



Cicerone Brewery GmbH

Business plan

Cicerone Brewery GmbH

Entrepreneurship (T3181) – TH Köln

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Description of the business

Cicerone Brewery GmbH consists of a micro-brewery that produces craft beer of various types, adding the possibility for the interested to try dishes that go hand-in-hand with a specific beer type. A menu explaining what flavors are paired up with which beers will be provided. Recommendations on pairings, explanations of the matching selections, and a thorough description of the beer when requested will be offered. The number of beers brewed will vary by demand, starting with seven options, with one of the flavors being a monthly special continuously changing.

In a relaxed environment, with a classical bar set up (a long bar with stools so you can sit alongside, a few high tables for those who would like just a quick visit and a table area) and a beer garden, customers will be encouraged to try the added value of the microbrewery: flavor collision of the house's beers with the right selection of food.

Located in the city of Cologne, Cicerone Brewery GmbH targets beer lovers, culinary adventurers and the general crowd interested in a different free time experience.

The breakeven point of the company will be achieved in 5,5 years and the cumulative dividend after 10 years of operation will be 3.772.725,0 €.

Mission

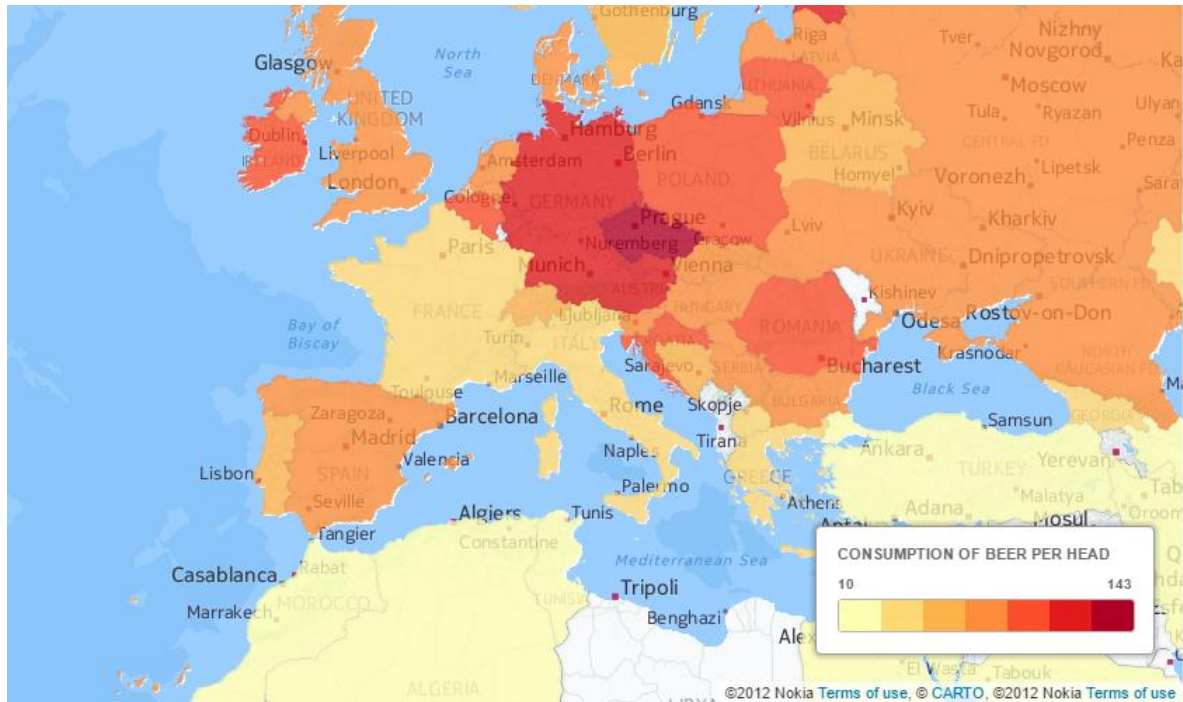
Cicerone Brewery is a pioneer in craft beer, providing the opportunity to its customer to embrace a complete new side of drinking beer. Our mission is to show the pleasure of discovering that different types of crafted beers can enhance the flavors of food. Firm belief that a good beer is done for the joy of drinking it and not just as a product to sell drive us. An experience that can be enjoyed by beer lovers and people open to try new things. The company workers know their beer and part of the product is the hospitality, a place where your bartender and your waiter can talk you through the beer. A working environment defined by education, manners, and respect accompanied by a training in the art of beer for all the employees. The goal of the business is to reach a high quality and being the "go to" brewery.

Vision

Use the variability of beer to provide culinary experiences, enhance beer culture and standardize the idea that beer is a complex and interesting drink.

The Market

1. Beer consumption per capita: ¹

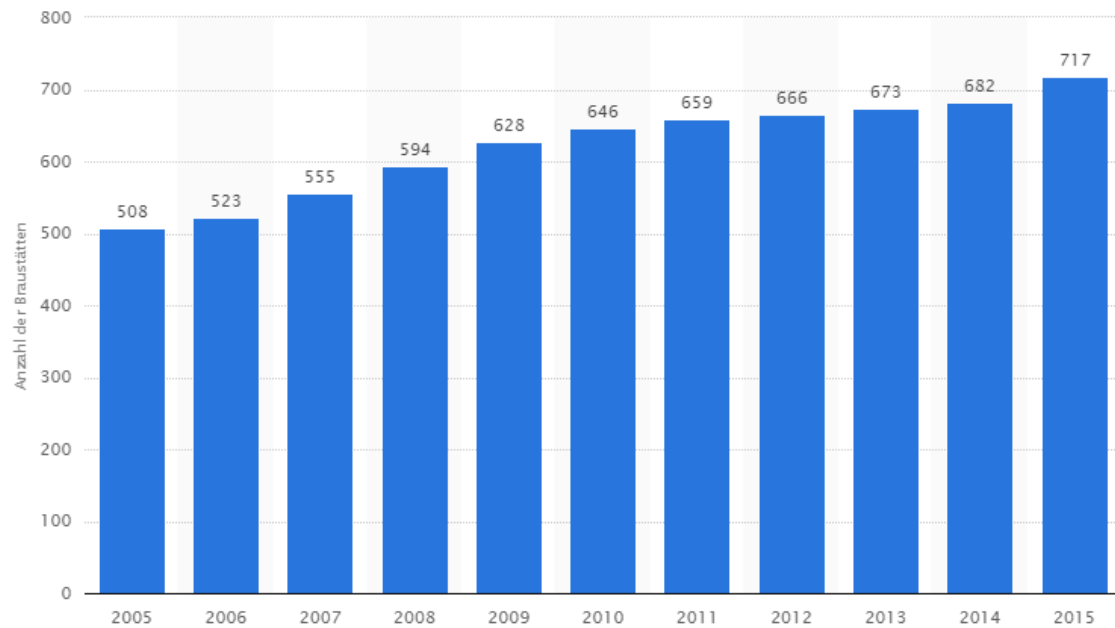


Germany is the second country, after Czech Republic, where beer is most consumed (110 liters is the consumption per capita).

