

# The Master Plan as a Tool for Corporate Development

configuration – benefit - examples

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# Configuration of Master Plan (1)

for Brewing and Malting Industry

## Paperwork

### Basic data

Production figures (today and stage(s) of extension)

### Capacity Calculations

Calculations for each department of the production, filling, logistic and utilities area:

- Standardized capacity calculation
- Rating of production supply
- Answers to problems and solutions for bottle necks
- Cost estimation

### Priority schedule with cost budget

# Configuration of Master Plan (2)

for Brewing and Malting Industry

## Drawings

As-built-drawings of the whole Plant (scale 1:200 or 1:500) with the following items drawn in:

- Main production facilities and utilities (Technical services)
- Extension and renewing areas  
(under consideration of stepwise realisation)

# Benefits of Master Plan (1)

for Brewing and Malting Industry

**By the help of a Master Plan the following benefits can be earned:**

## General

- Avoidance of delivery bottlenecks by well-timed investment
- Avoidance of wrong building arrangement on site by proper reservation of extension areas
- Gain of time for permissions under building-law
- Prearrangement of next construction stage (e.g. infrastructure connections can be prepared in advance)

# Benefits of Master Plan (2)

for Brewing and Malting Industry

**By the help of a Master Plan the following benefits can be earned:**

## Budget

- Basing on the priority schedule it is easy to prepare the budget/investment plan for the next 5 years
- Corrections and improvements can be done in advance by economical calculations, investigation of alternatives a.s.o.

# Master Plan Capacity Calculation (Example)

BREWHOUSE			Brewhouse capacity
Brew size:	200	hl CW/brew	
Factor for wort and beer losses (high gravity):	1,2	hl SB/hl CW	
Working weeks:	4,2	wk/mo	
Working days:	6,0	d/wk	
Brew cycle:	12	brews/d	
Annual peak:	0,12	y/mo	
<b>Calculated brewhouse capacity:</b>			

# Master Plan

## Priority list (draft)

Project – priorities also depend on brewery growth rate	Priority
Brew house with water, malt and heat supply	1
Fermenting (8 CCT), storage (4 CCT), yeast management, CIP, supply with coldness - step 1a	1
Supply with coldness – step 1b, supply with electrical power	1 or 2
Logistic and filling plant(s) – step 1 – 4.000 m <sup>2</sup>	2
Fermenting (3 CCT), storage (14 CCT), supply with coldness – step 2, supply with electrical power	2
Filtration, bright beer tanks, whole peripheral equipment	2
Logistic and filling plant(s) – step 2 – 3.400 m <sup>2</sup>	2
Logistic and filling plant(s) – step 3 – 2.125 m <sup>2</sup> , truck loading	2 or 3
All utilities and capacities must be adapted while each new step	1-3

1: short-term (1-3 y)

2: middle-term (4-6 y)

