Omnichannel Allocation

Ebook

QUICKLIZARD

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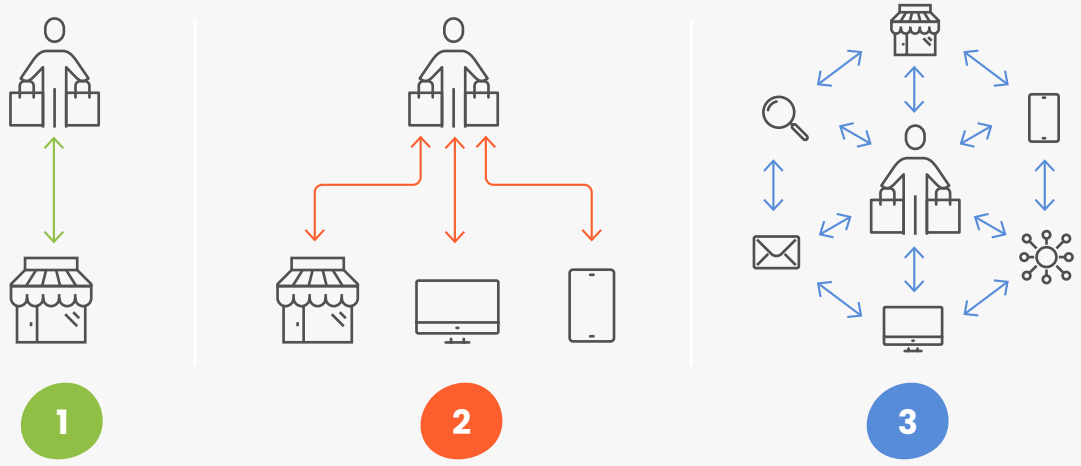
Omnichannel Retail

Omnichannel retail is a multichannel approach to sales that focuses on catering to many customer segments and providing a seamless customer experience across different channels. Retailers that employ this strategy benefit from increased sales and a better customer experience due to the optimized nature in which they serve different segments. An Omnichannel retailer can be one that operates in different geographies, online and offline, or across many store locations. The goal is customer convenience and a seamless customer journey.



1 – **Single channel** a single sales channel

2 – **Multichannel** involves many channels and revolves around the product

3 – **Omnichannel** involves all channels and revolves around the customer

Omnichannel customers have a 30% higher lifetime value but the challenges around inventory allocation and yield management mean that retailers need to be careful before employing this strategy across the board. For retailers with this strategy, correct Omnichannel inventory allocation is paramount to yield management and profitability.

Omnichannel Allocation

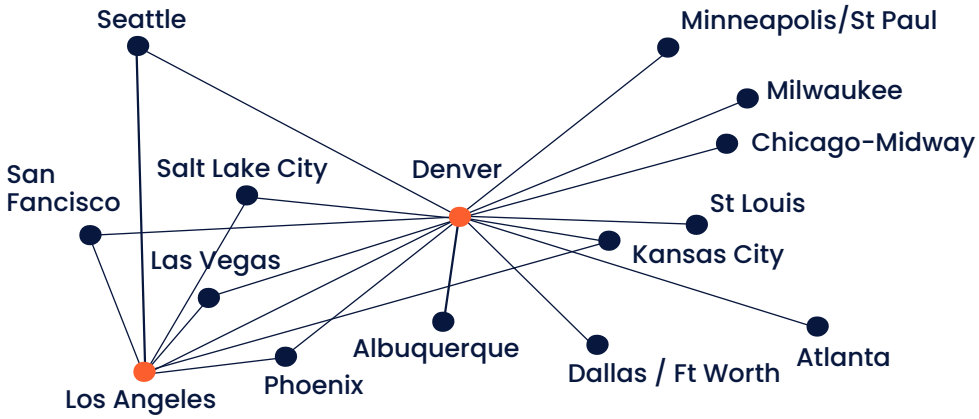
Omnichannel allocation is the distribution of one inventory set across multiple channels with a limited sell through timeframe.

The goal of Omnichannel allocation is to maximize inventory yield across the different channels. This is done via an understanding of how the demand curves differ for each individual channel. For example Offline customers are more spontaneous and Online customers are more price sensitive.

For retailers that operate across borders, each market has a different set of competitors, customer segments, and demand curves. This makes inventory yield management possible via differentiated pricing due to the different willingness to pay in each market. This price differentiation allows retailers the ability to meet each customer segment on their individual demand curve and cater pricing accordingly. The difference in willingness to pay across markets means that some channels are classed as higher yield than others. Omnichannel allocation aims to apportion inventory across channels so that lower yield channels do not cannibalize higher yield ones.