¹ <http://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/leisure/11237013/Mapped-Beer-sales-around-the-world-who-drinks-the-most.html>

2. Number of microbreweries in Germany: ²

Anzahl der Mikrobrauereien in Deutschland in den Jahren 2005 bis 2015



© Statista 2016

Weitere Informationen:
Deutschland

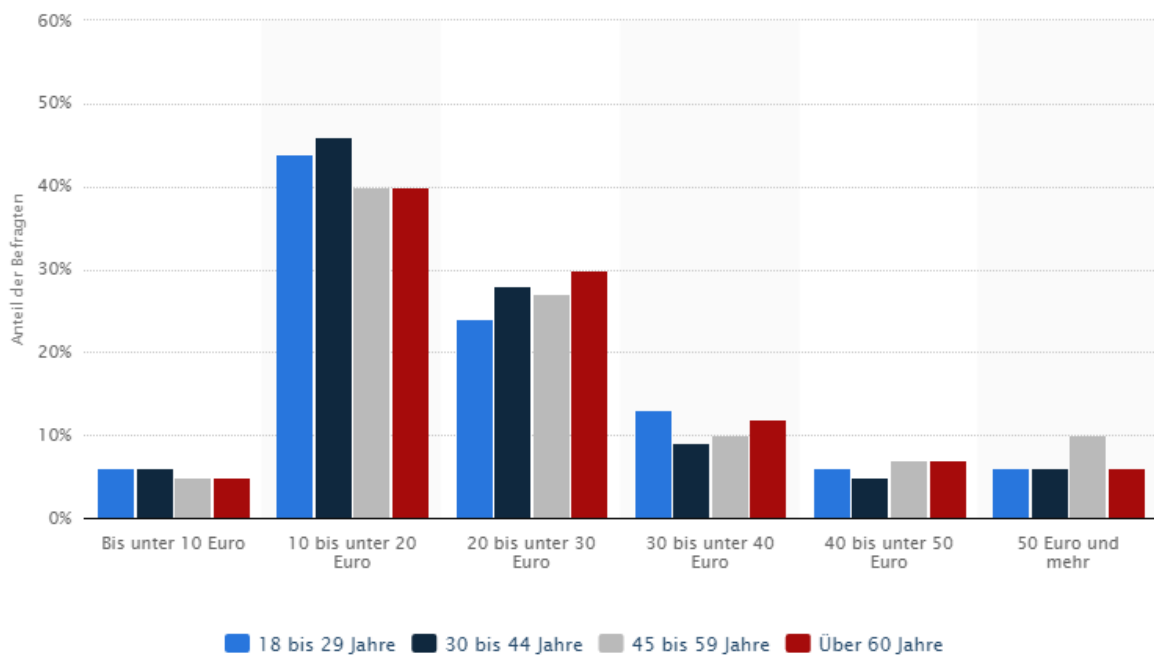
Quelle:
Statistisches Bundesamt

The statistics above show the number of microbreweries in Germany - defined here as breweries with a beer output of a maximum of 1000 hectoliters per year - in the years 2005 to 2015.

² <https://de.statista.com/statistik/>

3. How much money did Germans spend the last time they went to a restaurant?²

Wie hoch war in etwa der Betrag, für den Sie bei ihrem letzten Restaurantbesuch für sich selbst Essen und Getränke bestellt haben? (nach Alter)



© Statista 2016

Age	Up to 10 Euro	11 to 20 Euro	21 to 30 Euro	31 to 40 Euro	41 to 50 Euro	More than 50 Euro
18 to 29 y.o	6%	44%	24%	13%	6%	6%
30 to 44 y.o	6%	46%	28%	9%	5%	6%
45 to 59 y.o	5%	40%	27%	10%	7%	10%
>60 y.o	5%	40%	30%	12%	7%	6%

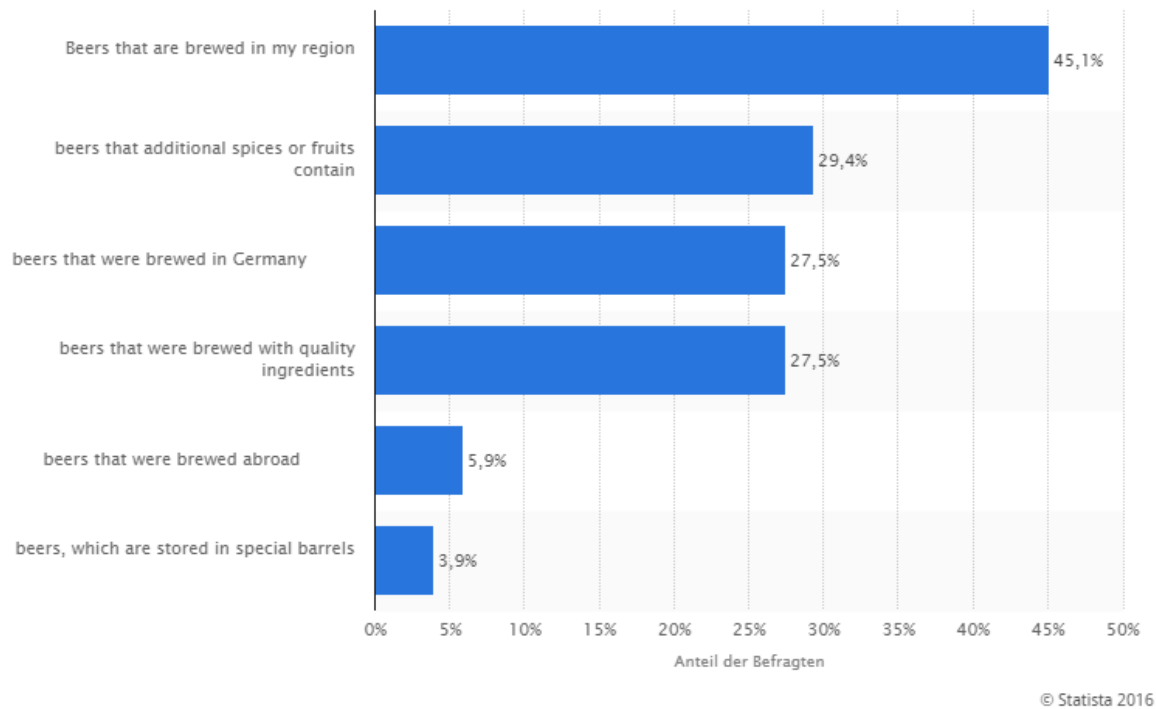
The statistics show the results of a survey commissioned by *Bookatable* on the satisfaction of the guests in the German gastronomy from the year 2013.

The participants were asked for the amount of money spend in what they ordered (foods and drinks) for themselves during their last visit to a restaurant - regardless of who paid the bill. The results were subsequently classified according to age groups. Exceeding 100 % or missing percentages are subject to rounding.

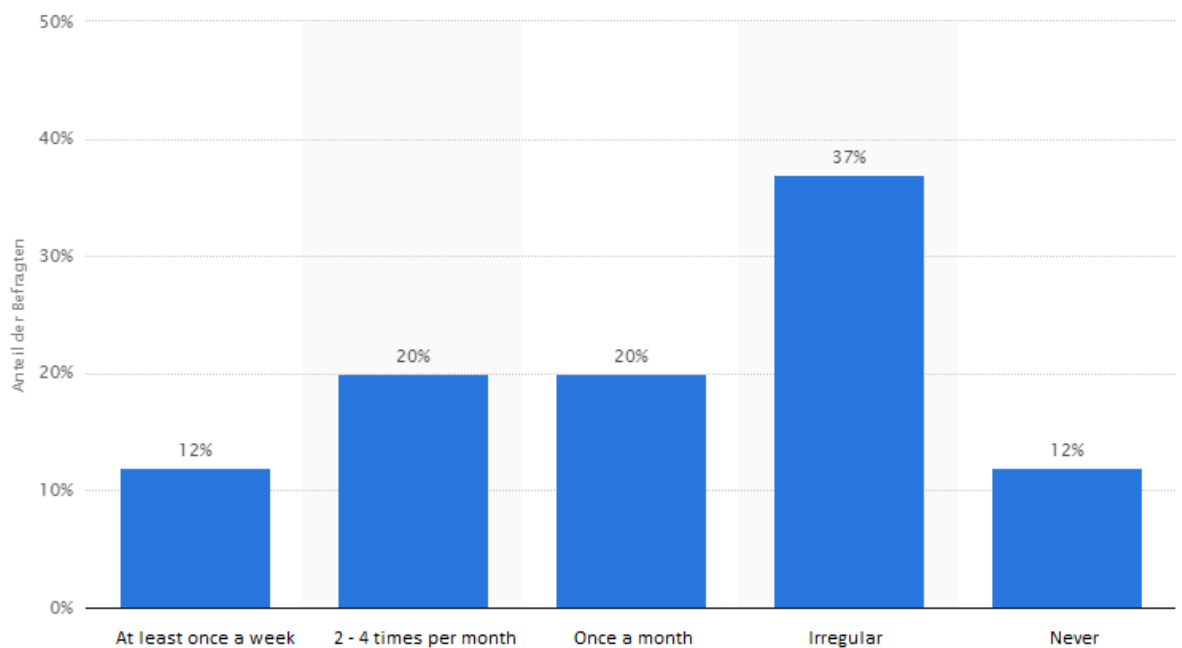
According to CHD Expert (foodservice industry marketing trends & data), the average per capita expenditure for food outside home per year in Germany is 804 euros.³

³ <http://www.bild.de/ratgeber/2010/studie-so-schlemmen-die-deutschen-11771716.bild.html>

4. What are the consumers looking for in a Craft-beer in Germany? ⁴



5. How often do Craft beer consumers buy Craft beer in Germany? ⁵



The statistics show the results of a survey conducted in Germany on the buying frequency of Craft Beer in 2016. About 20 percent of the interviewees bought Craft Beer once a month.

