

## Business Running Case: Investing in a New BrewPub? (Conceptual Study by the Owner of an Existing Restaurant/Tavern)

### New BrewPub: Starting Points

The owner of an existing restaurant/tavern operation is considering an opportunity to increase (locally) the competitiveness of the company by investing in a new system (BrewPub) for brewing craft beer (draught beer) in-house. In pursuing this proposed venture, the owner of the existing operation seeks to capitalize on national and regional trends that demonstrate skyrocketing interest in craft and specialty beers<sup>1</sup>.

After a thorough evaluation of a broad spectrum of offers, the owner selects a proposal for a capital project with the following starting parameters:

### System Characteristics of a 40 barrel (8 tanks, 155 gallon/tank) BrewPub System

- Turn-key system (brand-new equipment, consists of eight 155 gallon tanks = 40 bbl) for simultaneously brewing of up to eight types of craft beer on site. System characteristics:
  - (i) The patented malt extract system incorporates brewing, fermenting, and serving from the same tank.
  - (ii) The brewing system includes heater, combination fermentation/serving tanks, glycol chiller, stainless steel faucets or tap directly on tank, and all hoses, valves, carbonator, and gauges required for brewing and also for the draught beer system (connection from the serving tank to the faucet in the restaurant OR to the draught beer tapped in kegs, prepared for wholesale).
  - (iii) The system provider is offers complete sets of ingredients for making of up to 25 different types of crafted beer (see Appendix 1 for more details). All recipes have been carefully crafted to create refreshing, highly drinkable beers.
- Two possible distribution models:
  - (i) Draught beer (measured in pints) for direct sale (retail) in the existing restaurant/tavern;
  - (ii) Draught beer (tapped in kegs), to be distributed through licensed beer wholesalers<sup>2</sup>;
  - (iii) Kegged and/or tanked draught beer should always be kept cold, which the industry has standardized at 38° F. Under these conditions, the storage life of the craft beer is 30 days<sup>3</sup>.
- Annual maximum production capacity of a 40 bbl BrewPub System is based on the following assumptions:
  - (i) One pint = 16 oz = 474 ml
  - (ii) One keg = half barrel = 15.5 gallons = 124 pints

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<sup>1</sup> The Brewer's Association reports that small and craft beer producers are seeing success even in a weak economy. In the first half of 2013, dollar sales "were up 15 percent" and "volume of craft brewed beer sold jumped 13 percent."

Retrieved from URL: <http://www.brewersassociation.org/pages/media/press-releases/show?title=brewers-association-reports-continued-growth-for-u-s-craft-brewers>

<sup>2</sup> To learn more, review [www.ttb.gov](http://www.ttb.gov) and <http://nbwa.org/industry-tech/how-to-become-a-beer-distributor>

<sup>3</sup> To learn more, review [http://craftbeerrestaurant.com/Craft\\_Beer\\_Restaurant/Storage\\_Guidelines.html](http://craftbeerrestaurant.com/Craft_Beer_Restaurant/Storage_Guidelines.html)

- (iii) One bbl = brewer's barrel = 31 gallons = 2 kegs = 117.4 liters = 248 pints
- (iv) One tank = 155 gallon = 5 bbl = 10 kegs = 587 liters = 1240 pints
- (v) Maximum capacity of a 40 bbl BrewPub system (8-155 gallon tanks):

|        | <u>1 Tank</u> |   |   |   |                | <u>8 Tanks</u>     |               |  |  |
|--------|---------------|---|---|---|----------------|--------------------|---------------|--|--|
| Week:  | 1             | X | 1 | = | 1 X 155 g =    | 1 X 8 X 1,240 p =  | 9,920 pints   |  |  |
| Month: | 4             | X | 1 | = | 4 X 1,240 p =  | 4 X 8 X 1,240 p =  | 39,680 pints  |  |  |
| Year:  | 48            | X | 1 | = | 48 X 1,240 p = | 48 X 8 X 1,240 p = | 476,160 pints |  |  |

- One week production cycle. The brewing process includes:
  - Step 1: sanitize tank (10 minutes) and mix ingredients (30 minutes)
  - Step 2: fermentation (5 days)
  - Step 3: chill tank and serve (1-2 days)
- Minimal size requirements:
  - (i) 100 sq ft of tiled floor space (floor able to hold 1800 lbs on three legs)
  - (ii) standard floor drain
  - (iii) 3/8 inch hot and cold water lines (with valves)
  - (iv) 4 standard electrical outlets
- Production personnel: two workers (one per shift)
- Training program for:
  - (i) production personnel
  - (ii) sales force
  - (iii) manager of the business unit BrewPub
- Regular delivery to the business unit of complete sets of ingredients for selected types of crafted beer (see [Appendix 1](#))
- Service & maintenance contract (first 12 months included in the price)
- Offered final price for the package: \$150,000
- Option: Financing through a private financing institution is available



Combination fermentation/serving tank  
capacity 155galon = 1,240 pints

## Conceptual Study: Starting Points

### The owner of the existing restaurant/tavern:

- owns the space needed for the new project, but has to rent an additional 200 ft<sup>2</sup> for the wholesale operation (selling of kegs);

- would like to separate the new operation from the existing business in the restaurant/tavern and is planning to manage it as a separate business unit, fully controlled by the existing company;
- is preparing a database with all market and product related information (please review AD715 course website, page 'Business Running Case').

