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A blueprint to change the cost culture of Entity X

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Sensitive information about the company is adjusted or intentionally left out.

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UNIVERSITY OF TWENTE

Master thesis

A blueprint to change the cost culture of Entity X.

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Preface

This is my thesis for the Financial Engineering and Management master at the University of Twente. I conducted a graduation study at Entity X in Place X. The aim of my research was to increase cost awareness, eliminate bad costs and change the cost culture within the organization. Therefore, we initialized and performed a cost reduction project named ZBC for which we developed a new blueprint and process which COMPANY X can use as examples for future projects.

I really enjoyed working at Company X and learning about the cost structures of such a large organization. It was and still remains a challenge to create cost visibility and change the cost culture in the whole organization of ENTITY X. With my research we provided a good first step in changing this culture and I therefore hope that the project will be continued and will generate new cost saving opportunities.

I would like to express my gratitude to the financial control team of ENTITY X, who have given me the time and input I needed for my research. Furthermore, I would like to give a special thanks to Person X who has supported and guided me during my time at Company X. Finally, I would like to thank Reinoud Joosten and Berend Roorda as my first and second supervisor respectively from the University of Twente. I really appreciate your time and support throughout my master program.

Michiel Köllmann

Executive Summary

My research has been conducted at Entity X in Place X. Here, the brewery produces beer for its home market (base volume) as well as support volume for countries around the world. Since 2016, ENTITY X base volume has declined and support volume is expected to decrease. The latter is the results of other Operating Companies (OpCos) needing less support, as their production efficiencies improve and production volumes increase. Furthermore, ENTITY X has high fixed costs compared to other OpCos. Therefore, an investigation is needed to several opportunities to reduce costs and to investigate the cost culture of ENTITY X.

The purpose of my investigation is to create full cost visibility, eliminate bad costs and change the cost culture within the organization. Therefore, we initialized and performed a cost reduction project named Zero Bad Costs (ZBC), which is part of COMPANY X's new global finance vision for 2021. ZBC was launched as a project without clear guidelines for execution. To establish cost visibility, we analyzed cost structures and identified cost categories. We collected data through meetings and literature study. To identify key problem areas, we developed a benchmark for the OpCos. Investigating the current situation at COMPANY X, we found multiple opportunities to decrease costs. Furthermore, we noticed the need for a standardized method across the ENTITY X OpCos of booking costs in clearly defined categories. This is paramount in order to develop cost visibility and develop future benchmarking opportunities. We also recorded a cultural problem embedded in the company structure.

To realize sustainable cost reduction and change the cost culture, we designed a blueprint which is applicable for all cost categories within COMPANY X. This blueprint is used to drive the ZBC projects and to achieve repetition. In the blueprint all steps necessary to decrease costs and ultimately change the cost culture within an organization like COMPANY X, are explained in detail. We applied this blueprint for the first ZBC project within ENTITY X. We have found a lack of cost awareness amongst ENTITY X employees and we identified saving opportunities. Following the steps of the blueprint systematically will not only identify problem areas and correct issues but will also change the attitude of people towards cost and therefore ultimately change the cost culture in Company X.

My research was the first time a ZBC project was completed within ENTITY X. As a result, we successfully created cost saving opportunities worth X€ and developed a blueprint for ZBC that can be used for the coming years. We also established a more cost focused mind-set in some areas of ENTITY X. However, we also discovered resistance and learned that changes are not accepted easily. Therefore, it is essential that COMPANY X will continue with the ZBC projects to establish standardization and realize a true cost culture change.

Based on my research the following recommendations are made:

1. Continue to apply ZBC, following the steps in the newly developed blueprint, both in ENTITY X and in other organizations within COMPANY X. Using my blueprint as the base for ZBC projects will help change the cost culture of ENTITY X.

2. Standardize the booking rules for costs across ENTITY X. This allows transparent cost control for all categories and allows proper benchmarking.

3. Create continuous visibility by using KPI dashboards.

4. Incorporate after care and post completion evaluation when a ZBC project is finished. Only a consistent follow up can result in a cost culture change.

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List of abbreviations

ABC	Activity-Based Costing
ABI	Anheuser-Busch InBev
ATL	Above The Line
BTL	Below The Line
BTS	Brewery Technical Services
CAGR	Compound Annual Growth Rate
C&B	Compensation & Benefits
DOL	Degree of Operating Leverage
EBIT	Earnings Before Interests and Taxes
ERP	Enterprise Resource Planning
FTE	Full-Time Equivalent
ENTITY Y	Company X
ENTITY X	Entity X
HUK	COMPANY X United Kingdom
HUSA	Company X United States of America
KPI	Key Performance Indicator
OpCo	Operating Company
OpCos	Operating Companies
OPI	Operating Performance Indicator
PPE	Personal Protective Equipment
P&L	Profit and Loss statement
ZBB	Zero-Based Budgeting

1. Introduction

To complete my Master Thesis for Financial Engineering and Management at the University of Twente, I performed an internship at the COMPANY X Company in Place X. This report describes my research to analyze and improve the cost culture within Entity X to create a competitive advantage.

Section 1.1 provides information about COMPANY X global and COMPANY X Place X. Section 1.2 describes the motivation on why this project is relevant for COMPANY X. In Section 1.3 the problem statement is formulated. Section 1.4 describes the research approach followed with the research objective in section 1.5. Section 1.6 describes the research question and sub questions. This chapter ends with a research guide in Section 1.7.

1.1 Company description

Company X operates in the brewery market.

— Deleted due to confidentiality —

1.1.1 COMPANY X Place X company structure

Company X consists of two divisions, Company X Commerce (ENTITY Y) and Entity X . In Figure 1.3 the organizational chart of COMPANY X is partly shown, my research is solely focused on ENTITY X in Place X. As seen in Figure 1.3 the Finance department is part of Support which is part of ENTITY Y. However, at the moment, Support is a general entity for both ENTITY Y and ENTITY X. In 2020 a reorganization will take place which will create a separate Support entity for ENTITY Z, ENTITY Y and ENTITY X. I performed this report within ENTITY X, specifically the financial control department.