⁴ <https://de.statista.com/statistik/daten/studie/549676/umfrage/umfrage-zu-den-bevorzugten-craft-bieren-in-deutschland/>

⁵ <https://de.statista.com/statistik/daten/studie/549718/umfrage/umfrage-zur-kaufhaeufigkeit-von-craft-beer-in-deutschland/>

Sector Growth

As stated by Beer Marketer's Insight⁶, craft brews provide more options, making craft breweries successful at local scale. Craft Brewery participation was 7 % of sales share dollars in U.S. and the figure holds for other beer drinking countries.

Technavio's⁷ market study concluded that a trend towards craft breweries in Germany is defined by growing demand by young urban populations as exemplified by Berlin with 20 microbreweries engaged already. Germany trends follow US. Trends. Market growth is expected to continue rapidly until 2019.

Millennials are other reason for an expanding market, they are defined as a generation interconnected by the internet, making them people that is interested in defining a unique personality, craft beer offers individuality as the tastes and types are plenty and as Marcella M. LaHara⁸ discusses, a 37 % of people in this group consider beer their favorite drink in the US.

Competitors

- Weissbrau Köln (<http://www.weiss-braeu.de>)
- Alter Bahnhof Frechen (<http://www.gleisbrauer.de>)
- Hellers Brauhaus (<http://www.hellers-brauhaus.de>)

	Average Bier Price (0.2 L)	Average Dish Price	Most Expensive Dish	
Weissbräu Wiess	1.80 €	12.90 €	16.50 €	Wienerschnitzel vom Kalb
Alter Bahnhof Frechen	1.60 €	12.90 €	18.00 €	Lammsteaks
Hellers Brauhaus	1.70 €	12.65 €	17.30 €	Grillhaxe

Opportunity

- Germany's consumption of beer per capita, Cologne as a city of cultural diversity, market numbers proving the growth of craft beer in the global market, penetration of craft breweries in the urban centers of Germany.

- 110 liters of beer consumed per person per year (in Germany) and as Technavio stated, German trends have been following the US trends regarding craft brewery, meaning sustained growth until 2019 at least and increasing participation.

- Cologne's urban center (around 50 % of the population is between 15- 50 years)⁹ provides the environment described by the market studies and has low competition in the specific area

⁶ <http://www.investopedia.com/financial-edge/0310/beer-mergers-are-the-micro-brewers-doomed.aspx>

⁷ <http://www.finanznachrichten.de/nachrichten-2016-03/36878376-technavio-identifies-three-key-trends-impacting-the-beer-market-in-germany-through-2019-004.htm>

⁸ LaHara, Marcella M., "BarLee: Business Plan for an Urban Beer Garden" (2013). Syracuse University Honors Program Capstone Projects. Paper 89.

⁹ http://www.stadt-koeln.de/mediaasset/content/pdf15/cologne_facts_and_figures_2015.pdf

of craft brewery, but a big bar scene that is moved by students. Students are a large part members of the millennial generation, which is promoting craft beer culture.

The product (technical description)

Beer components and ingredients ¹⁰

Beer can be defined as any fermented beverage made with a cereal grain. The main components present in beer are: water, ethanol, carbohydrates, carbon dioxide and proteins; nevertheless, the composition of finished beers varies since many minor components are added to modify its flavor.

The four main ingredients used to elaborate beers are: malt, hop, yeast and water. Table 1 briefly describes the role of each ingredient.

Table 1. Core ingredients used for beer preparation.

Malt	Seeds of a grain (barley, wheat, oats, rye, etc.) that provides starch and the enzymes able to break down the starch into fermentable sugars
Hop	The flowers of this plant are used to give bitterness and flavor
Yeast	Responsible for the fermentation process
Water	Accounts for up to 95 % of beer's content

Beer making: standard brewing process

1. Milling: the grain seeds are first converted to malt. In this process the seeds are soaked in water on and off for approximately two days, then they are spread on a floor (provided with moist air) and turned regularly allowing them to sprout. The germinating seeds are heated around 80 °C – 100 °C in a kiln. Finally, the seeds are crushed using a mill.
2. Mashing: to obtain the fermentable sugars, the crushed seeds are stirred with hot water in a mash tun.
3. Wort separation: the water containing the sugars is separated from the spent grains by filtration.
4. Boiling: using a heater, the sweet water is boiled for an hour in a kettle or a copper. At this point, hops are added.
5. Chilling: the mix is cooled in a heat exchanger. The hops and the proteins that coagulated during the cooling process are removed.
6. Fermenting: the mix is moved to a fermenter, where the yeast is added to allow the process of fermentation. If the fermenter is heated by the fermentation reaction, cooling must be provided to avoid undesirable tastes.
7. Conditioning: the beer is kept in contact with the yeast to achieve a certain flavor (the time depends on the type of beer being prepared). The beer is filtrated or centrifuged to remove the yeast and other particles.

¹⁰ Barth, R., 2013. The chemistry of beer: the science in the suds. New Jersey: John Wiley & Sons, Inc.

8. Packaging: carbon dioxide is added under pressure and finally the beer is put into kegs for sale in bars.

Beer quality

To assure the efficiency of the brewing process and the quality and consistency of the final product, several tests are performed during various stages of the beer elaboration. Table 2 summarizes the main evaluation procedures that should be performed.

Table 2. Tests performed to evaluate beer quality.

Parameter	Description	Method
Carbohydrate content	Evaluates the mashing process and monitor the progress of the fermentation (estimate the alcohol content of the beer)	Specific gravity Equipment: hydrometer
Temperature	Evaluates the mashing process (measure appropriate temperature for enzymes to work)	Equipment: thermometer
Color	Evaluates aesthetics characteristics of the different types of beer	Absorption of light at a specific wavelength Equipment: spectrophotometer

Types of beer and their food pairings ¹¹

Explanation of Quantity Style Statistics

Original Gravity (OG): The specific gravity of wort (unfermented beer) before fermentation. A measure of the total amount of solids that are dissolved in the wort, it compares the density of the wort to the density of water, which is conventionally given as 1,000 at 15,55°C.

Final Gravity (FG): The specific gravity of a beer as measured when fermentation is complete (when all desired fermentable sugars have been converted to alcohol and carbon dioxide gas). When fermentation has occurred, this number is always less than Original Gravity.

Alcohol by Volume (ABV): A measurement of the alcohol content in terms of the percentage volume of alcohol per volume of beer. Caution: This measurement is always higher than Alcohol by Weight. To calculate the approximate volumetric alcohol content, subtract FG from OG and divide by 0,0075.

Example: OG = 1.050, FG = 1,012

$ABV = (1,050 - 1,012) / 0,0075$

$ABV = 0,038 / 0,0075$

$ABV = 5,067$

¹¹ *Beers Styles Study Guide*. (2016, August 29). Retrieved from CraftBeer: craftbeer.com

ABV = 5 % (approximately)

International Bitterness Units (IBUs): 1 bitterness unit = 1 milligram of isomerized (exposed to heat) hop alpha acids in one liter of beer. Can range from 0 (lowest—no bitterness) to above 100 IBUs. Usually the general population cannot perceive bitterness above or below a specific range of IBUs (said to be below 8 and above 80 IBUs by some sources).

