



Inventory allocation

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Introduction

Every customer wants to enjoy short lead-times and reliable on-time deliveries. This is the ideal but is not easy for suppliers of goods to achieve in practice. If we serve every customer to the level and standard they want we are likely to go out of business. Many loyal customers expect to be treated as special so that in times of shortages they get preferential treatment.

Pre-allocating or assigning stock while it is in transit or production ensures that customer demand can be met quickly without incurring unnecessary warehousing costs. However, this activity can cause problems:

- Shortages can occur due to poor demand planning or excess take-up by customers.
- Stock levels can grow due to external economic pressures or unexpected seasonal conditions.
- If a company reserves stock to protect it for premium customers, this can add a layer of complication for the planning and forecasting teams.
- Where a customer over-estimates his needs (“bullwhip effect”), this can lead to expensive stock taking up valuable warehouse space.

Some customers are more equal than others

A preferred customer is one that is provided with privileges not freely available to others; the challenge is to identify and satisfy these preferred customers. Being identified as a preferential customer includes being protected from stock-outs or rationing in times of short supply. One industry sector that is most concerned about this dilemma is manufacturing, where the prompt availability of components and spares is vital. Other sectors that may “block” or assign stock or capacity in advance are retail, airlines and the transport/logistics industry.

Successful organisations define their customer policy to ensure that the most profitable customers receive the highest level of service. To do this they apply some form of customer segmentation which aims to identify the value that each customer brings so that orders are prioritised for fulfilment based on a pre-defined service level. “**Ring-fencing**” is a term commonly used in finance and banking but it is also applied to goods or services that are set aside for group or individual customers. It has been shown that the ring-fencing of products or services for premium customers benefits sales growth in the longer term.

The retail sector

Multiple sales channels (Omni-channels) in the retail sector are adding complexity to inventory management. Products are sold through retail stores, online or direct from the manufacturer or distributor. Stock management is one of the main drivers of profitability in this sector and bad planning or stock-outs can have a devastating effect on profitability. One of the biggest challenges for a merchandiser or demand planner is determining how much product needs to be allocated to each retail store. Stock allocation ensures that the right amount of goods is being allocated to the right channel for delivery at the right time. A warehouse management system (WMS) is vital for success as well as ensuring continuous collaboration across the supply chain.

The aviation sector

On a scheduled airline flight, the airline decides what percentage should be reserved (ring-fenced) for loyalty or elite customers, what percentage for early sale at a discount, and what percentage kept for later sale at a higher price.

Available-to-promise (ATP) is a business function, used extensively in the airline industry that responds to customer order enquiries, based on resource availability. The basic idea of ATP allocation is to increase revenues through efficient customer segmentation. The same principle applies to the transportation of cargo.

Stock allocation using technology

Until recently, sales managers often assembled critical historical data manually to feed the demand forecast. Tools have since been developed to automate the process of inputting sales history, future promotions and other variables such as seasonal fluctuations, to provide more accurate information. Demand forecasting provides an estimate of the number of goods and services that its customers will purchase in the foreseeable future.

The allocation planning function ensures that the number of products available to customers is arrived at based on their demand forecast, current on-hand inventory and their relative importance. ATP supports order promising and fulfilment, aiming to manage demand and match it to capacity using IT-enabled software systems.

Where demand is steady and easy to predict, allocating much of the stock may be the best way to minimise supply chain costs. Poor allocation practices can have a profound financial impact due to additional supply chain costs and missed sales opportunities.

Effective stock allocation is different in every business. Optimising inventory allocation processes by segmenting customers and using the appropriate technology tools undoubtedly helps to minimise costs.

Author



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