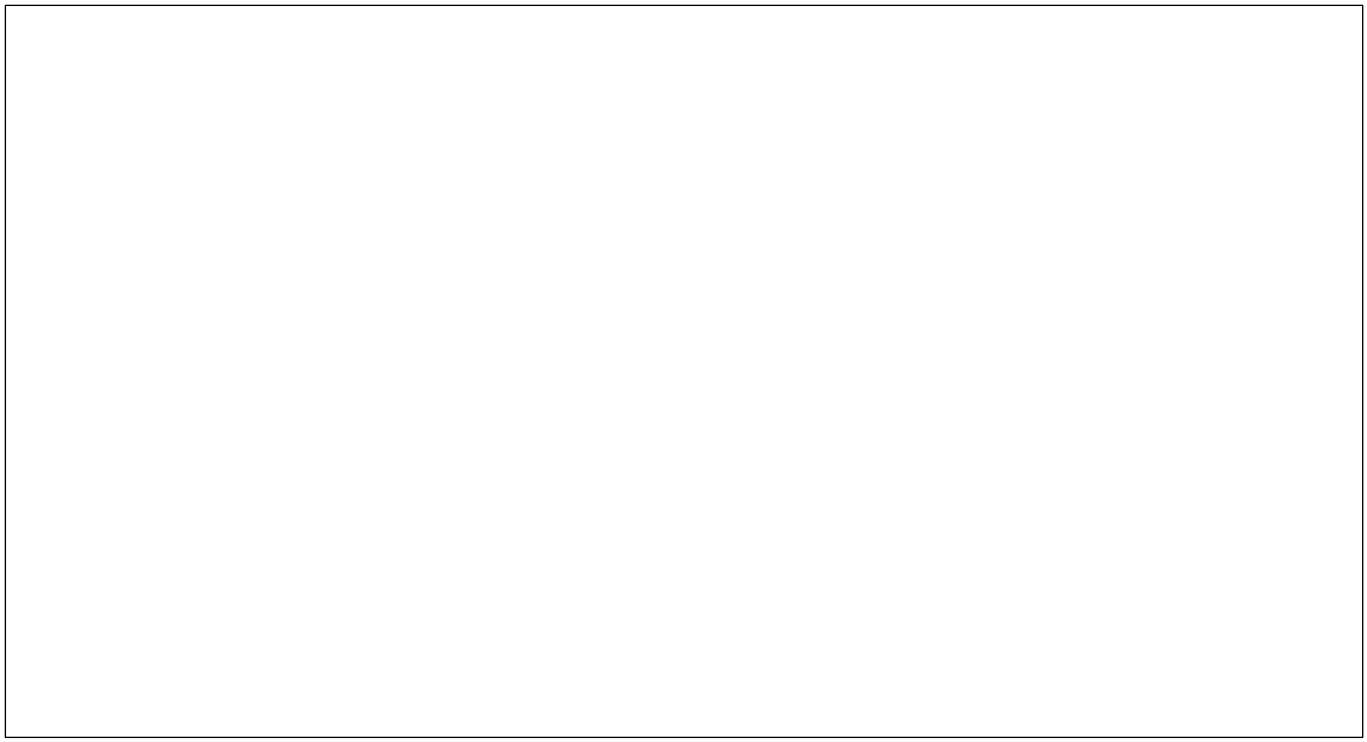


Figure 1.3: Organizational chart Company X.

1.2 Motivation

With big changes in the world's beer industry the brewery in Place X also noticed a change in the base export volume. The brewery in Place X is focused on producing millions of hectoliters of premium beers such as COMPANY X and Company W. With the changing industry and the increased demand for authentic special beers, the amount of base export volume is declining. With Place X being the largest brewery in Europe, a lot of fixed costs are incurred which lead to high overhead costs. These costs, combined with a declining base volume, could result in future problems for COMPANY X. With declining export markets such as the USA (HUSA), United Kingdom (HUK) and Taiwan, COMPANY X needs new sorts of production volume streams to be established. This means that COMPANY X needs to increase its product volume streams with alternative Z such as Product X, as well as expand to different markets, in order to potentially construct new support volumes.

The changes in the global market have made COMPANY X focus on their cost culture, therefore COMPANY X came up with a new global finance vision for 2021. The purpose of this vision is to create cost awareness and ownership to ultimately establish a sustainable competitive advantage. This target should be achieved by creating cost visibility and governance of spending, to develop and strengthen a positive cost culture.

Culture includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits (Needle, 2004). A cost-conscious culture involves creating a mind-set that looks for value on an ongoing basis, regardless of business cycle, instead of one-time cost reduction drive. A cultural shift is more than improved procedures, it requires a change in the employees' attitude (Kulkarni, 2017).

1.3 Problem statement

As stated above, the Company X brewery in Place X is the largest beer brewery in Europe. The production volume is partly used for consumption in the Netherlands and partly used for consumption in other parts of the world. Furthermore, Place X has the unique capability to increase their production support volume when a problem occurs at other Operating Companies (OpCos) in different parts of the world.

ENTITY X has three main challenges:

1. Challenge X.
2. Challenge Y.
3. Challenge Z.

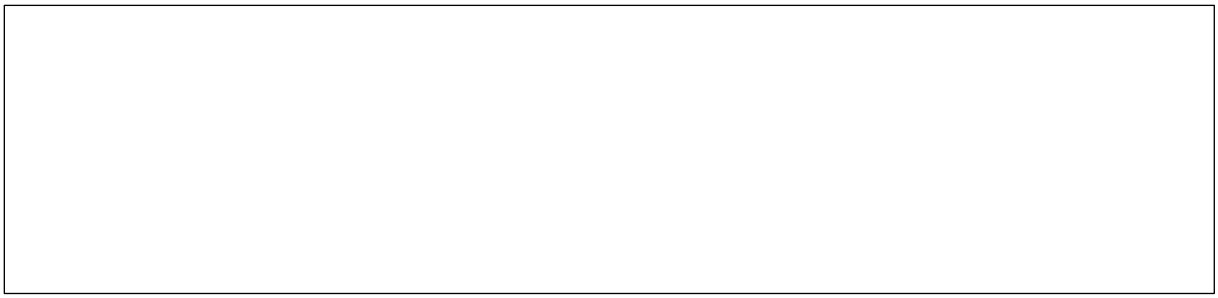


Figure 1.4: Change in volume produced ENTITY X.