Bitterness Ratio (BU: GU): A comparison of IBUs (Bitterness Units) to sugars (Gravity Units) in a beer. 0,5 is perceived as balanced, less than 0,5 is perceived as sweeter and over 0,5 is perceived as more bitter. Formula: Divide IBU by the last two digits of Original Gravity (remove the 1,0) to give relative bitterness.

Standard Reference Method (SRM): Provides a numerical range representing the color of a beer. The common range is 2-50. The higher the SRM, the darker the beer. SRM represents the absorption of specific wavelengths of light. It provides an analytical method that brewers use to measure and quantify the color of a beer. The SRM concept was originally published by the American Society of Brewing Chemists.

Examples: Very Light (1-1.5), Straw (2-3 SRM), Pale (4), Gold (5-6), Light Amber (7), Amber (8), Medium Amber (9), Copper/Garnet (10-12), Light Brown (13-15), Brown/Reddish Brown/Chestnut Brown (16-17), Dark Brown (18-24), Very Dark (25-39), Black (40+)

Volumes of CO₂ (v/v): Volumes of CO₂ commonly vary from 1-3+ v/v (volumes of dissolved gas per volume of liquid) with 2,5-2,7 volumes being the most common in the U.S. market. Beer's carbonation comes from carbon dioxide gas, which is a naturally occurring byproduct created during fermentation by yeast and a variety of microorganisms. The amount of carbonation is expressed in terms of "volumes" of CO₂. A volume is the space the CO₂ gas would occupy at standard temperature and pressure, compared to the volume of beer in which it's dissolved. So one keg of beer at 2,5 volumes of CO₂ contains enough gas to fill 2.5 kegs with CO₂.

Apparent Attenuation (AA): A simple measure of the extent of fermentation wort has undergone in the process of becoming beer, Apparent Attenuation reflects the amount of malt sugar that is converted to ethanol during fermentation. The result is expressed as a percentage and equals 65 % to 80 % for most beers. Or said more simply: Above 80% is very high attenuation with little residual sugar. Below 60 % is low attenuation with more residual sugar remaining. Formula: $AA = [(OG-FG) / (OG-1)] \times 100$

Example: OG = 1,080, FG = 1,020

$AA = [(1,080 - 1,020) / (1,080 - 1)] \times 100$

$AA = (0,060 / 0,080) \times 100$

$AA = 0,75 \times 100$

$AA = 75 \%$

Types

1. Bohemian-Style Pilsner

Bohemian-style pilsners have a slightly sweet and evident malt character and a toasted, biscuit-like, bready malt character. Hop bitterness is perceived as medium with a low to medium-low level of noble-type hop aroma and flavor. This style originated in 1842, with "pilsner"

originally indicating an appellation in the Czech Republic. Classic examples of this style used to be conditioned in wooden tanks and had a less sharp hop bitterness despite the similar IBU ranges to German-style pilsner. Low-level diacetyl is acceptable. Bohemian-style pilsners are darker in color and bigger in final gravity than their German counterparts.

Quantitative Style Statistics

OG 1,044 – 1,056

FG 1,014 – 1,020

ABV 4,1% - 5,1%

IBU 30 - 45

BU:GU 0,68 – 0,80

SRM 3 - 7

CO₂ Volumes 2 – 2,5

Apparent Attenuation 64 – 68

Alcohol Not detectable to mild

Brewing/Conditioning Process Decoction mash provides a rich malt character

Color Straw to Light Amber

Clarity Clear to Brilliant

Country of Origin Czech Republic

Collar of Foam (Head Retention) Good

Collar of Foam (Texture) Foamy

Carbonation (Visual) Medium Rising Bubbles

Hop Aroma/Flavor Hop aroma and flavor are low to medium-low, deriving from noble-type hops. Hop bitterness is medium

Hop Ingredients Czech Saaz

Malt Aroma/Flavor Toasted, biscuit-like, and/or bready malt flavors along with low levels of fermented-malt-derived sulfur compounds may be evident

Malt Ingredients Pilsner, CaraPils

Palate Body Soft

Palate Carbonation Medium

Palate Length/Finish Short

Temperature 4-7 °C

Water Low mineral content

Food Pairing

Cheese Mild White Cheddar

Entrée Shellfish, Chicken, Salads, Ceviche

Dessert Shortbread Cookies

Glass Flute

2. Imperial Indian Pale Ale

High hop bitterness, flavor and aroma. Hop character is fresh and evident from utilization of any variety of hops. Alcohol content is medium-high to high and notably evident with a medium-high to full body. The intention of this style is to exhibit the fresh and evident character of hops.

Quantitative Style Statistics

OG 1,075 – 1,100

FG 1,012 – 1,020

ABV 7,6 % - 10,6 %
IBU 65 - 100
BU:GU 0,87 – 1,00
SRM 5 - 16
CO₂ Volumes 2 – 2,5
Apparent Attenuation 80 – 84
Alcohol Noticeable
Brewing/Conditioning Process Dry-hopping is common
Color Gold to Light Brown
Clarity Clear to Hazy
Country of Origin United States
Collar of Foam (Head Retention) Good
Collar of Foam (Texture) Foamy
Carbonation (Visual) Medium to Fast Rising Bubbles
Hop Aroma/Flavor Hop flavor and aroma are very high, should be fresh and lively and should not be harsh in quality, deriving from any variety of hops. Hop bitterness is very high but not harsh
Hop Ingredients Varies
Malt Aroma/Flavor Malt character is medium to high
Malt Ingredients American Two-Row, Crystal, Malted Wheat
Palate Body Mouth-Coating
Palate Carbonation Medium to High
Palate Length/Finish Long
Temperature 10-12 °C
Water Varies

Food Pairing

Cheese Rich Cheeses
Entrée Bone-In Pork Chops, Buffalo Wings
Dessert Carrot Cake
Glass Tulip

3. German Style Marzen/ Oktoberfest

A beer rich in malt with a balance of clean, hop bitterness. Bread or biscuit-like malt aroma and flavor is common. Originating in Germany, this style used to be seasonally available in the spring (“Marzen” meaning “March”), with the fest-style versions tapped in October.

Quantitative Style Statistics

OG 1,050 – 1,060
FG 1,012 – 1,020
ABV 5,1% - 6,0%
IBU 18 - 25
BU:GU 0,36 – 0,42
SRM 4 - 15
CO₂ Volumes 2 – 2,5
Apparent Attenuation 67 – 76
Alcohol Mild
Brewing/Conditioning Process A decoction mash is commonly used
Color Pale to Reddish Brown
Clarity Brilliant

Country of Origin Germany
Collar of Foam (Head Retention) Good
Collar of Foam (Texture) Foamy
Carbonation (Visual) Medium Rising Bubbles
Hop Aroma/Flavor Hop aroma and flavor are very low to low. Hop bitterness is medium low to medium
Hop Ingredients German Noble
Malt Aroma/Flavor Toast
Malt Ingredients Pilsner, Vienna, Munich
Palate Body Soft
Palate Carbonation Medium
Palate Length/Finish Short to Medium
Temperature 7-10 °C
Water Varies

Food Pairing

Cheese Jalapeno Jack
Entrée Kielbasa, Sausages, Dry Ribs
Dessert Coconut Flan
Glass Flute

4. Belgian Style Quadruple

These beers are amber to dark brown in color. Caramel, dark sugar and malty sweet flavors dominate, with medium-low to medium-high hop bitterness. Quads have a relatively light body compared to their alcoholic strength. If aged, oxidative qualities should be mild and not distracting. Sometimes referred to as Belgian strong dark.

