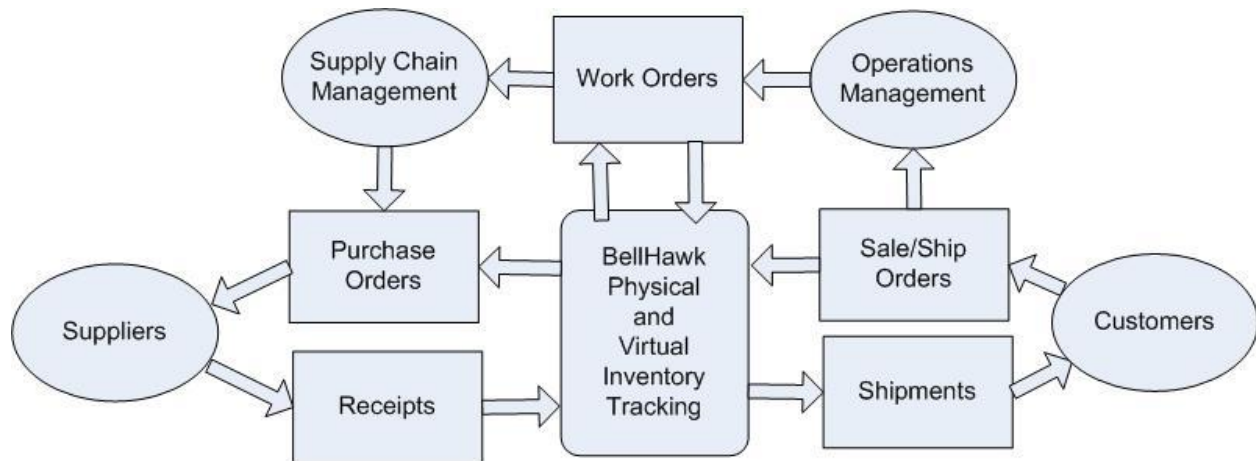


**Data Sheet for BellHawk Available Inventory Prediction Option**

In quick-turn, make-to-order manufacturing, it is not sufficient to just track physical inventory. It is also important to track what you have on order, what you are going to make or consume on work orders, and what you are planning to ship.

You might, for example, have 10 widgets in stock and release a work order to consume 8 of them only to find that another work order, for another customer order, has been issued which will use 6 of these. So although you might have 10 units in stock, you are out of inventory. Or, you might assume that you need to order another 4 widgets only to find out that you have already issued a Purchase Order (PO) for 6 more widgets, which are expected to arrive tomorrow.

The BellHawk Available Inventory Prediction (AIP) option solves this problem by tracking predicted inventory as well as physical inventory. It does this in its virtual inventory table which contains the following fields:

- Item Number
- Quantity to be added or subtracted
- Expected date of add or subtract
- Reason for Add or Subtract (PO, Work Order, Ship Order)

How this table is used is as follows:

- Whenever a PO is entered then add entries are made for all PO lines with the expected date of receipt.
- Whenever a Receipt is made against a PO line then this increases physical inventory and reduces the corresponding add quantity in the virtual inventory table.
- Whenever a Ship Order is entered then a subtract entry is made for all the SO lines with the expected date of shipment.

- When a shipment is made against an SO line the physical inventory is reduced and the corresponding subtract quantity in the virtual inventory table is reduced.
- When a work order is entered then subtract entries are made in the virtual inventory table for the materials to be consumed on the work order, based on its expected bill of materials, with the expected start date. Also separate add entries are made for the materials to be produced by the work order at the wanted date.
- Whenever materials are recorded into a work-order route step/operation, the physical inventory is reduced and the corresponding subtract quantity in the virtual inventory table is reduced.
- Whenever materials are recorded out of a work order then this increases physical inventory and reduces the corresponding add quantity in the virtual inventory table.

In this way, BellHawk keeps track of the expected materials to be added and subtracted from inventory and the dates when these changes are expected to happen. This data is used, along with the physical inventory to produce a screen which shows the available inventory, in real-time, with details of physical inventory, inventory to be received, inventory to be made and consumed on work orders, and inventory to be shipped on customer orders.

Details of the predicted inventory can also be exported as an Excel spreadsheet with details of when the available inventory will increase and decrease, with the reason for each change. This available inventory screen and Excel export then provide the real-time information needed by production and materials managers as to what materials will be available and when. This enables these managers to make informed make or buy decisions for needed materials.

While many of our clients use the available inventory prediction module (AIP) as the basis for issuing orders to buy or make materials for customer orders, this process can be made easier for make-to-order and quick-response manufacturers by the use of the Demand-Driven Materials Resource Planning (DRP) option. DRP facilitates the creation of purchase orders and work orders in response to lack of available inventory for new customer orders and work orders.

Together AIP and DRP provide a materials resource planning (MRP) capability that is much more suitable for short run, quick-turn, make-to-order, manufacturers than the MRP functionality embedded in most ERP systems.

The MRP functionality embedded in most ERP systems is designed for planning the production and purchase of materials for long-run manufacturing orders based on several months of projected sales and operations planning (S&OP) demand. This is very different from the materials planning needed for quick-turn make-to-order manufacturing where lead times of a few days in response to customer orders are typical.

With the assistance of MilramX to do the automated data exchange, the AIP and DRP modules can be used to complement the MRP functionality of ERP systems. Here the ERP/MRP system is used to do long range materials planning and to order long-lead materials. AIP and DRP can be used to generate supplemental purchase orders for additional materials when needed, which can be included in the next MRP long range materials plan.

For more details, please see www.BellHawk.com.