The challenges mentioned above provide sufficient reasons to initiate a project to reduce costs and change the cost culture within Entity X . Therefore, the problem statement can be formulated as:

With changing markets and competition, the organization of ENTITY X is currently not able to compete on costs with other similar OpCos and therefore needs a sustainable method to decrease costs.

1.4 The problem approach

During my project the following points are to be addressed. First of all, we need to manage the project within ENTITY X. We need to inform employees on what we are doing and explain the importance of this project. Next, we need to analyze the costs of COMPANY X so we can deliver a clear categorized cost analysis on which we can work on as a team. Finally, we need to mobilize a group of people to execute the Zero Bad Costs project with the analysis made.

The knowledge that is to be acquired is partly available in COMPANY X and partly in the literature. As explained, we need to map and understand the cost culture of COMPANY X. Therefore, it is important to talk to many employees in ENTITY X in order to get a clear understanding of the current situation. Furthermore, we need all the cost data of ENTITY X. COMPANY X has many databases that we can use and with these we will make an analysis of each cost category we identify. Finally, we use the literature to find information on how to change the cost culture and to identify the strategies COMPANY X is using. The aim is to deliver a solution to lower costs for the categories analyzed by developing a blueprint with guidelines.

1.5 Research objective

The goal of my research is to create full costs visibility with clear accountability to induce a culture change to free-up cash and ultimately establish a sustainable competitive advantage. A method named Zero Bad Costs (ZBC) will be used to achieve this goal. ZBC was introduced by COMPANY X in their global finance vision for 2021. It was launched as a project without clear guidelines for execution.

To identify and decrease the costs of a company, many methods are possible to use. However, COMPANY X has made the decision to work with ZBC. Therefore, I will briefly explain other methods in the literature review and will extensively elaborate on ZBC further on in this report.

Using ZBC, first an analysis of all the costs within ENTITY X needs to be conducted. Next, these costs need to be categorized so an overview can be constructed of where they are made. Costs within each category need to be linked with the profit and loss statement, and the current system that COMPANY X uses to identify costs, so in the future it will be clear on how to categorize costs within ENTITY X. Furthermore, research needs to be done on what sort of costs exactly are within each cost category. This is an important step as this information can be used to identify potential cost savings. Then, we want to work out multiple cost categories and exactly identify the potential savings COMPANY X can make within ENTITY X. Finally, we want to deliver a blueprint that shows in detail how to establish these savings per chosen cost category and change the cost culture within ENTITY X.

1.6 Research questions

Based on the problem statement and the objective, we formulated the following research question:

How can the cost culture within Entity X be improved to lower costs and create a sustainable competitive advantage?

To answer the main research question, the following sub-questions have been formulated:

1. What is the current cost culture within ENTITY X?
   1.1. Is there enough visibility of the cost structures?
   1.2. Is there any cost awareness?
   1.3. How do other similar OpCos perform?
   1.4. Which systems and methods are used?
2. What is Zero-Bad-Costs?
3. How do we determine the current costs and what are they?
4. What is described in the literature to improve cost culture in a company?
5. Which are the possible improvements to be identified in the cost categories?
6. How can we realize the potential savings and a change in the organization?
7. What are the results identified in this research?
8. Which organizational changes are required to implement the solutions?

1.7 Research guide

This research is structured as follows. Section 2, describes the plan of approach. Section 3, discusses related work from the literature. Section 4, describes the context analysis. In Section 5, the blueprint we developed to identify potential savings is described. In Section 6, the results of this research are presented. In Section 7, this report is concluded with the conclusion and further recommendations.

2. Plan of approach

In the plan of approach, we explain how we intend to go about solving the research problem and to implement the results to address the core problem. We divide the plan of approach in two sections. Firstly, we discuss the research design and we explain the research strategy on how the necessary information and data will be obtained. Secondly, we explain the methodology on which methods and data collection techniques are used during this project.

2.1 Research design

With the core problem explained, we identify this research project as a practice-oriented project. In a practice-oriented research, the project context is a practical problem in a public or private organization. Such a project is meant to provide knowledge and information that can contribute to a successful intervention to change an existing situation (Verschuren & Doorewaard, 2010). Therefore, I visited COMPANY X several times before starting this project to obtain as much information as possible. In the case of practice-oriented research the context often consists of a problematic situation or particular request to initiate a new policy. This is also the case in this project where COMPANY X has difficulties in identifying all costs and wants to initiate a new policy to reduce these costs.

Using the intervention cycle from Verschuren & Doorewaard (2010), we identify 5 steps for practice-oriented research.

1. Problem analysis: At the beginning of an invention it is important to bring the problem to attention to the stakeholders. It is the initial stage of the intervention cycle.

2. Diagnosis: After the problem was identified, the background and the causes of the identified problem can be examined. If the reason for the problem is understood, then a course of action in order to find the solution, can be determined.

3. Design: When the problem analysis and diagnosis have been determined, the initial design of the new cost structure can be composed. In this part of the cycle the results are taken into account to design a method to realize cost savings.

4. Intervention/change: At this stage the course of intervention or change needs to be set in motion. This entails implementing the template in order to change the cost culture. As explained earlier, it will take time to initiate all the changes proposed.

5. Evaluation: Finally, we need to verify whether the implemented changes have actually solved the problem identified. By pointing out the weak aspects, we can make recommendations for improving future policies or strategies.

2.2 Methodology

Here, the methods and data collection techniques are described. Furthermore, we explain the type of research we use. During this project we use a combination of qualitative and quantitative research methods. Qualitative means that data are collected through observations, documents and interviews while with quantitative methods data are collected and analyzed through numerical comparisons (McLeod, 2017).

2.2.1 Methods and data collection techniques

The materials needed for this research are the following:

- Literature.
- Documents from Company X and the beer industry.
- Data from the data systems used at ENTITY X.
- Observations in meetings.

These materials will be collected throughout the whole project. Besides the data we collect from the literature and the data systems, it is very important to communicate with stakeholders. This project will initiate changes within ENTITY X and therefore we have to be careful on how to propose these changes. Potential savings are often easy to handle on paper but to realize them in practice we have to communicate with each department. Therefore, many meetings are to be held during this project.