Quantitative Style Statistics

OG 1,084 – 1,120
FG 1,014 – 1,020
ABV 9,1% - 14,2%
IBU 25 - 50
BU:GU 0,30 – 0,42
SRM 8 - 20
CO₂ Volumes 2,5 - 3
Apparent Attenuation 83 – 83
Alcohol Noticeable to Hot
Color Amber to Dark Brown
Clarity Slight Haze
Country of Origin Belgium
Collar of Foam (Head Retention) Varies
Collar of Foam (Texture) Mousse-like
Carbonation (Visual) Medium Rising Bubbles
Hop Aroma/Flavor Hop aroma and flavor are not perceived to very low. Hop bitterness is low to medium-low
Hop Ingredients Varies
Malt Aroma/Flavor Caramel, dark sugar and malty sweet flavors and aromas can be intense, not cloying, while complementing fruitiness
Malt Ingredients Varies
Palate Body Mouth-Coating

Palate Carbonation Medium
Palate Length/Finish Medium to Long
Temperature 10-12 °C
Water Varies

Food Pairing

Cheese Aged Gouda
Entrée Roasted Duck, Filet, Sweet and sour Ribs
Dessert Cheese cake, crème brulee
Glass Tulip

5. Baltic Style Porter

A smooth, cold-fermented and cold-lagered beer brewed with lager yeast. Because of its alcoholic strength, it may include very low to low complex alcohol flavors and/or lager fruitiness such as berries, grapes and plums (but not banana; ale-like fruitiness from warm-temperature fermentation is not appropriate). This style has the malt flavors of a brown porter and the roast of a schwarzbier, but is bigger in alcohol and body.

Quantitative Style Statistics

OG 1,072 – 1,092
FG 1,016 – 1,022
ABV 7,6% - 9,3%
IBU 35 - 40
BU:GU 0,47 – 0,49
SRM 40+
CO₂ Volumes 2 – 2,5
Apparent Attenuation 76 – 78
Alcohol Noticeable
Brewing/Conditioning Process Brewed with lager yeast and cold-fermented
Color Very Deep Ruby or Garnet to Black
Clarity Clear to Opaque
Country of Origin United Kingdom
Collar of Foam (Head Retention) Good
Collar of Foam (Texture) Foamy
Carbonation (Visual) Medium Rising Bubbles
Hop Aroma/Flavor Hop aroma and flavor are very low. Hop bitterness is low to medium-low
Hop Ingredients Varies
Malt Aroma/Flavor Distinctive malt aromas of caramelized sugars, licorice, and chocolate-like notes of roasted malts and dark sugars are present. Roasted dark malts sometimes contribute a coffee-like roasted barley aroma. Low smoky aroma from malt may be evident. Debittered roasted malts are best used for this style
Malt Ingredients Munich, Vienna, Pilsner, Crystal, Special "B", Carafa Special II, Chocolate
Palate Body Mouth-Coating
Palate Carbonation Medium
Palate Length/Finish Medium to Long
Temperature 7-10°C
Water Varies

Food Pairing

Cheese Aged Gouda

Entrée Prime Rib

Dessert Deconstructed S'mores

Glass Tulip

6. Irish Style Dry Stout

Dry stouts are black. These beers achieve a dry-roasted character through the use of roasted barley. The emphasis on coffee-like roasted barley and a moderate degree of roasted malt aromas define much of the character. Hop bitterness is medium to medium high. This beer is often dispensed via nitrogen gas taps that lend a smooth, creamy body to the palate.

Quantitative Style Statistics

OG 1,038 – 1,048

FG 1,008 – 1,012

ABV 4,2% - 5,3%

IBU 30 - 40

BU:GU 0,79 – 0,83

SRM 40+

CO₂ Volumes 1 - 1.5

Apparent Attenuation 75 – 79

Alcohol Not detectable

Color Black

Clarity Clear to Opaque

Country of Origin Ireland

Collar of Foam (Head Retention) Good

Collar of Foam (Texture) Foamy

Carbonation (Visual) Slow to Medium Rising Bubbles

Hop Aroma/Flavor Hop aroma and flavor are not perceived to low, from European-type hops. Hop bitterness is medium to medium high

Hop Ingredients Kent Goldings

Malt Aroma/Flavor Dry stouts achieve a dry-roasted character through the use of roasted barley. Initial malt and light caramel flavors give way to a distinctive dry-roasted bitterness in the finish. Emphasis of coffee-like roasted barley and a moderate degree of roasted malt flavors define much of the character

Malt Ingredients British Pale Ale, Flaked Barley, Black Roasted Barley

Palate Body Soft to Mouth-Coating

Palate Carbonation Low to Medium

Palate Length/Finish Short to Medium

Temperature 10-12 °C

Water Moderate carbonate water

Food Pairing

Cheese Irish Cheddar

Entrée Seafood (Oysters), Ham, Fish and chips

Dessert Chocolate Desserts

Glass Nonic Pint

7. Belgian Style Witbier

Belgian-style wits are brewed using unmalted wheat, sometimes oats and malted barley. Witbiers are spiced with coriander and orange peel. A style that dates back hundreds of years, it fell into relative obscurity until it was revived by Belgian brewer Pierre Celis in the 1960s. This style is currently enjoying a renaissance, especially in the American market. “Wit” means “white.”

Quantitative Style Statistics

OG 1,044 – 1,050

FG 1,006 – 1,010

ABV 4,8% - 5,6%

IBU 10 - 17

BU:GU 0,23 – 0,34

SRM 2 - 4

CO₂ Volumes 2 – 2,5

Apparent Attenuation 80 – 86

Alcohol Not Detectable to Mild

Brewing/Conditioning Process Often bottle-conditioned

Color Straw to Pale

Clarity Hazy

Country of Origin Belgium

Collar of Foam (Head Retention) Good

Collar of Foam (Texture) Mousse-like

Carbonation (Visual) Fast Rising Bubbles

Hop Aroma/Flavor Hop flavor and aroma are not perceived to low. Hop bitterness is low, achieved traditionally by the use of noble-type hops

Hop Ingredients German Noble

Malt Aroma/Flavor Malt aroma and flavor are very low to low

Malt Ingredients Pilsner, Flaked Wheat, Unmalted Wheat, and occasionally oats and malted barley

Other ingredients Orange Peel, Coriander Seed

Palate Body Drying

Palate Carbonation High

Palate Length/Finish Medium

Temperature 4-7 °C

Water Varies

Food Pairing

Cheese Mascarpone

Entrée Moules and Frites

Dessert Panna Cotta

Glass Tulip

Equipment

Restaurant, bar & beer garden layout and equipment selection

The restaurant layout, including the dining room, kitchen and serving line, will be designed for efficiency, flexibility and to accommodate the fluctuation in customer traffic and peak meal periods. The size and constitutes of the kitchen and restaurant floor itself has been designed and selected in order to match the market analysis. Likewise the Bar and beer garden have also been designed and fitted in such a manner to match the estimated seating requirements. The distribution of seating and area throughout the brewery have been formulated based of market analysis and seasonality, with 300 meter square for the restaurant and bar and 100 meter square for the beer garden. The seating arrangements mirror this distribution with 100 seats within the restaurant, 50 within the bar and a further 40 outside in the beer garden.

In specific regard to the point of sale (POS) and overall restaurant operational system, once the customer's order is taken, the order will automatically be printed to a requisition printer located in the kitchen or bar area. The kitchens and bar staff will use the printed ticket to keep track of orders and complete as required. Using an electronic method in the POS also yields significant bonuses in the management and tracking of consumption cost and sales, for this reason the Restaurant, Bar and Beer garden staff and facilities will be fitted with a sophisticated electronic POS system.

The equipment for the production and distribution of food and drinks through the restaurant, bar and beer garden is designed to incorporate and function with the aforementioned POS system and distribution system. The kitchen equipment and configuration has been designed to be operated by a minimum staff with the possibility to expand to full staffing for large catering events or peak season. This design allows line staffing to be adjusted to the business volume. Shift changes for all staff will involve cleanup, restocking and preparation. The closing shift will involve designated closing duties that will leave the restaurant clean and fully prepared for the next day. The specific selection of the equipment is based on standardized commercial kitchen and bar setups, whilst incorporating specialized items to satisfy the specialist needs of the brewery, for example 18 beer taps.

Brewery Equipment selection

The selection of the brew house and associated equipment was performed in a manner as to meet the specific needs of Microbrewery. In order to satisfy cost requirements and to aid in the ease at which the brewery is installed, a module microbrewery set is proposed. The Module brew module must allow the production of beer by both an infusion and decoction method, in order to allow production for 7 different beer types. Production of beer is proposed to be alternating and staggering to accommodate the production of 7 different beer types from one micro-brewery. Sophisticated bottling and packaging will also be required to ensure the beer varieties are easily available during operation hours.