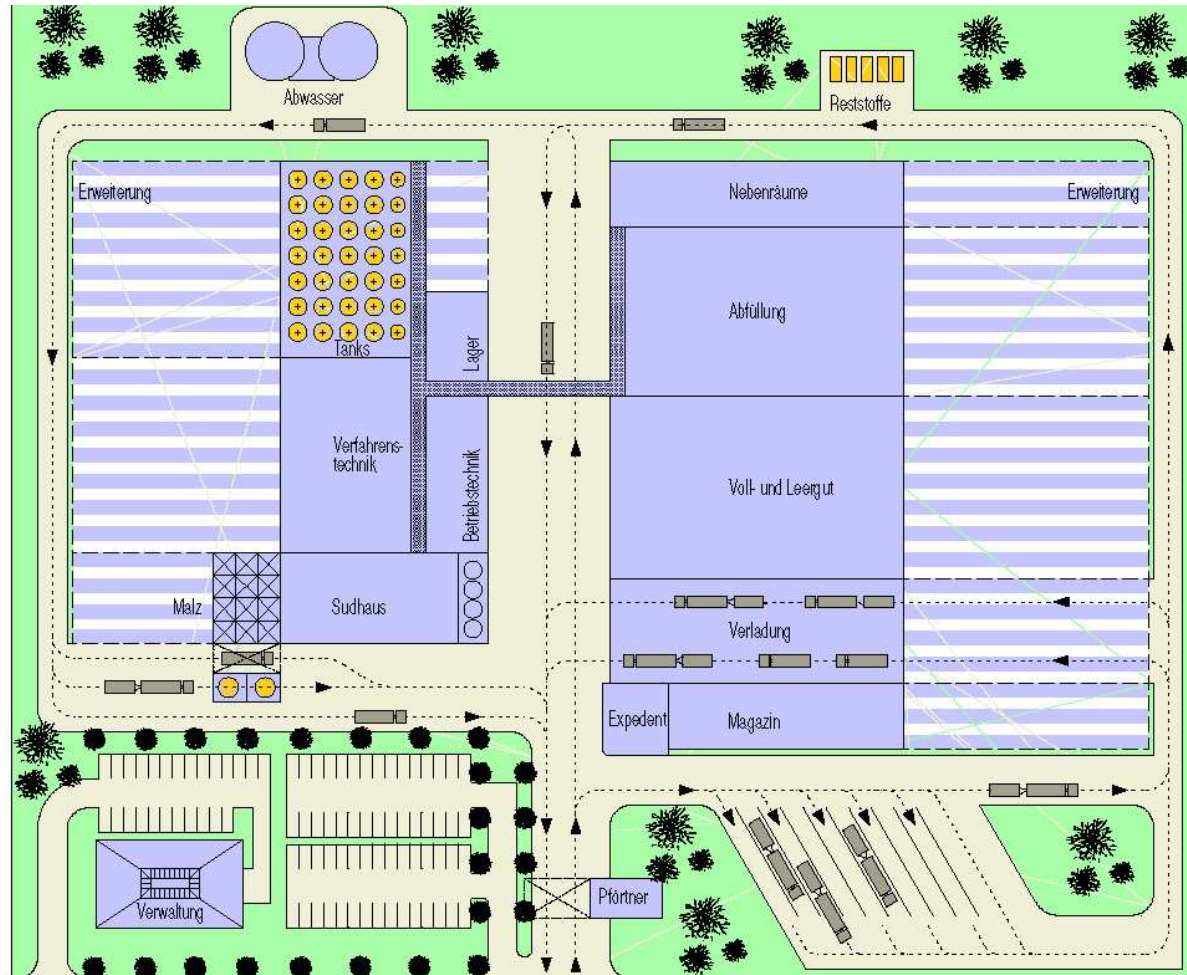
3: long-term (7-10 y)

# Master Plan Cost Estimation (Step 1)

Step no.	Description	Priority	Costs *) [1.000 €]
<b>MP STEP 1</b>			
1	Supply with electric power: dislocation, extension, re-connecting	1	210
2	Supply with coldness: 3 x 300 kW, complete chilling plant	1	860
3	Utility piping: steam, compressed air, water, distributors	1	310
4	Fermentation: 12 CCTs with 1.250 hl GTS each, piping, etc.	2	1.910
5	Yeast treatment. complete yeast plant	2	400
6	CIP plant: for wort way, CCTs, yeast	2	250
7	Chemical concentrates treatment: for above mentioned CIP plant	2	100
8	Water supply: 1.200 m <sup>3</sup> reserve **), complete equipment in old brew house	3	250
9	Brew house: 200 hl CW/brew, complete equipment	3	2.000
10	Water supply brew house: 4 tanks, piping, pumps	3	300
11	Malt silos and malt treatment: 15 silos, complete equipment incl. wet mill	3	850
12	CO <sub>2</sub> recovery plant ***): 200-250 kg/h, complete plant incl. storage tank(s)	5/6	350
<b>Sum MP Step 1</b>			<b>7.790</b>

# Master Plan

## Example: General Layout - Brewery



# Master Plan

## Example: General Layout – Soft Drink Plant

