational efficiency as it is key to accurately match resources, such as stock and personnel, with demand.

For the freshest products, such as meat and fish, shelf-life needs to be added into the equation to find the right balance between targeted availability and forecasted waste, as 100 % availability automatically means that there will be waste. In addition, retailers need to accurately factor in the impact of promotions and price changes, not only on the item being promoted, but also other products whose demand might be lowered by cannibalization. Of course, holidays and seasonal changes in demand also need to be considered in forecasting.

Omni-channel operations accentuate these challeng-

es, as the consequences of poor product availability are more immediately visible to the online consumer in the form of the ordered products having to be replaced with substitutions. What makes online grocery operations all the more challenging is that consumer preferences have shifted away from packaged and industrially produced foods towards healthy and fresh options. Consumers’ preferences for fresh and natural food options makes it more difficult to establish online grocery channels, as quick delivery of fresh food is complex and expensive for retailers. Online consumers are also highly sensitive to best before dates and freshness of products delivered, as they haven’t had the opportunity to check the dates or “squeeze the tomatoes” when ordering.

Due to its challenging nature, many US grocery retailers have been slow to establish online channels. Yet the online grocery market has great potential. Consumers are increasingly participating in online grocery shopping and US online grocery sales alone are anticipated to grow by 11% in 2017. To read more about [how US online grocery retailers tackle challenges, take a look at this article by Fung Global Retail Tech.](#)

Moving from traditional grocery retail to omni-channel grocery retail adds new aspects to demand forecasting that need to be considered, including how to forecast per sales and fulfillment channel, how to react when products fall out-of-stock, and how to optimize operations. In connection with the growing interest in e-grocery retail, we’ve gathered some tips to help you succeed in omni-channel grocery retail.



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Forecasting for different sales and fulfillment channels

OMNI-CHANNEL GROCERY RETAIL comes in many shapes and forms. Online orders can be picked in distribution centers, in dark stores or in regular brick-and-mortar stores for delivery to the customer. Retailers are even leveraging third-party couriers that handle the pick-up of goods and deliver to customers' homes in order to reduce the costs of owning trucks. Many also offer less margin-erosive alternatives like pick-up of online orders in stores, or even drive-through pick-up.

A basic forecasting requirement is that retailers need to link online sales to the right fulfillment channel. For example, online orders that are picked in a regular store need to be included in the demand forecast driving replenishment to that store, even though the actual sales transactions belong to the online channel.

However, simply lumping regular store sales together with online orders to form the basis for forecasting does not suffice. On many occasions, online orders follow a different sales pattern compared to regular store sales. We have, for example, noticed that easy price comparison online often drives even more pickup for promotions. Also, for major holidays, the timing of purchases may differ between physical stores and online; for example, online customers place large orders in advance of the holiday, whereas physical stores see a lot of last-minute dashes for products people have forgotten to buy. This means that separate forecasting of online sales is needed to accurately account for the sales channels' varying demand patterns.

Omni-channel retail, thus, takes the need for granular forecasting even further. In addition to having forecasts per store, omni-channel retailers need to forecast per sales and fulfillment channel.

Managing product assortments and availability

OUT-OF-STOCKS AND PRODUCT substitutions pose challenges across all channels. In physical stores, substitutions due to out-of-stocks can be almost subconscious customer decisions, however to online consumers they are much more visible and have a greater negative impact on the shopping experience. This has led many grocery retailers to use a multi-step process of proposing and enabling online consumers to review and accept any product substitutions in order to keep customer satisfaction high. But these replacements often erode already thin margins as they are commonly made with higher priced items offered to the consumer at the price of the originally desired product.

A better option for e-grocery retailers is to quickly react when products fall out-of-stock, and if possible, remove them from the offered assortment. It is imperative to accurately estimate how much demand was left uncaptured because of the out-of-stock and assortment update in order to accurately forecast future demand. The forecast needs to account for the time between when the product ran out and when it was removed from the online range.