Advanced configuration of micro-brewery (module with additional tanks – see technical specification below) is required to satisfy variety and alternating production and storage of beer. In addition to satisfying base production, the advanced configuration allows gradual development of the company, increasing production capacity and the possibilities of the microbrewery. For the aforementioned reasons the Microbrewery Module BREWORX

CLASSIC 2002M-6000 was chosen, with an optimal production 3000HL per year, with the opportunity to increase to 6000HL if required. Furthermore, to satisfy the numerous beer types the Microbrewery Module is fitted with 12 additional fermentation, maturing and storage tanks, allowing production to continue whilst keeping an 'in house' supply of each beer.

At the discretion of management the brewer may gradually extend his micro-brewery, adding other components and devices to customize the beer production and keep up with market trends. By adding additional fermentation units they can achieve growth in production capacity of the microbrewery. By adding pressure tanks, filters, washing machines and filling machines they get the opportunity to sell beer in kegs and bottles and ensure slowly building additional distribution. CIP pump station, nitrogen generator, yeast activators, etc. significantly increase the comfort and productivity of workers in the brewery, whilst hot water tank allow a more efficient use of energy and contribute to costs savings.

Articles of association

§ 1 Company name, registered office and financial year

1. The name of the company is Cicerone Brewery GmbH.
2. It has its registered office in Betzdorfer Str. 2, 50679 Cologne, Germany.
3. The financial year shall be the calendar year.

§ 2 Object of the company

1. The company is a brewery that operates in the area of food services. The object of the company is in particular the:
 - a) Production of crafted beer of various types of brews inside a restaurant.
 - b) Having a restaurant with the concept of "food pairing", creating dishes that go hand-in-hand with the specific beer produced.
2. The company is entitled to pursue all business and carry out all measures which appear to serve its object. It may establish branches or subsidiaries abroad or participate in other utilities. The company is entitled to transfer or relinquish its business fully or partially to other companies, to conclude company agreements and enter into co-operations.

§ 3 Share capital

1. The company has an initial capital of one hundred twenty thousand euros (€ 600.000,0) divided into six (6) shares, with a nominal value of twenty thousand euros (€ 100.000,0) each. The capital shares have been fully paid by the partners to the company in cash, as follows:

Name	Share	Capital
René Paz	1	€ 100.000,0
Luis Álvarez	1	€ 100.000,0

Nicholas Wetzlar	1	€ 100.000,0
Juan Delgado	1	€ 100.000,0
Kunal Saraf	1	€ 100.000,0
Andrea Colina	1	€ 100.000,0
TOTAL	6	€ 600.000,0

2. The personal liability of members is limited to the amount of their contributions.

§ 4 Shareholders meeting

1. The supreme organ of the company is the shareholders meeting.
2. The voting rights of the shareholders are measured in accordance with the initial contribution of each shareholder. A shareholder is permitted to be represented by a fellow shareholder or by a third party. A power of attorney in writing is required therefor.
3. Whenever partners can deliberate by any means of telecommunications, the decisions made at the conference are valid and legally binding. Deliberations by telecommunications should always be successive or simultaneous. Evidence of telecommunications and relevant resolutions, as confirmation by fax or email, will be included in the respective acts, in accordance with the requirements established in these by-law.
4. The general shareholders meeting shall be held at the headquarters of the Company once a year.
5. The general shareholders meeting is to be convened at the least thirty days prior to the date until the expiry of which the shareholders must register for the general shareholders meeting.

§ 5 Managing directors and representation

1. The management board can comprise the same members as the company's shareholders.
2. The shareholders meeting may grant to one or more managing directors the power to represent the company alone and exempt them from the restrictions of § 181 BGB (German Civil Code).

§ 6 Dissolution of the company

1. The company shall be dissolved:
 - a) When reduction of the capital losses to less than fifty percent (50 %) figure.
 - b) When the number of partners exceed twenty-five (25).
 - c) By decision of the Board of Partners taken by a plural number of shareholders representing at least seventy percent (70 %) of the votes.
 - d) Any other legal cause.

§ 7 Death or disability of a partner

1. Society is not dissolved by the death of one of its partners, will continue in the exercise and development of its purpose with the heirs of the deceased partner and the surviving partners, without involving or modification of the company, or creating a new one.

2. In case of death or disability established by law of one of the partners, the company shall continue with their heirs. The surviving spouse and the heirs shall appoint, from among themselves, who should represent them in society as the succession process is terminated or disability, as appropriate.

3. Within sixty (60) days following the death of a partner days, the other partners will be entitled to acquire shares or contributions of the deceased, by his commercial value at the date of death. If not reached any agreement on the price and payment terms, these will be determined by experts appointed by the parties. If there are several partners who wish to acquire the shares will be distributed among them in proportion to the value of their contributions.

§ 8 Notices and official announcements

1. Announcements of the company are to be made exclusively in the Electronic Federal Gazette, unless other organs mandatory are provided for by law.

2. Notices to and the convening of the shareholders shall be done through the sending of letters to the addresses recorded in the company's share register.

§ 9 Final provisions

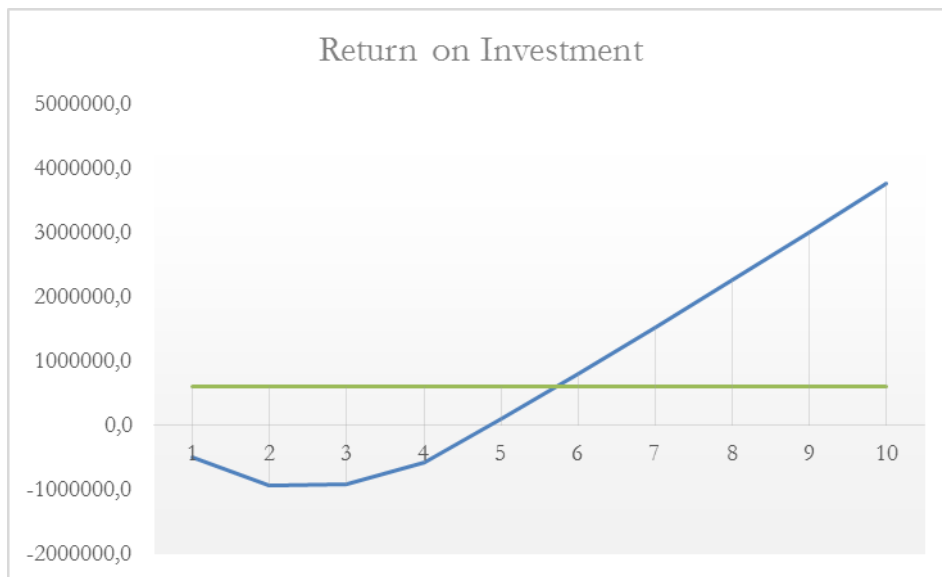
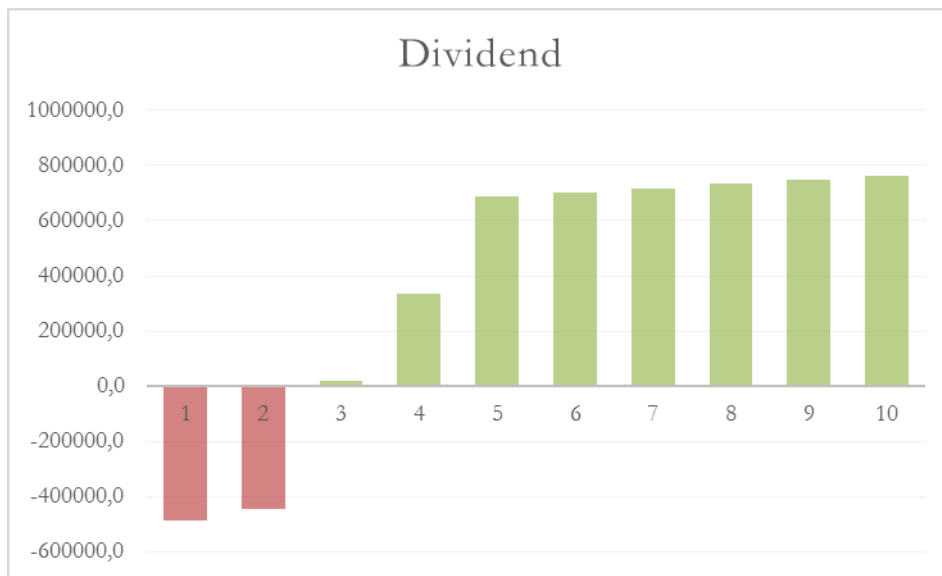
1. Insofar as not provided for by the articles of association, the statutory provisions apply to the company.