2.2.2 Research methods

As explained above we use different methods to obtain the data we need to solve the research problem. The methods described are both qualitative and quantitative research techniques. Qualitative research has been defined as: “any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings” (Patton, 2002). Qualitative analysis allows the researcher to understand social reality in a subjective but scientific manner (Zhang & Wildemuth, 2000). This is also what we will try to understand during my project. In order to understand the current status of the cost culture and to implement the potential savings identified, it is paramount to collect as much data as possible from COMPANY X and from the observations made during meetings. Therefore, it is important to communicate with stakeholders and understand this culture within ENTITY X.

In research, qualitative and quantitative analysis are not mutually exclusive and can be used in combination (Zhang & Wildemuth, 2000). Quantitative research gathers data in a numerical form which can be put into categories, or in rank order, or measured in units of measurement (McLeod, 2017). One of the methods of quantitative research is a descriptive analysis. Descriptive analysis allows us to describe and understand the current status of the problem. Descriptive analysis is performed in order to provide an overview of the data provided by COMPANY X. Combining these methods, we will deliver a final template with potential savings and guidelines on how to change the current cost culture. These guidelines will be captured in a blueprint which will indicate each step necessary to identify the cost structure of an organization and realize a change in this structure.

3. Literature review

Here, we discuss background information and research insights from external papers and journals. The information will be obtained on the following topics:

- The global beer industry.
- Strategic options for COMPANY X.
- Company culture change.
- Cost accounting methods.
- Financial systems used.
- Zero based budgeting.

3.1 The global beer industry

The beer industry has been developing for a long period of time. Over the last couple of years, the industry has experienced a stagnation in the markets globally with various factors impacting consumption (JPMorgan, 2018). Factors influencing the industry are for example: structural challenges, tighter regulation, increased competition and a change in consumer habits.

One of the big trends shown is that traditional markets such as North America have been stagnant while developing countries experience growth. Latin America accounts for 17% of world consumption where demand has shown a compound annual growth rate (CAGR) of 1.2%. In the figure below the CAGR of the global beer consumption is shown.

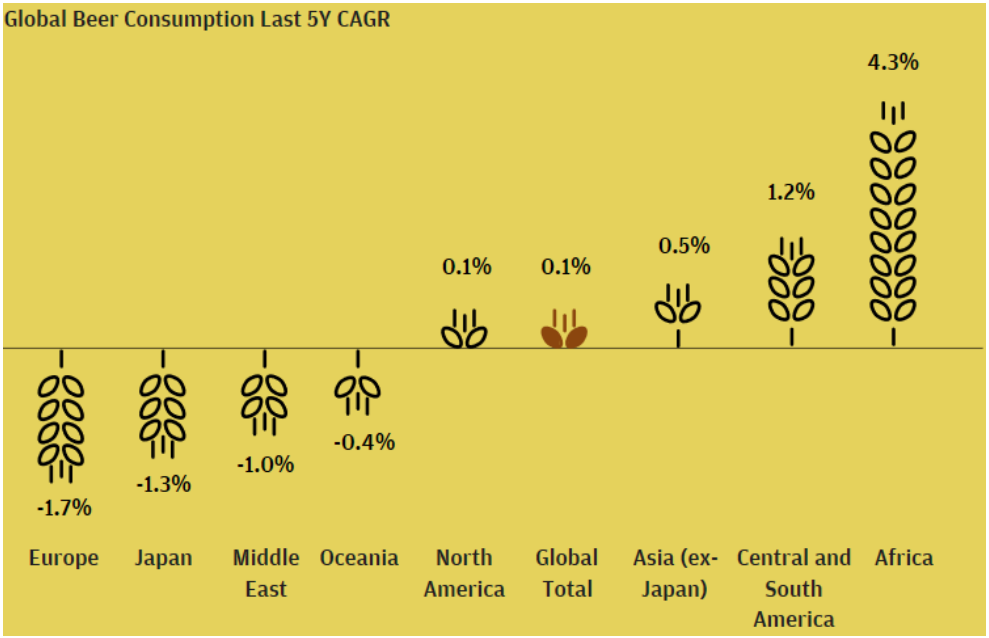


Figure 3.1: Global beer consumption from 2011-2016 (JPMorgan, 2018).

In a time of shifting customer preferences, brewers and Place Z must recognize that traditional plans for growth might not align with cultural trends, or their target audience. To overcome these challenges, companies seem to focus on new strategies such as increasing their portfolio and channel complexity. Furthermore, reducing the lead times of product innovations and try to focus on customer quality finding out the consumers' needs and aspirations.

3.2 Strategic options COMPANY X

With a changing global industry towards low alcohol drinks and special craft beers, a clear and well-defined strategy is very important to have. A firm's relative position within its industry determines whether its profitability is above or below the industry average (Porter, 1985). The fundamental basis of above average profitability in the long run is sustainable competitive advantage. This is also the goal of this project, as explained in Section 1. In addition to achieving one-time reductions as a result of insight in the costs, the goal of this project is to provide sustainable changes to the cost culture.

Two basic types of competitive advantage exist: low costs or differentiation. Combined with the scope of activities for which a firm seeks to achieve, this leads to the three generic strategies for achieving above average in an industry. These strategies are cost leadership, differentiation and focus. Furthermore, the cost strategy has two variants, differentiation focus and cost focus.

1. Cost leadership

With cost leadership as a strategy, a firm tries to become the low-cost producer in its industry. Depending on the structure of the industry, sources of cost advantage vary. These sources are for example, economies of scale, proprietary technology, preferential access to raw materials and more. Low-cost producers typically sell a standard product and place considerable emphasis on reaping cost advantages from all sources. When a firm achieves and sustains overall cost leadership, it will be an above average performer in the industry. Provided the producer can command prices at or near the industry average. A cost leader, however, cannot ignore the basis of differentiation. If a product is not comparable to or acceptable by buyers, a cost leader is forced to decrease the prices well below competitors to gain sales.