Hub and spoke

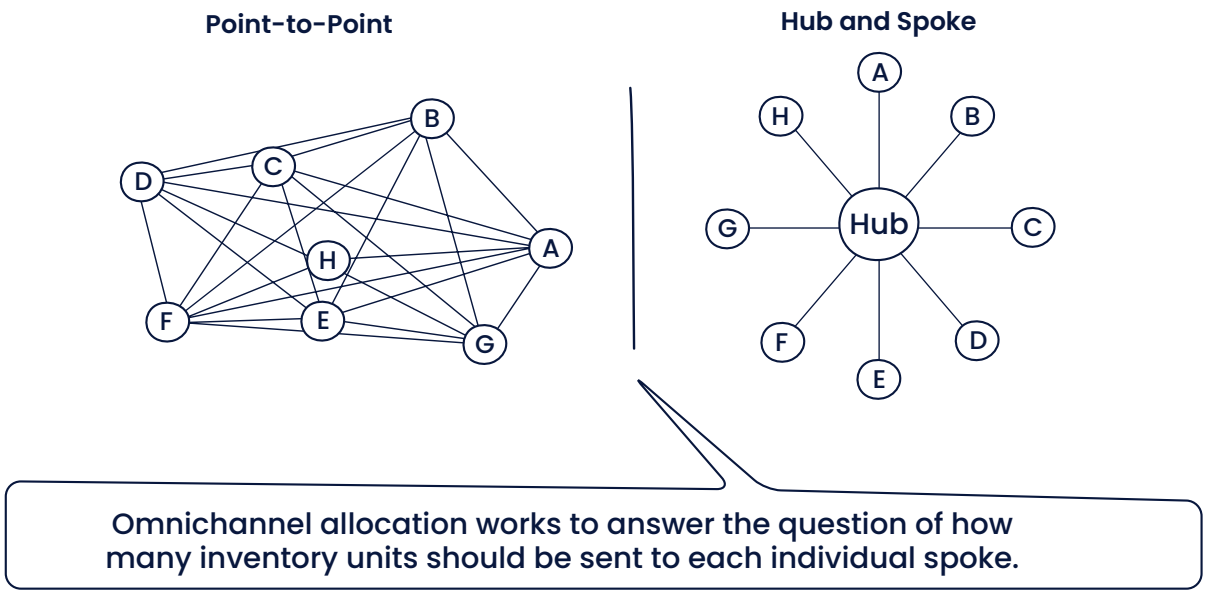
Omnichannel allocation originated from the airline industry hub and spoke model that was developed by Delta Airlines. The hub and spoke model is a distribution method in which a centralized 'hub' exists and all distribution is managed out of this hub. For airlines, travel either originates out of the hub airport or is sent via the hub airport. Spokes are outlying points to a central hub.



The benefits of this model are a lower number of routes that are necessary versus a point-to-point system. This means that a higher frequency of flights can be offered and therefore the capacity and yield of the airlines increases.

For retailers, the hub and spoke model includes a centralized warehouse (hub) with distribution centres (spokes) strategically placed in locations with most optimal travel distance and time to get to customers. These spokes can be individual store locations or distribution centres in areas with a lot of customers.

Point-to-Point VS Hub and Spoke Distribution Model



In Practice

In practice Omnichannel allocation estimates the demand curve of each different market and allocates inventory accordingly

Quantity method

The most common method of Omnichannel allocation is to pick a point on each demand curve by running simulations across the different channels. The goal of this method is to pick the point that optimizes profitability or yield according to business goals. While this can be done via mathematical simulations, it is still a prediction that uses historical sales and profitability for future allocation and needs to be updated and corrected continuously.

In practice, many retailers start the allocation exercise with the most profitable markets and starve the least profitable markets. If market A is seen as the most profitable market and Market B as the least , the inventory allocation will be highest in market A and lowest in market B.

Once the units are allocated to each channel, this forecasted demand is then compared to real sales data, specifically looking at the per unit yield in each market. This per unit yield is forecasted and calculated based on the average selling price of a unit.

The markets that had a lower average selling price (yield) versus the forecast will get a smaller allocation in the next period and the markets that had a higher yield than expected will get a higher allocation.

Shadow price method

The second method is known as the last unit method. A shadow price is a value assigned to an unknowable cost in the absence of correct market data. The lowest yield market would be where the last, and cheapest, unit is sold. In the example above, no market could sell for at a price below the Spanish price of $2.