Financial data

Cash flow ¹²

	Years									
	1	2	3	4	5	6	7	8	9	10
(€)	40,00%	50,00%	70,00%	80,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
Sales profit	1507200,0	1884000,0	2637600,0	3014400,0	3768000,0	3768000,0	3768000,0	3768000,0	3768000,0	3768000,0
Depreciation cost	-130940,0	-130940,0	-130940,0	-130940,0	-130940,0	-130940,0	-130940,0	-130940,0	-130940,0	-130940,0
Labour cost	-1008000,0	-1008000,0	-1008000,0	-1008000,0	-1008000,0	-1008000,0	-1008000,0	-1008000,0	-1008000,0	-1008000,0
Consumption costs	-384626,0	-480782,5	-673095,5	-769252,0	-961565,0	-961565,0	-961565,0	-961565,0	-961565,0	-961565,0
Financing costs	-247929,5	-223136,6	-198343,6	-173550,7	-148757,7	-123964,8	-99171,8	-74378,9	-49585,9	-24793,0
Lost carried forward		-264295,5	-223154,6	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Profit before taxes	-264295,5	-223154,6	404066,4	932657,4	1518737,3	1543530,3	1568323,2	1593116,2	1617909,1	1642702,1
Taxes (40%)	0,0	0,0	161626,5	373062,9	607494,9	617412,1	627329,3	637246,5	647163,6	657080,8
Profit after taxes	-264295,5	-223154,6	242439,8	559594,4	911242,4	926118,2	940993,9	955869,7	970745,5	985621,2
Cash flow (net profit + depreciation)	-133355,5	-92214,6	373379,8	690534,4	1042182,4	1057058,2	1071933,9	1086809,7	1101685,5	1116561,2
Repayment credit	354185,0	354185,0	354185,0	354185,0	354185,0	354185,0	354185,0	354185,0	354185,0	354185,0
Dividend	-487540,5	-446399,6	19194,8	336349,4	687997,4	702873,2	717748,9	732624,7	747500,5	762376,2
Cumulated Dividend	-487540,5	-933940,1	-914745,2	-578395,8	109601,6	812474,7	1530223,6	2262848,3	3010348,8	3772725,0

¹² See detailed tables in Appendix 2



Marketing strategy

- Mass media exposure as social media, by means of Facebook and Twitter Accounts
- Initial promotional campaign performed by a marketing advisor.
- Offer of special prices based on group size.
- Beer tastings
- Product exposure at city events.
- Distribution of specific types of the beer to concurred bars.
- Advertisement in high transit areas.
- Special brews for publicity stunts, for example: Carnival brew, and programmed activities as can be a musical themed brew or revolving around a big sport event.

Distribution

As result of strategic alliances and cooperation's certain type of more "common" brews will be distributed to partners or commercializing stores, maintaining the strength of special and unique beers being available only at the microbrewery. Preferably locations that mirror the style of Cicerone Brewery. Avoid retail at gas stations and kiosks, Cicerone beer is a product of high quality to be distributed through channels that represent the quality.

Appendix

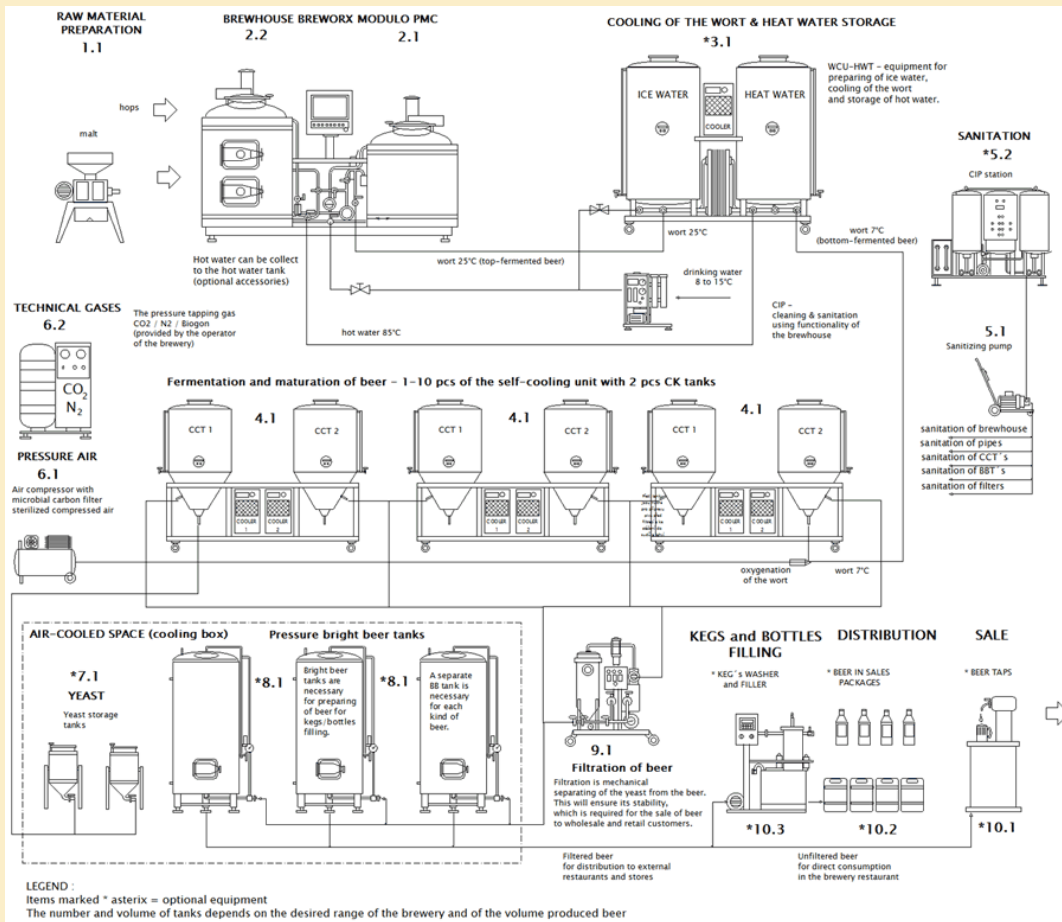
Appendix 1: Advanced configuration of the equipment

1. Preparation of the ingredients:
 - 1.1 malt mill
2. Wort production:
 - 2.1 Brewhouse: mash-wort pan
 - 2.2 Brewhouse: kombi tank - lauter tub / whirlpool tub. (Module System)
3. Water management system:
 - 3.1 and 3.2 WCU-HWT unit - Cooler and storage tank for ice water to cool down the wort and storage tank for heat water
 - 3.3 Equipment for the treatment of drinking water.
4. Fermentation and maturation of beer:
 - 4.1 Fermentation tanks with integrated cooler
5. Sanitation:
 - 5.1 Mobile CIP pump
 - 5.2 CIP station.
6. Industrial gases:
 - 6.1 Air Compressor with carbon filters
 - 6.2 N₂ generator / cylinder with CO₂.
7. Yeast storage system:
 - 7.1 Yeast tanks & regenerators for storing of yeast.
9. Filtration of Beer:
 - 9.1 Primary and secondary beer filter.
10. Sale of beer:
 - 10.1 Taproom in the brewery restaurant
 - 10.2 Distribution of beer in packages
 - 10.3 Washer and filler for kegs.