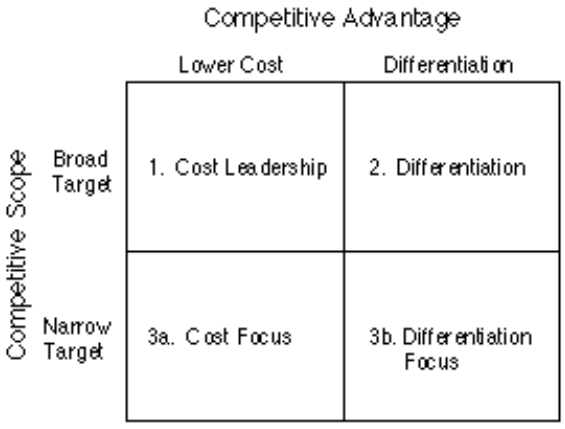


Figure 3.3: Porter's generic strategies (Porter, 1985).

2. Differentiation

With a differentiation strategy, a firm seeks to be unique in its industry along dimensions that are valued by customers. The firm selects one or more attributes that many buyers in the industry perceive as important, and uniquely positions itself to meet those needs. With this unique position the firm can ask premium prices.

The means for differentiation can be different for each industry. Differentiation can be based on the delivery system by which it is sold, the marketing approach, the product itself and a broad range of other factors (Porter, 1985). A firm that can achieve a sustainable differentiation will be an above average performer in its industry if the price premium used exceeds the extra costs incurred by being unique. When aiming for a differentiation strategy you cannot ignore the cost position, because the premium prices may be nullified by a markedly inferior cost position. Therefore, a differentiator aims to reduce costs on factors that do not affect differentiation. In contrast to cost leadership, there can be various successful differentiation strategies, linked to the product attributes valued by customers.

3. Cost focus

The focus strategy is different from the first two because it rests on the choice of a narrow competitive scope within an industry. As a firm you select a segment or group of segments in the industry and tailor the strategy to serve them to the exclusion of others. By optimizing the strategy for its target segments, a competitive advantage can be actualized.

There are two variants for the focus strategy, cost focus and differentiation focus. In cost focus, a firm aims for cost advantage in a particular segment. In differentiation focus a firm aims for differentiation in its target segment. Cost focus exploits differences in cost behavior while differentiation focus exploits the special needs of buyers (Porter, 1985).

4. Stuck in the middle

If a firm does not achieve to engage in one of the generic strategies it is ‘stuck in the middle’. It possesses no competitive advantage which result in a below average performance.

3.2.1 Value disciplines

Besides the model of Porter (1985), Treacy & Wiersema (1993) created three value disciplines to market leadership. These are shown in Figure 3.4. Operational excellence describes a specific approach to the production and delivery of products and services. The objective is to lead the industry in price and services. Companies pursuing this strategy seek ways to minimize overhead costs, to eliminate intermediate production steps, to reduce transaction costs and to optimize business processes across organizational and functional boundaries. The focus is on delivering their products or services to customers at competitive prices and with minimal inconvenience.
Companies pursuing customer intimacy continually tailor and shape products and services to fit a fine definition of the customer. Customer-intimate companies are willing to spend now to build customer loyalty for the long term. They typically look at the customer's timeline value to the company instead of the value of any single transaction. This is why employees in these companies will do almost everything to make sure that all customers get exactly what they really want.

Companies that pursue the third discipline, product leadership, strive to produce a continuous stream of state-of-the-art products and services. It requires them to challenge themselves in three ways. First, they must be creative. Being creative means recognizing and embracing ideas that usually originate outside the company. Second, such innovative companies must commercialize their ideas quickly. All their business and management processes have to be engineered for speed to do so. Third and most important, product leaders must relentlessly pursue new solutions to the problems that their own latest product or service has just solved. If anyone is going to render their technology obsolete, they prefer to do it themselves.

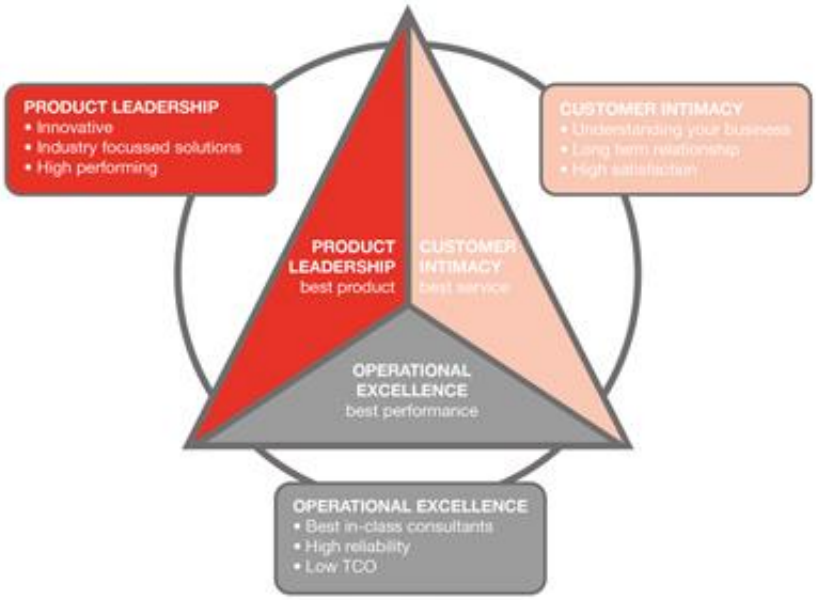


Figure 3.4: Value disciplines (Treacy & Wiersema, 1993).

The models of Porter (1985) and Treacy & Wiersema (1993) have many things in common. Product leadership has resemblances to the differentiation strategy and operational excellence is similar to the cost focus strategy. However, the customer intimacy strategy is unique. Focusing on customers in such an extensive way is a new type of strategy. Furthermore, the model of Porter has an economic approach whereas the model of Treacy & Wiersema has a customer-oriented strategy (Linde, 2019).

3.3 Company culture change

With the costs analyses we make during this project we also want to form guidelines for a sustainable change for ENTITY X. This means that some cost reduction will be a one-time reduction while others require change within departments of ENTITY X. Changes in a settled structure like ENTITY X are very difficult to make. Schein (1985) states that 'Organizational learning, development, and planned change

cannot be understood without considering culture as the primary source of resistance to change'. Schein (1985) describes a culture as:

'The culture of a group can now be defined as a pattern of shared basic assumptions learned by a group as it solved its problems of external adaption and internal integration, which has worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems'.