This practically imposes a restriction on the different pricing managers, not to sell units at a price which is lower than the predicted unit price at the market that is least profitable, thus avoiding sub-optimal allocation of inventories between markets.

Considerations

Predicting demand curves is not easy

While Omnichannel allocation predominantly relies on demand forecasting for accurate apportioning of inventory across channels, predicting demand for each channel is not easy.

A fundamental assumption in demand forecasting is that future demand will look like historic demand. This is often not the case.

In addition, each demand curve needs to consider channel specific differences in consumer behaviour, competition, and willingness to pay (Variation across suburban and urban or online and offline customers poses similar challenges for demand forecasting).

No global price

The decentralization of pricing decisions across channels also poses a challenge.

Setting the same average global price across borders would leave money on the table. In competitive markets a retailer may end up being too expensive and in others too cheap.

Therefore, channel specific pricing is set and amended according to the allocations given. Allocation works by dictating inventory amounts that the demand curves predict will be sold at given prices. It is a way of influencing pricing via inventory allocation.

Differing costs

Thus far the assumption has been that Omnichannel allocation is cost agnostic. That is, that costs do not matter in the allocation decision. However, this is not the case. International markets have different shipping costs, chargeback rates, return rates etc. This difference holds for physical versus online stores within the same geography as well. An Omnichannel allocation strategy that aims to optimize yield must take these differing costs into account.

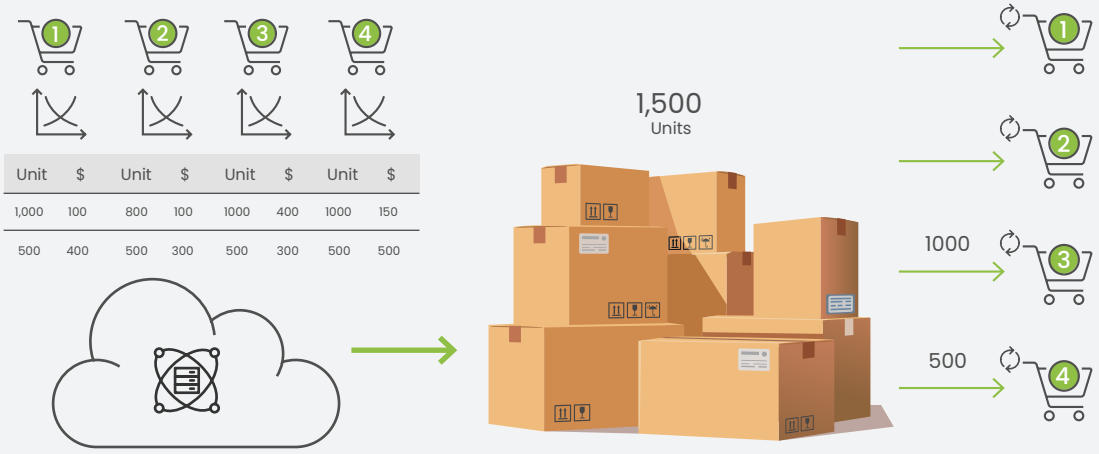
Brand perception

The mathematical exercise of estimating demand curves for each channel does not consider the full suite of strategic goals such as brand perception or market share. While one channel's demand curve may dictate no inventory according to the demand forecast, a minimum inventory may still be allocated to that channel for the retailer to support a full assortment claim.

How Quicklizard Can Help

Retailers that have worked through the scaling challenge of an Omnichannel strategy are able to work through the allocation optimization towards a goal of yield growth. While demand forecasting by channel allows retailers to apportion inventory, it is process of iteration and incorporating real world data that yields the greatest benefit.

The Quicklizard Omnichannel inventory allocation allows retailers to sync inventory across channels and provides real-time visibility from a centralized hub that is the single source of truth.



The proprietary algorithm and full suite of pricing optimization and enrichment modules advances pricing excellence, at scale. It enables retailers to automate pricing and move to a fully digitalised pricing infrastructure that is tailored to business goals. Powered by science, designed for success.

To learn how Quicklizard can help you achieve pricing excellence, speak to one of our pricing experts today.

Learn more

QUICKLIZARD

Quicklizard enables retailers and brands to automate their pricing strategies and move from manual pricing to a smart, fully automated digital pricing infrastructure. The Pricing Platform and suite of pricing optimization and enrichment modules advances pricing excellence at scale, based on individualized business goals.