Selected Equipment

Brewhouse	BREWORX CLASSIC 2000
Automatic brewhouse control system	BHAC-2 Brewhouse Breworx Automatic Control System
Automatic tank cooling control system	TTMACS-18 Tank temperature measuring & automatic control system for media

Malt mill - grinder	MM-1000 Malt mill 1000 kg/h
Steam generator	Gas steam generator GSG-200
Hot water tank	HWT-4000 Hot water tank 4000 liters
Ice treated drink water tank	ITWT-4000 Ice treated water tank 4000 liters
Fermentation tanks	Cylindrical-conical tank Classic CCT-4000/4800 L (insulated 2-jacket)
Maturation tanks	Cylindrical-conical tank Classic CCT-4000/4800 L (insulated 2-jacket)
Bright beer tank	MBTVI-4000 Maturation tank Bright beer tank vertical insulated 4000/4360 liters
Yeast regeneration	YSTP4G - Yeast pressure storage tank 40 liters
Wort cooler & aerator	WCASB-2000 - Block wort cooler-aerator 2000 L/h
Glycol cooler	GCU-125 - Glycol cooling unit 21,3 kW
Ice cooling water tank	ICWT-2000 Ice cooling water tank 2000 liters
Cleaning and sanitation equipment	CIP-503 Cleaning and sanitizing station 3x500 liters
Air compressor with filters	ACO-60 Air compressor with microfiltration 60 m ³ /hour
Brewery accessories and tools	SBT1 - Set of brewing tools
Assembling material	XAM-18000 Assembling material



Appendix 2: Detailed costs information

Equipment costs:

Brewery	(€)	Depreciable Period (Yrs)	Depreciation Yearly (€)
Microbrewery Module BREWORX CLASSIC 2002M-6000 HL/Y	494000	10	49400
Additional 2 x Fermentation Tanks	24000	10	2400
Additional 6 x Maturing Tanks	72000	10	7200
Additional 6 x Bright beer Maturing Tanks	84000	10	8400
Bottle filler and labler	40000	10	4000
Keg washer and Filler (Kegs included)	12000	10	1200
Cleaning and Sanitation Equipment	14000	10	1400
Liquid Fire Protection System	4000	10	400
Stainless Steel 3 bowl sink	1500	10	150
Installation Costs (est)	50000		
Sub Total	795.500,00	Total Depreciation p/(yr)	74.550,00

Kitchen			
Walk In Cooler	8000	10	800
Commercial Dishwasher with Sink in Table (use with bar)	7000	10	700
Reach in Stainless Steel Freezers (2)	6000	10	600
Stainless Steel Cold Station	3000	10	300
Food processor/blender	900	10	90
Ice Maker with Storage Bin	4000	10	400
Stainless Steel Hood with Exhaust	11000	10	1100
3 Door Reach In Beverage Cooler	3500	10	350
Kitchen Small wares	1500	-	-
Deep Fryer	3000	10	300
Six Burner Restaurant Range w/ Oven (2)	10500	10	1050
Chrome Shelving Systems (6)	1000	10	100
Reach In Coolers (4)	7200	10	720
Stainless Steel Work Tables (3)	1200	10	120
Hutch for Stainless Steel Table (2)	800	10	80
Liquid Fire Protection System	4000	-	-
Stainless Steel 3 bowl sink	1500	10	150
25 Timber Tables	12500	10	1250
100 Timber Chairs	5800	10	580
20 track mood lighting	1000	-	-
Crockery, Cutlery and Silverware	25000	-	-
Fine Table cloths , napkins	2000	-	-
Art, Decorating	50000	-	-
Cash register + POS System	4000	4	1000
Ofc PC	1200	4	300
Sub Total Restuartant	175.600,00	Total Depreciation p/(yr)	9.990,00
Beer Garden and Bar			
Schelfing and storage glassess and liqour	1000	10	100
Beer taps (12) inc. Cooling & Tray	6000	10	600
Reach in Stainless Steel Freezers	3000	10	300
Reach In Coolers (4)	7200	10	720
Bar (15m)	6750	10	675
High tables	1500	10	150
High stool	1750	10	175
Timber table	2500	10	250
Timber chairs	1250	10	125
Outdoor beer taps (6) inc. Cooling & Tray	3500	10	350
Outdoor Timber table	6000	10	600
Outdoor Timber chairs	2800	10	280
Shade and Wet Weather Umbrella	3000	10	300
Outdoor Lighting	2000	-	-
Indoor Lighting	500	-	-
Plants and landscaping	25000	-	-
Art, Decorating	50000	-	-

Cash register + POS System + handheld devices (5)	6500	4	1625
Stainless Steel 3 bowl sink	1500	10	150
Crockery, Cutlery and Glasses	25000	-	-
Liquid Fire Protection System	4000	-	-
Sub total Bar and Beer Garden	160.750,00	-	6.400,00

Investment costs:

Description	Investment expenditures	Depreciation rate (%)	Depreciation costs
Property	1.000.000,0	0	0
Building	2.000.000,0	2	40.000,0
Brewery Equipment	745.500,0	10	74.550,0
Assembly of equipment	50.000,0	0	0
Restaurant	175.600,0	10	9.990,0
Bar & Beer garden	160.750,0	10	6.400,0
Licences	10.000,0	0	0
Total	4.141.850,0 €	-	130.940,0 €

Consumption costs:

Expendable material	Cost per year (100%)
Raw materials	
Water	20.000,0
Yeast	131.250,0
Hops	1.815,0
Barley	30.000,0
Raw material cost for food	600.000,0
Utilities	
Electrical	60.000,0
Administrative costs	32.500,0
Marketing	40.000,0
Requirement for new bottles and labels	25.000,0
Cleaning of bottles	9.000,0
Distribution of Beer	12.000,0
Total	961.565,0 €

Labor costs:

Salaries	Cost/year
Management	129.375,0
Beer production & distribution	124.200,0
Service	373.750,0
Kitchen	517.500,0
Total	1.144.825,0 €

Financing costs:

Total Investment and Financing	
Total Investment	4.141.850,0 €
Own capital funds	600.000,0 €
Outside financing	3.541.850,0 €

Year	Balance of debt (€)	Interest rate (7%)	Interest (€/year)	Refunding Bank Loan (€)
1	3541850,0	0,07	247929,5	354185,0
2	3187665,0	0,07	223136,6	354185,0
3	2833480,0	0,07	198343,6	354185,0
4	2479295,0	0,07	173550,7	354185,0
5	2125110,0	0,07	148757,7	354185,0
6	1770925,0	0,07	123964,8	354185,0
7	1416740,0	0,07	99171,8	354185,0
8	1062555,0	0,07	74378,9	354185,0
9	708370,0	0,07	49585,9	354185,0
10	354185,0	0,07	24793,0	354185,0
Sum Interest	-	-	1.319.337,25 €	-
Sum Payment		-	-	3.541.850,00 €

Turnover/revenue:

Year	Capacity	Beer			Food			Total Revenue
		Output	Price/L	Beer Revenue	Output	Price/plate	Beer Revenue	
1	0,4	120000,0	8,0	960000,0	45600,0	12,0	547200,0	1.507.200,0
2	0,5	150000,0	8,0	1200000,0	57000,0	12,0	684000,0	1.884.000,0
3	0,7	210000,0	8,0	1680000,0	79800,0	12,0	957600,0	2.637.600,0
4	0,8	240000,0	8,0	1920000,0	91200,0	12,0	1094400,0	3.014.400,0
5	1,0	300000,0	8,0	2400000,0	114000,0	12,0	1368000,0	3.768.000,0
6	1,0	300000,0	8,0	2400000,0	114000,0	12,0	1368000,0	3.768.000,0
7	1,0	300000,0	8,0	2400000,0	114000,0	12,0	1368000,0	3.768.000,0
8	1,0	300000,0	8,0	2400000,0	114000,0	12,0	1368000,0	3.768.000,0
9	1,0	300000,0	8,0	2400000,0	114000,0	12,0	1368000,0	3.768.000,0
10	1,0	300000,0	8,0	2400000,0	114000,0	12,0	1368000,0	3.768.000,0

Luis Fernando Álvarez: _____

Andrea Colina Blanco: _____

Juan Pablo Delgado: _____

René Paz Guerrero: _____

Kunal Saraf: _____

Nicholas Wetzlar: _____