Forecasting for Workforce Optimization

IN TRADITIONAL BRICK-AND-MORTAR grocery retail, store personnel forms the largest operational cost, amounting to around 14 % of sales. In this case, shoppers also do a lot of work by picking the products that they want. When sales take place online, the retailers need to perform the order picking, which regardless of where the orders are picked – in a distribution center, in dark

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stores or in regular stores - is extremely labor-intensive, as the products need to be handled unit by unit, instead of in case packs.

This means that omni-channel grocery retailers need to be able to forecast picking volumes and their timing very accurately to be able to fulfill the lead-time promises made to their customers, without excess labor cost.

Workforce optimization in line with forecasted demand is a key element in an efficient omni-channel grocery retail operation. To illustrate, if online orders are picked in a regular store, the retailer needs three different forecasts to optimize store rosters:

1. **the in-store sales forecast** taken down to the 15-minutes level, which is the driver for checkout work and customer service,
2. **the forecast** of daily incoming deliveries, which is the driver for in-store goods handling work, such as shelving, and
3. **on-line order lines** to be fulfilled within a certain time frame (depending on the offered delivery lead times), which is the driver for order picking work

Through smart optimization of the timing of work tasks, retailers can, for example, move personnel from the checkouts to order picking when business is slower in the store. Planning for this in advance, means that excellent service is possible while keeping costs in check.

So, forecasting is not only needed for optimizing inventories, it is also required for optimizing operations. This again means that we need to move from day-level sales forecasting to more granular forecasting to be able to plan when during a day capacity will be needed.

More data for better forecasting

GROCERY RETAIL IS the kind of business where the amounts of data are always massive due to the high number of SKU's and vast amount of daily transactions. Still, forecasting is often hampered by lack of data. Estimating the effect of price changes may, for example, be surprisingly difficult due to a limited amount of relevant price changes in the past.

In brick-and-mortar retail, it is quite onerous to test different approaches to, for example, pricing, promotions

and assortments as it requires a lot of manual work, such as updating shelf labels, producing promotional material, and rebuilding shelf displays. This means that the business is more static than one would think. Electronic shelf labels make changes easier, but online stores still offer a much better opportunity to run lean experiments on a limited scale.

Systematic testing allows omni-channel retailers to better understand, for example, consumer response to assortment width or price sensitivity in different product categories and for specific items. This kind of testing and analysis enables continuous optimization of the online offering, but is also highly likely to provide insights that can be utilized in the brick-and-mortar stores.

A combination of people and systems

TACKLING THE CHALLENGES of demand forecasting in an omni-channel retail operation will require a combination of people and systems. Omni-channel grocery retailers need to invest in planning teams with a comprehensive understanding of both demand planning as well as the retail operations in which the demand forecasts are used.

- The team should then be equipped with tools that
- ▶ **enable a high level of automation** to be able to cope with the massive amounts of data and extremely granular planning needed,
 - ▶ **are able to make use** are able to make use of all available planning information and data. For example by applying machine learning to weather-based sales forecasting to uncover relationships between demand and weather,
 - ▶ **support demand planning and forecasting** for multiple purposes, such as forecasting for both fulfillment as well as for workforce optimization, and
 - ▶ **provide the flexibility** needed to be able to adapt to a continuously changing business environment.

Despite the challenging nature of online grocery retail, it is expected that traditional grocery retailers will continue to expand their online operations. However, what is clear is that protecting and growing margins will become even more challenging as grocers deal with growing price competition and rising labor costs.



HOW TO PROCEED?

Contact me

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Let's meet!

An hour's meeting is enough to go through your company's current situation and to define the first steps!

RELEX SOLUTIONS, PROVIDER OF UNIFIED RETAIL PLANNING SOLUTIONS, is dedicated to helping retail businesses improve their competitiveness through localized assortments, profitable use of retail space, accurate forecasting and replenishment, and optimized workforce planning.

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