

PRODUCT SPEC

Inventory Redesign

OWNER: Emily

TARGET RELEASE: Sprint End on **11/23/16** Release on **11/28/16**

Business Rationale

- Need to simplify the finished product structure to facilitate:
 - Inventory management and analytics
 - Setup/onboarding process
 - Decreased support/training
 - Associate Finished Products with SKU's so we can more accurately associate with quickbooks

User Stories

User: Owner / Ops Manager

- As an owner or ops manager, I need to be able to setup my finished products quickly, and organize them based on beer type, and sellable product types. I want to define which beer types are packaged in what ways so I can monitor demand to separate packaging profiles, as well as the cost of packaging materials. I want to be able to run analytics for a beer type as a whole, across all packaging profiles for that product, as well as on packaging profiles as a whole, across all beer types. When I want to make changes to my packaging profiles based on business and sales analytics, I should be able to make these changes quickly and universally, while still being able to handle exceptions.

User: Master Brewer

- As a master brewer, I need to be able to schedule packaging runs for different products and packaging profiles based on requests from sales and management. I want to organize my packaging lines in advance and know exactly what supplies I will need to properly complete each packaging run. When scheduling packaging runs, I want to minimize the amount of adjustments I need to make to a packaging line between packaging runs. So if I have 3 different beer types to bottle, I might schedule the same size bottle to be packaged back to back when transitioning from one beer type to the next. I want to track losses based on beer type, packaging profiles, and packaging line so I can help pinpoint areas or weakness. I want to know how much beer I completed overall, regardless of packaging profiles, and I want to know how much beer I made of each size and type of container, so I can re-package efficiently without having to re-bottle or re-can.

User: Sales

- I am concerned with current packaged inventory based on beer type, packaging profile, and sku number/cost. When making a sale, I need to know what different options I can offer my client for a particular type of beer, and how much each option will cost them. I want to know total volume of beer available, as well as size/type of container, and the packaging profiles. I should be able to request a re-packaging based on customer demands, and know whether or not that repackaging will be possible. I should be able to navigate the inventory overview quickly and simply, so that I can find alternatives to sales orders when requested product inventory is low. I need to track sales based on product and variant so I can know which products are selling better than others and why.

User: Accounting

- I want to track sales based on sku number. I need to track cost of beer, cost of packaging, and sales revenue for every product and for every packaging profiles. I should be able to easily associate products in brewhouse with products in quickbooks. I should be able to recommend repackaging options based on cost and revenue. I should be able to identify packaging profiles that are costing the brewery more money than they are worth, as well as those that are producing the most profit.

User: Warehouseman

- I need to know how much inventory I have of each SKU and how these items are stored in the warehouse. I would like to know how many of case A fit on a pallet, and how many kegs of each size and shape belong to each product. I need to be able to organize the warehouse floor and verify inventory quantities found in brewhouse with physical quantities at a glance.

Details

PROTOTYPE: <https://invis.io/GX9BU008Y>

- BREW-250 <https://distillerysolutions.atlassian.net/browse/BREW-250>
 - DB restructure
- BREW-254 <https://distillerysolutions.atlassian.net/browse/BREW-254>
 - Add Packaging Profiles (NEW)
- BREW-253 <https://distillerysolutions.atlassian.net/browse/BREW-253>
 - BREW-264 <https://distillerysolutions.atlassian.net/browse/BREW-264>
 - Add/edit finished product (NEW)
 - BREW-265 <https://distillerysolutions.atlassian.net/browse/BREW-265>
 - Add/edit FP Variant (NEW)
- BREW-252 <https://distillerysolutions.atlassian.net/browse/BREW-252>
 - Details view (NEW)
- BREW-251 <https://distillerysolutions.atlassian.net/browse/BREW-251>
 - Overview (NEW)
- BREW-258 <https://distillerysolutions.atlassian.net/browse/BREW-258>
 - Remove storage profiles from Raw Materials and supplies and make sure units are correctly associated to the “track by field”. Associated forms:
 - Add / receive PO
 - Item details
 - Item overview
 - add/edit
 - Add Materials to batch
 - Recipe add/edit/apply
 - Start brew/boil
- BREW-255 <https://distillerysolutions.atlassian.net/browse/BREW-255>
 - Begin Packaging Run (changed)
 - Complete Packaging Run (changed)
- BREW-259 <https://distillerysolutions.atlassian.net/browse/BREW-259>
 - Add/edit PO (changed)
 - Receive PO (changed)
 - Change PO Status (changed)
- BREW-256 <https://distillerysolutions.atlassian.net/browse/BREW-256>
 - Add/edit Sales Order (changed)
 - Change Sales Order Status (changed)

Steps to be completed only after all else has been completed and approved:

- Add finished product - whole setup process, including variants on one form
- Change Finished product overview to pivot table.

Other Considerations:

- FIFO
- Beer Cost
- How to handle packaging profiles and attached supplies?

Do Not Pass Go

To be addressed at a later time:

- Setup:
 - Add/edit finished product
 - Finished product list
 - Add/edit packaging profiles
 - Packaging Profiles list
 - Add/edit inventory categories
 - Inventory Categories list
 - Add/edit Warehouses
 - Warehouse List
 - Add/edit Kegs
 - Add/edit Barrels
- Repackaging Run
- Batch Types/ Recipes
- Add/edit Storage Profiles (pallets)
- Deactivate Variants
- Deactivate Products
- Deactivate Raw Materials
- Deactivate Supplies
- Deactivate Packaging Profiles
- Deactivate Storage Profiles
- Additional Warehouses
- Tax Status
- Add/edit Raw Material categories
- Assign raw material categories
- Add/edit Supply categories
- Assign supply categories
- Assign volume associations to supplies

Questions | Further Research

- What does it look like to export products from quickbooks?
- Barrels? Empty barrels = inventory? Full barrels = inventory?
- Serving Tanks?

- Associate FP with recipes / batch types

Technical Notes

DB Changes:

- **New Finished Product Flow**
 - Add table `packaging_profiles`
 - Add Foreign Key in inventory_items for packaging_profiles (i.e. packaging_profiles_id)
- **New Category System**
 - Change inventory_category to inventory_type
 - Duplicate inventory_reporting to inventory_category (keep parent/child relationship)
 - Change inventory_reporting to _ttb_inventory_reporting
 - Add some sample data to inventory_category (Hops, Grains, Yeast, General Supplies, Container_Types etc...)
 - Remove container_type_ref in containers and add them into new inventory_items category
- **New Inventory Metric/Meta System**
 - Add Inventory_Meta table (inventory_item_id, Inventory_item_meta_type_id, Value)
 - Add Inventory_Item_meta_type (Id, Name) i.e. Alpha, Beta, Grain Potential, etc...