When projecting this on COMPANY X we are looking at the organizational culture. Schein (1985) defines organizational culture as:

'The basic tacit assumptions about how the world is and ought to be that a group share and that determines their perceptions, thoughts, feelings, and, their overt behavior'.

Schein (1985) describes three levels of organizational culture.

1. **Artefacts**: These artefacts are at the surface, aspects which can be easily discerned but are hard to understand.
2. **Espoused Values**: Beneath artefacts are espoused values which are conscious strategies, philosophies and goals.
3. **Basic assumptions and values**: This is the core or essence of culture which is represented by the basic underlying assumptions and values which are difficult to change because they exist at a largely unconscious level.

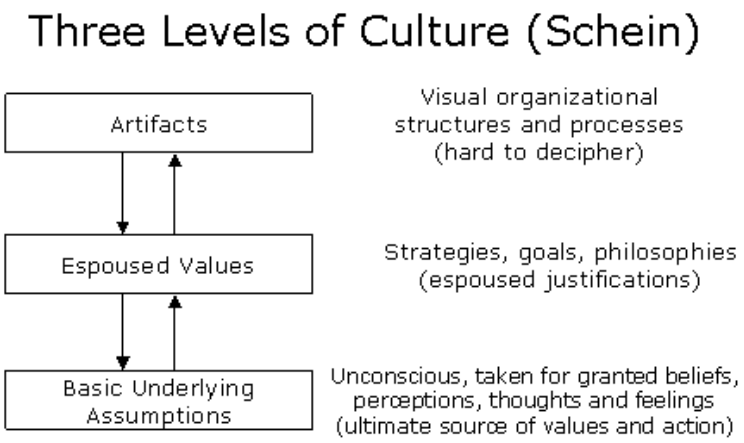


Figure 3.5: Three levels of organizational culture (Schein, 2016).

Culture change, in the sense of changing basic assumptions is difficult, time consuming and initiates anxiety. To initiate the cost reductions and culture changes at the end of this project we need to understand the deeper levels of the organizational culture of ENTITY X and to deal with anxiety.

Lewin (1947) developed a change model involving three steps: unfreezing, changing and refreezing. The model represents a very simple and practical model for understanding the change process. The process of change entails creating the perception that a change is needed, then moving towards the new desired level of behavior and finally solidifying that new behavior as the norm.

Similar to Lewin (1947), Beckhard and Harris (1987) created a change model that describes the conditions necessary for change to occur. The model describes that individuals and organizations change when:

- There is dissatisfaction (D) with the current state.
- There is a clear and shared Vision (V).
- There is an acceptable first steps (F) roadmap to achieve the vision.
- The product of D *V *F is greater than the resistance to change (R).

These four conditions form the following change formula:

$D * V * F > R.$

All three elements on the left side must be present for change to occur. If any element is missing, the product of multiplication is zero, which will always be less than the existing resistance. However, the formula is not a scientific calculation, but a mere indication of the impact of the change factors. There are also other factors that can influence change and not every factor has the same weight. Nevertheless, it provides a good understanding of what is needed to initiate a culture change.

3.4 Cost accounting

A cost accounting system traces costs to jobs or products for financial accounting requirements in order to allocate costs incurred during a period between costs of goods sold and inventories (Drury, 1992). Cost accounting first measures and records these costs individually, then compares input results to output or actual results to help company management in measuring financial performance.

There are four types of cost accounting:

- Traditional cost accounting.
- Activity-based costing.
- Lean accounting.
- Marginal costing.

Traditional cost accounting

This method refers to the allocation of manufacturing overhead costs to products manufactured. The traditional method assigns the factory's indirect costs to the items manufactured on the basis of volume such as the numbers of units produced or production machine hours. In recent decades we see that manufacturing overhead costs have been driven by many other factors. If a manufacturer wants to know the true costs of producing specific products for customers, the traditional method is inadequate. Activity-based costing (ABC) was developed to overcome these shortcomings. (Averkamp, 2019)

Cost allocation will not be an important factor for my investigation due to the fact that we focus on costs categories that directly impact employees. Therefore, we do not have to assign these costs. For future categories studied such as transport and maintenance, cost allocation does become more relevant.

Activity-based costing

Activity-based costing (ABC) is an accounting method that identifies and assigns costs to overhead activities and then assigns those costs to products. An ABC system recognizes the relationship between overhead activities, costs, manufactured products and trough the relationship it assigns indirect costs to products less arbitrary than traditional methods.

The ABC system of cost accounting is based on activities, units of work, or tasks with a specific goal, such as setting up machines for production. Activities consume overhead resources and are considered as cost objects. Using ABC, an activity can also be considered as a transaction or event that is a cost driver. A cost driver is used to refer to an allocation base.

Unlike traditional cost accounting systems that use bases as direct labor and machine hours to allocate indirect or overhead costs to products, ABC segregates the expenses of indirect and support resources

by activities. It then assigns those expenses based on the drivers of the activities (Cooper & Kaplan, 1991). ABC identifies five levels of activities. These levels are: batch-level activity, unit-level activity, customer-level activity, organization-sustaining activity and product level-activity.

ABC improves the costing process in three ways:

1. It expands the number of cost pools that can be used to assemble overhead costs.
2. It forms new bases to assign overhead costs to items. Costs are allocated based on activities that generate costs instead of volume measures.
3. ABC alters the nature of several indirect costs making costs traceable to certain activities.

Lean accounting

Lean accounting is an extension of lean manufacturing and production developed by Japanese companies in the 1980s. The methods mentioned above are replaced by value-based pricing and lean focused performance management. Lean accounting consists of five principles: lean and simple business accounting, accounting processes that support lean transformation, clear and timely communication of information, planning from a lean perspective and strengthen internal accounting control. These principles all have different practices and tools such as value stream mapping, box scores to improve decision making and target costing. Lean accounting focuses on measuring and understanding the value created for the customers and uses this information to enhance product design, product pricing, and lean improvement (Maskell & Baggeley, 2006).

