

hawkeye planner



## ARE YOUR INVENTORY PROJECTIONS ACCURATE?

With increasing competition, product proliferation and innovation, as well as global supply chains with potentially long lead times, managing inventory has become increasingly important. Companies are instituting aggressive campaigns to reduce inventory as a part of working capital. However, many companies miss their goals because their teams create unrealistic estimates of inventory and then fall short of these estimates. What's worse, these same teams have trouble understanding and explaining the miss and consequently confidence erodes in meeting inventory goals. If these types of inaccurate projections are plaguing your supply chain performance, then it is time to reevaluate the inventory management process.

For a lot of companies, inventory projections are done independently or possibly by personnel that doesn't actually control inventory levels. In some cases, the projection is simply a best guess or a forecast based on historical levels. This leads to inaccuracy because of an important fact: **inventory is an outcome of other functions**. If we can understand and plan these functions, we can better manage inventory.

Simply put, **inventory is controlled by two types of material flows—Outbound and Inbound**. Outbound material movements are customer shipments for finished goods (FG) and production usage for work in process (WIP) and raw materials (RM). Inbound flow are created by material creation or production (generally for WIP and FG) or by material ordering and receipt (RM and some WIP and FG). Interestingly enough, a company actually controls most of these processes through material ordering and production. And although customer shipments may not be controlled, these are almost invariably forecasted and monitored by every business.

With this in mind, **inventory projections need to be calculated, not forecasted**. For any material at any stage, for each period of time, inventory should be calculated by this simple equation:

$$\text{Beginning Inventory} - \text{Demand} + \text{Supply} = \text{Ending Inventory}$$

Again, demand can be comprised of multiple components, and the same holds true for supply. Ideally this calculation for future periods should be made for **every**

**material** so that a detailed rollup is available. This projection is based on the inventory drivers and not a rough estimate. More importantly, when actual inventory is compared to projections, reasons for success and failure can be easily pinpointed. Inventory variances should either be because demand or supply did not come in as expected (inventory accuracy is a potential third source of variance; problems in following the plan are another). Once the reason for a variance is known, then supply chain personnel can correct the issues driving the variance. As a side benefit, the team will also understand the estimated accuracy for future inventory projections.

Inventory projections can seem mystifying, but they are relatively simple to do correctly. Projecting inbound and outbound flows helps to understand how and where the inventory is building. There is complexity in tracking FG, WIP and RM, but this level of detail is necessary for succinct inventory management. Getting a handle on inventory projections and variances is the first step to inventory reduction. Next step: understanding the inventory drivers in planning and execution ....