

BWH News Letter

Volume 6 Number 2

The Three Forecasts

What will happen week ending February 28, 2011? Will sales be down, flat, or up? What categories will be popular? What will be the labor requirements? The truth is that no one really knows, this is the challenge for forecasting. If we could remove all uncertainty from our forecasting, every department could plan their execution years in advance. There would be no surprises and the only factor affecting results would be execution.

When preparing for a particular time period we need three forecasts: a "budget forecast" that establishes overall capacity (plant, equipment, overseas containers, number of employees, etc.); a "Capacity Allocation" forecast that is used to allocate the available capacity (production schedules, delivery schedules, staff schedules, etc.); and an "Execution Forecast" that best utilizes the allocated capacity (what must be on the truck, staff adjustments for snow days or illness, etc.) and alerts the business when expectations cannot be met.

With each of these forecasts there needs to be a feedback mechanism that measures their final accuracy and captures additional data that can be used to improve future forecasts.

Each forecast has a particular perspective of the business, assumptions upon which it is based, a normal lead time for preparation, an expected level of accuracy and precision, and other characteristics. Within an operating department, there may be various capacity allocation and execution forecasts because of different production lead times. For example, in order to prepare all their packaging materials, private label buyers may have to commit to specific items far in advance of brand buyers.

Understanding the role of these forecasts and how they interrelate goes a long way to achieving good operating results.

Budget Forecasts

The Budget Forecast is usually derived from the financial planning process and therefore has a top down perspective of the business. It is based upon a broad set of assumptions that include the general

economic outlook, planned mergers or acquisitions, new store openings, etc. It is normally expressed in dollar amounts.

The general lead time for budgets is a year, but budgets may be adjusted on a quarterly basis to reflect unanticipated changes such as new or closed stores and distribution centers, updated equipment, new union contracts, etc.

Budget Forecasts are primarily by operating department in order to give various managers and supervisors targeted performance objectives. Inventory forecasts may be by merchandising department. Open to buy and other inventory related forecasts may need to be at a lower level for categories which have long lead times.

The feedback mechanism for the Budget Forecast must identify exceptions to its assumptions and whether they should affect future budget forecasts. If the company made an acquisition, it might be possible to state results both with and without the unforeseen acquisition. This will allow evaluation of the original forecast and show how the new acquisition is performing.

Capacity Allocation Forecast

The Capacity Allocation Forecast begins to take a bottom up perspective of the business. It uses the adjusted Budget Forecast (reflecting recent activity), past item sales history, and industry experts to establish category level forecasts by location. It is the last chance to make capacity adjustments that were not planned (expand the delivery schedule by renting a truck; hire a part timer; etc.). The goal is to have forecasts at the level of precision necessary to allocate the capacity built into the budget. This includes factors such as warehouse shifts, delivery schedules, storage utilization, etc. Category Allocation accommodates the different cold chain, cube, weight, and handling requirements of various products. Changes to the operating environment such as installation of self check-out lanes must be accommodated when dollar budgets are converted to operating parameters such as labor hours.

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Capacity Allocation forecasts may have various lead times and levels of precision. Some departments such as Private Label may need to make item specific decisions. Long lead time supply chains that involve overseas production may also need to make item level forecasts. A tiered approach may be taken for some products, planning the "most likely" level and then using extraordinary methods to fill underestimated requirements (rented equipment, local purchases, outside labor, etc.).

The promotion program is a key assumption that impacts capacity allocation. For high-low operators who offer deep discounts promotions can have a huge impact. A big paper promotion may require special direct store deliveries in order to avoid clogging the regular warehouse channel with paper products. Certain meat promotions may require additional labor hours at the store for preparing the retail cuts. In-store displays may require early week merchandise and additional labor to set them up before sales actually occur.

Execution Forecast

This is where the rubber meets the road. Lead time and duration for the execution forecast will vary based on specific requirements. The execution forecast for replenishment will occur during ordering and cover the period until the next order can be delivered. The execution forecast for labor will often be dictated by union contracts that require it to be posted by a certain time for the coming week.

The fundamental goal of the execution forecast is to utilize all the capacity that has been allocated without requiring any further adjustments. All the operating departments are executing off the same Capacity Allocation plan so the goal is to avoid adjustments that would impact other departments. If the order requirements are insufficient to fill a planned truck, the goal should be to load some extra merchandise that will sell quickly. If a contract requires minimum hours per employee but the forecast is light, the schedule should be spread across more employees to ensure everyone meets their minimum.

The feedback mechanism should include variance analysis to estimate promotion impact. This could be done by substituting average movement for all the promoted items. Highlighting non-promoted items whose period movement is unusual will reveal

the effect of other factors such as weather or the impact of the promotion program on other items in the store.

The feedback mechanism for the execution forecast will develop conversion factors for future forecasts. Item sales are used to develop factors used to convert dollar sales to merchandise categories, units (cases), cube, and weight. Labor hours are used for a factor to convert dollar sales to labor hours (labor management applications will help identify hours associated with promotion activities such as building and removing end displays).

Getting There

Constantly improving each of these forecasts is important for an organization. Monitoring tools should record what each forecast was for particular time period (normally a week). After the actual numbers are in, the retailer can compare how each of the forecasts fared.

Getting to the point where forecasts drive planning and execution is critical. Effective retailers are moving away from "ordering to fill holes" to making certain the inventory and forecast are accurate. This helps the whole organization because it gives suppliers, buyers, warehouse operators, transportation schedulers, and store personnel the forecast they need to get the merchandise to the shelf. If they can plan in advance rather than merely respond to requests, everyone is in a better position to serve the customer.