Marginal accounting

Marginal accounting is an analysis of the relationship between a product's or service's sales price, the volume of sales, the amount produced, expenses, costs, and profits. This relationship is called the contribution margin. This method can be used to gain insights into potential profits which is impacted by changing costs, types of sales processes and types of marketing campaigns.

3.4.1 Fixed costs

During this project we specifically focus on the fixed costs and overhead costs of ENTITY X. Fixed costs and fixed expenses are those which do not change as volume changes. It is one of the two components of the total costs of running a business, the other being variable costs. Fixed costs per item decrease with an increase in production. Following the strategy of economies of scale, COMPANY X produces goods to spread the same amount of fixed costs over a larger number of units produced and sold.

Companies with large fixed costs and unchanged variable costs in the production process tend to have the greatest amount of operating leverage. This is a cost-accounting formula that measures the degree to which a firm or project can increase operating income by increasing revenue. It measures a company’s fixed costs as a percentage of its total costs. This means that after a company achieves the break-even point, all else equal, any further increases in sales volume will produce higher profits. Conversely, decreases in sales volume can produce disproportionately bigger declines in profits.

Operating leverage is a cost-accounting formula that measures the degree to which a firm can increase operating income by increasing revenue. A business that generates sales with a high gross margin and low variable costs has a high operating leverage. The higher the degree of operating leverage the greater the potential danger from forecasting risk (Gahlon, 1981). A relatively small error in forecasting sales can be magnified into large errors in cash flow projections.

The formula for operating leverage is:

$$\text{Degree of operating leverage DOL} = \frac{Q * Contribution\ Margin}{Q * Contribution\ Margin - Fixed\ Operating\ Costs}$$

Where:
Q= Unit quantity
CM= contribution margin (price – variable costs per unit)

The formula is used to determine what the impact of any change in sales will be on the company earnings. It can reveal how well a company is using its fixed-costs items. This is an important factor for COMPANY X because the Base volume is declining while the fixed costs remain somewhat the same. Companies with a high operating profit must cover a larger amount of fixed costs regardless of whether they sell any products. Companies with a low operating leverage can have high costs that vary directly with their sales but have lower fixed costs to cover.

As an example, we have a look at the 2018 closing financial figures of ENTITY Y. Where:

Therefore every 1% change in the company's sales will change the company's operating income by X%. The degree of operating leverage can show the impact of operating leverage on the firm's earnings before interest and taxes (EBIT). Furthermore, the DOL is important if you want to assess the effect of fixed costs and variable costs of the core operations of the business (myaccountingcourse, 2019). A high degree of operating leverage indicates that the company has a high proportion of fixed operating costs compared to its variable costs. This means that they can make more money from each additional sale while keeping the fixed costs intact. So, the company has a high DOL by making fewer sales with high margins. Therefore, the firm's profit margin can expand with earnings increasing at a faster rate than sales revenues.
On the other hand, a business with high DOL can be vulnerable to business cyclicality and macroeconomics conditions. In the case of an economic downturn, the earnings may decrease because of high fixed costs and low sales. In the case of ENTITY X a DOL of X means that it has relatively high fixed costs compared to its variable costs and can therefore be seen as risky.

3.5 Financial systems used within ENTITY X

COMPANY X uses an Enterprise Resource Planning (ERP) from SAP. SAP incorporates the key business functions of an organization. ERP systems integrate inventory data with financial, sales, and human resources data, allowing organizations to price their products, produce financial statements, and manage the resources of people, materials, and money (Markus, Tanis, & van Fenema, 2000). When we need to identify certain invoices or transactions to create cost awareness, we have to dive into the ERP system to find these exact numbers with the corresponding descriptions.

Besides ERP, ENTITY X uses BLINK. This is a management information system in which the volumes produced and organizational costs are gathered together. This system is the main information point with all financial data of COMPANY X. One of the necessary targets is to establish cost awareness for ENTITY X. This means that we exactly want to know what costs are made within each OpCo, department and production line. From BLINK we can make a profit and loss statement (P&L), this is a financial statement that summarizes the revenues, costs and expenses incurred during a specific period, usually a fiscal quarter for the year. These records provide information about the company's ability to generate profit. During this project we will make use of the P&L by comparing different accounting periods and cost centers.

A cost center is a subunit of a company which takes care of the costs of that unit, the main function of a cost center is to track expenses. On the other hand, a profit center is a subunit of a company which is responsible for revenues, profits, and costs. COMPANY X uses these centers in a similar way with a minor difference. Within the P&L each cost center has a subcategory. In this way the P&L categories can be used to show the costs in different levels of detail.

Furthermore, the P&L can be differentiated into P&L by nature and P&L by function. In a P&L by nature the expenses are disclosed according to the categories they are spent on, such as raw materials, transport costs, staffing costs, depreciation and employee benefits. In a P&L by function the expenses are disclosed according to the different functions they are spent on such as, cost of goods sold, selling and administrative functions (Enston, 2018).

The different financial systems shortly elaborated on, are systems that are used the most during this project. When we mention a particular system in this report and more explanation is necessary, we will provide this in that section.

3.6 Zero-based budgeting

Zero-Based budgeting (ZBB) is a method of budgeting in which all expenses must be justified for each new period. ZBB requires justifying each budget item's need or cost, while respecting strict policies and top-down targets set by the cost category owners (Timmermans & Shuda, 2014). Budgeting from zero each year helps to remove unnecessary costs and construct a detailed forecast. This level of detail allows for useful internal and external benchmarking. Because of the detail-oriented nature of ZBB, the process can take several years. Therefore, ZBB should be looked upon as a longer-term management development process rather than a one-year cure-all (Pyhrr, 2012). ZBB can help lower costs by avoiding increases to a prior period's budget. According to Timmermans & Shuda (2014), 20 to 35% of costs can be relocated. Furthermore, only about 50% of companies can sustain cost savings for more than one to two years. ZBB can create significant cost visibility at a granular level. One key to generate sustainable cost benefits is to improve accountability such that people feel responsible for the company's money. This is also what COMPANY X wants to establish and therefore ZBB could be a great option to implement in the future. The aim of ZBB should be to change the company culture so that sustainable cost management becomes part of the DNA (Timmermans & Shuda, 2014). ZBB could be a follow-up solution on ZBC to implement a structural check of the budget which can provide sustainable cost advantages.

