Columbus® | Food

4 Ways to Digitize Your Brewery

Craft brewers have a number of system requirements that are typical of many manufacturers looking to deploy an ERP system: material planning, cradle to grave lot traceability, bar-codes for materials handling, production scheduling, etc. However, there are many business processes that are unique to this burgeoning industry.

As breweries begin to grow in size and sophistication, they encounter an increasing need to start managing and controlling their unique processes within the ERP system, as opposed to relying on manual and home-grown systems.

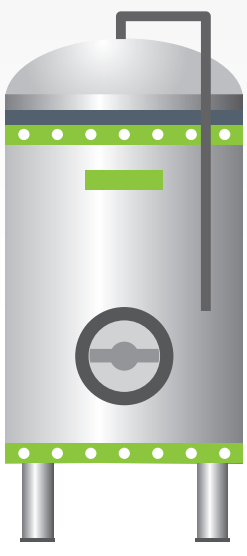
1. Tracking barrel aged beer

Small batches of special beer creations are often aged in barrels, which may be stored in a warehouse for extended periods of time and even transferred to different locations prior to being packaged and made available for sale.

As the size of a "barrel program" grows, it can be challenging to keep track of 1) what beer is currently stored in which types of barrels; 2) where the barrels are located; and 3) what types of beer have passed through a given barrel in the past (thus establishing a "flavor profile").

With Microsoft Dynamics ERP, we have used the concept of "License Plate Numbers" (LPNs) to assign a unique ID to each of these barrels. We can then track the beer that is assigned to an LPN, track the location and movements of the LPN, and also see a history of how many times a barrel has been used and what types of beers were stored in the barrel.

2. Blending of batches in a bright tank

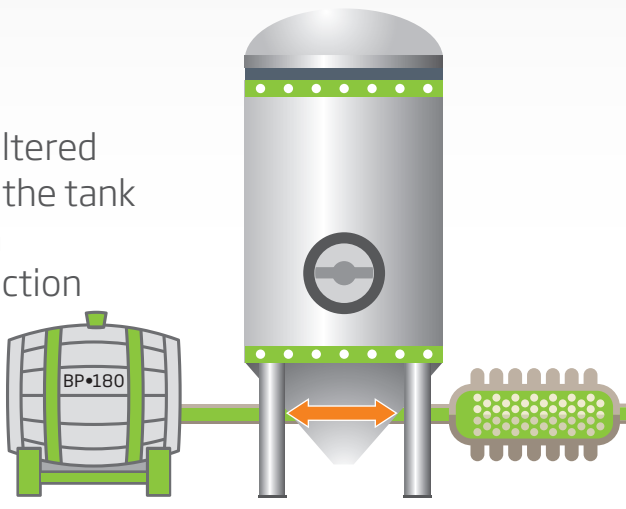


Bright tanks are where clarified beer is stored after it has been filtered and before it gets bottled or placed in a keg / cask. It is not uncommon for a quantity of beer from one production batch to remain in a bright tank when a new production batch is added to the tank. As a result, two separate batches of beer that would ordinarily be tracked with two distinct lot numbers, have now effectively become blended into a single "combined" batch, which is then packaged and sold to customers.

We have developed an automated routine to merge these batch numbers to reflect the blending of the beer in the bright tank, allowing for a more accurate and true lot traceability.

3. Batch processing resulting in the production of both filtered beer and unfiltered beer

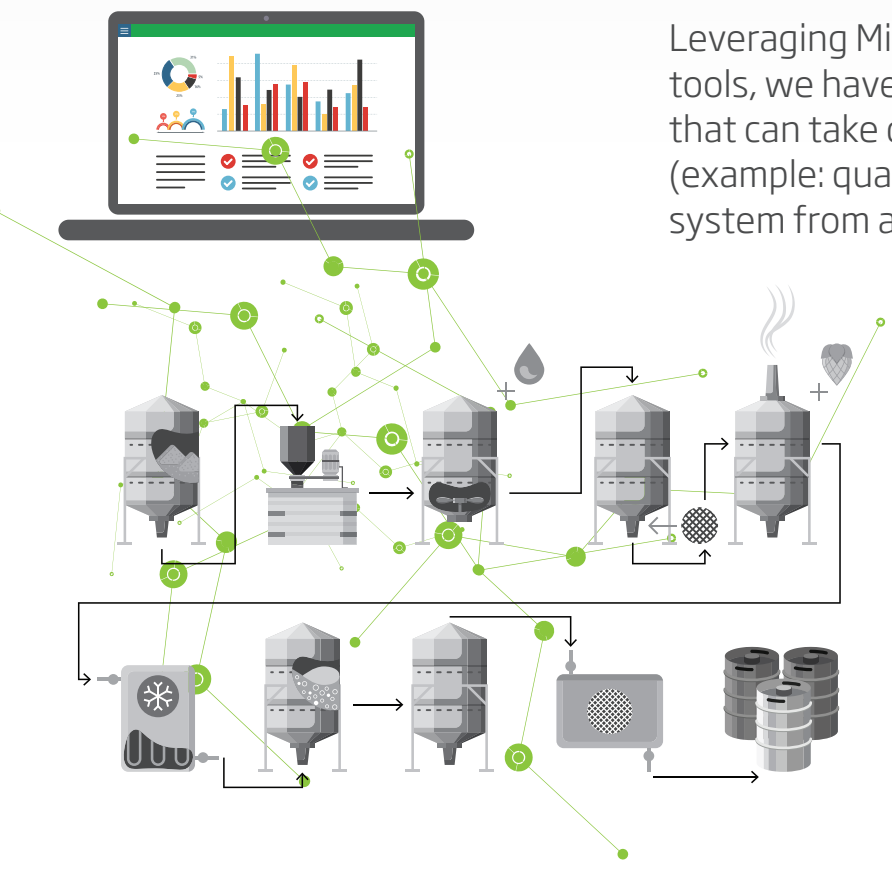
In some cases, during the course of producing a filtered beer, a quantity of unfiltered beer is taken out of the tank prior to filtering. Sometimes, this might even be a last-minute decision that is made after the production order has been started. This unfiltered beer might then be barrel-aged or have special ingredients added to it in order to produce a batch of a special limited offering product.



Because the process manufacturing functionality within Microsoft Dynamics allows for the creation of coproducts on a single production order, we can easily use one production order to produce both the unfiltered and filtered beer, and accurately track them as two distinct products.

4. Integration to Brewing Systems

Because brewers need to swiftly make decisions about which brew systems, fermentation vessels, and bright tanks to use, it is important for them to interact directly with the ERP system if we are to maintain timely and accurate information about the production process.



Leveraging Microsoft Dynamics' strong integration tools, we have been able to build integration points that can take direct feeds from the brewing system (example: quantities of malt that flow into the brew system from a silo can feed directly to the ERP production order, quantities of filtered beer flowing through a filter outlet into a bright tank are fed directly to the production order).

We have also built touch-points allowing for brewers to manually record transactions in the brewery floor systems that then get integrated to the ERP system.

Learn more at:
www.columbusglobal.com/craft