**Before confirming/rejecting the offer, the owner would like to prepare a conceptual study, structured as a managerial report that will address the following questions:**

1. Define the overall goals and objectives of the new business unit.
2. Based on the federal and state's specific legal rules and regulations<sup>4</sup>, to determine (i) whether it is legal to acquire and hold a brewers permit, and (ii) whether the capacity output (225.4K liters annually) of the turnkey system would comply with the state alcoholic beverages acts/codes.
3. Define the business strategy for the next three years of operation of the new business unit (the BrewPub).
4. Define how different functional strategies (e.g. marketing, innovation, operations, organization, finance) are influencing the overall parameters of the business strategy
5. Based on selected critical success factors and key performance indicators, evaluate the proposed strategy and plans.
6. Prepare an implementation plan for the first six months of operation (define specific actions and resources needed).
7. Prepare and present a summary of the results of the conceptual study.
8. Formulate the rational for a decision whether
  - (i) to accept the offer, or
  - (ii) to redefine the starting parameters of the initial request for quotation and to request a new quotation (based on new/modified starting points, as discussed in the conceptual study), or
  - (iii) not to invest in a BrewPub at all.

**The conceptual study will be prepared with the help of a *business simulation package*, called '*Strategies and Decision Support in Organizations*'**

- To learn how to use the business simulation, review the 'Tutorial for AD715: *Introduction to the Business Simulation 'Strategies and Decision Support in Organizations'*'.
- The software application '*Strategies and Decision Support in Organizations*' is preinstalled in the file folder AD715, accessible within the virtual labs, assigned for AD715 (<https://met-vlabs.bu.edu>)

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<sup>4</sup> Based on legal information on alcohol state laws, publish on [www.ttb.gov](http://www.ttb.gov) official state government sites, or third party sites, such as [http://www.law.cornell.edu/wex/table\\_alcohol](http://www.law.cornell.edu/wex/table_alcohol)

## Appendix 1: Recipes, Ingredients, and Supply Kits for the Proprietary BrewPub System

### A: Recipes and Ingredients

The provider of the turnkey brewing system is offers:

- (i) a large inventory of the most popular styles designed to appeal to a broad range of tastes, from novices to experts;
- (ii) an optional custom recipe program in which the brew master of the system provider formulates tastes exclusively for the client (the buyer of the brewing system). This can include reverse engineering to simulate and improve the client's choice of branded product;
- (iii) inclusive batch kits that provide the precise ingredients and supplies needed to brew a perfect batch of beer.

The batch ingredient and supply kits include concentrated brewers grade malt extracts and other proprietary ingredients (also called brewer's wort) which are

- (i) made based on a multiple step infusion brewing process for high fermentability and free amino nitrogen (FAN) levels, which is critical to good brewing;
- (ii) carefully vacuum evaporated to retain its full, rich flavor;
- (iii) all natural – they are not containing added caramels, sugars, preservatives, or additives of any kind.

All recipes are formulated and standardized for the patented malt extract BrewPub system, and are prepared based on the highest international standards for quality control and assurance of the final products.

### B: Estimates – Production Costs per Products [\$ per pint]

| # | Products                      | Production Costs (Variable Costs), per pint |                 |                 |                 | Notes         |
|---|-------------------------------|---------------------------------------------|-----------------|-----------------|-----------------|---------------|
|   |                               | Materials                                   |                 | Labor           | Others          |               |
|   |                               | Ingredients (*)                             | CO2 + H2O       |                 |                 |               |
| 1 | Pilsner All-Malt Beer         | \$0.35                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (**); (****)  |
| 2 | Bavarian Lager All-Malt Beer  | \$0.35                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (**); (****)  |
| 3 | Light Wheat Beer              | \$0.33                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (***); (****) |
| 4 | Red Wheat Beer                | \$0.33                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (***); (****) |
| 5 | Pale Ale Beer                 | \$0.33                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (***); (****) |
| 6 | Nut Brown Ale                 | \$0.33                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (****)        |
| 7 | Bock Dark Beer                | \$0.33                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (***); (****) |
| 8 | Stout Beer                    | \$0.33                                      | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (****)        |
| 9 | Selection of 17 more products | \$0.33-\$0.35                               | \$0.02 - \$0.05 | \$0.15 - \$0.25 | \$0.22 - \$0.35 | (****)        |

- Notes:**
- (\*) The cost per product is based on the price of a delivered, complete set of ingredients (one supply batch kit is required for the production of one 155 gallon tank of beer)
  - (\*\*) Products recommended for both direct sales in the existing restaurant/tavern AND as draught beer tapped in kegs (wholesale)
  - (\*\*\*) Products recommended for direct sales in the existing restaurant/tavern
  - (\*\*\*\*) Cost per products for CO2, H2O, Labor, and Others varies for different locations