4. Context analysis

In this Section we introduce the current situation at COMPANY X. We identify the current strategy and explain the ZBC program we want to implement in the organization. Furthermore, we explain the cost analyses made and further explain the scope of my research.

4.1 Strategy of COMPANY X

— Deleted due to confidentiality —

4.2 Fixed costs ENTITY X

— Deleted due to confidentiality —

4.3 Zero Bad Costs project

As briefly explained in Section 1, ZBC is a financial cost project that COMPANY X chose to implement within Europe. This is also the one condition we had during this project. This is why we elaborated briefly on some other financial methods in the literature review but discuss ZBC further in detail. However, the information that we gathered on financial methods is still useful to compare and to identify new ideas to implement in this project.

Due to the increasing competition and change in the export market a real change is necessary within COMPANY X. Last year COMPANY X introduced a new finance vision that provides a layout on what needs to be changed within the whole organization of COMPANY X. This vision for 2021 is shown in

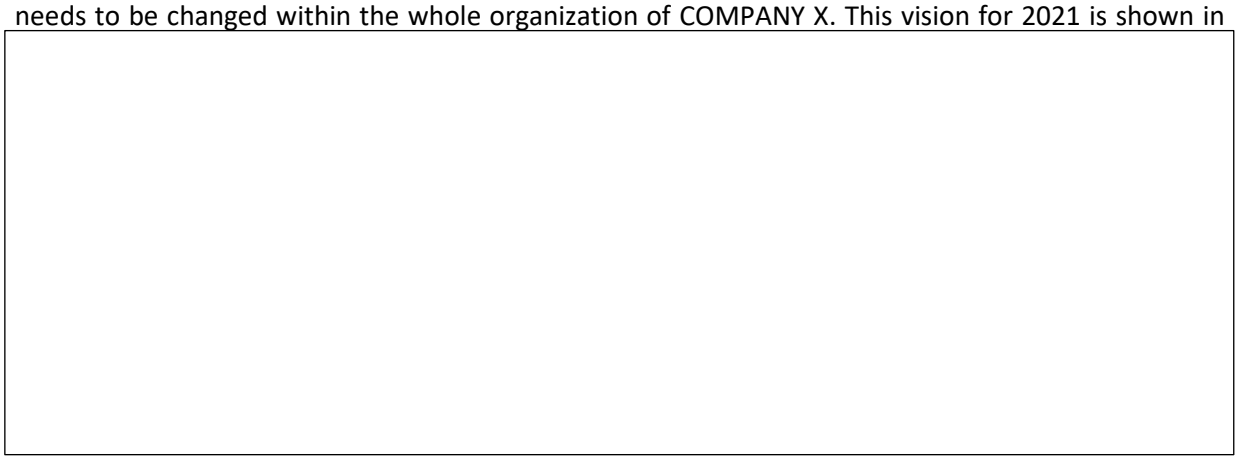


Figure 4.3: Finance vision 2021.

Figure 4.3.

In this new vision four main missions are to be accomplished:

- First class business partner: This resembles the link between the business and the financial controllers. These two departments need to cooperate efficiently to formulate clear financial analysis on the one side and implement these into business on the other side.
- Guardian of Company X Assets and Reputation: All employees of COMPANY X need to be more responsible for their own assets and budget. We want to establish cost responsibility and reduce the chance of reputational damage.
- Balancing service and costs: The financial control department cannot be responsible for every financial task. Basic financial services need to be performed by the employees within the

specific departments themselves. Using this method, the financial control department is not occupied with simple services that can be done by others.

- Increase cost culture: Create an environment in which COMPANY X focusses on a permanent insight in their costs.

Out of these missions, four strategic targets were selected that each will be developed within a project during the coming years. The ultimate goal of these targets is to achieve a cost decrease of 26 million Euro. One of these strategic targets is Zero Bad Costs, where the goal is to increase cost awareness, eliminate bad costs and change the cost culture within the organization.

As briefly explained in Section 1, ZBC is necessary because the key export markets such as HUSA and Taiwan are declining. COMPANY X therefore needs to anticipate possibly lower revenues as a result of possibly lower volumes and thus needs to reduce the fixed cost base. Furthermore, the fixed cost base of ENTITY X is at the moment higher than that of other OpCos in similar countries as shown in Figure 4.2.

During my time at COMPANY X I was responsible for the ZBC project and to design a blueprint to identify and reduce costs within ENTITY X. ZBC is a way of working that brings business, finance and procurement together to create sustainable opportunities for savings that fuel growth. What is really new about ZBC, is that it involves all functions to address all costs in scope. With ZBC, the aim is to have a sustainable reduction of bad costs and to move to a continuously cost focused culture. At the moment this is a new idea which is presented in the Finance vision 2021 (Figure 4.3).

To realize more cost visibility, a taxonomy with 16 categories is made that link to the P&L statement of COMPANY X. This means that to analyze all the costs, we divide them into categories to make a clear overview. These categories are chosen to fit the purpose of the operating model and comply with the reporting standards of COMPANY X. In Figure 4.4 these 16 categories are shown.

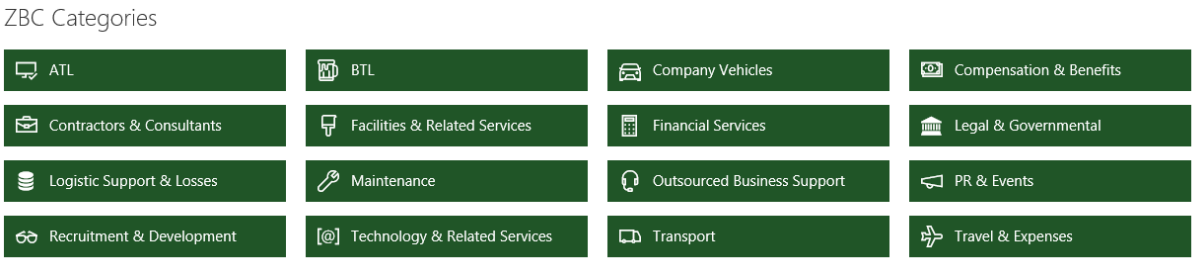


Figure 4.4: ZBC categories COMPANY X.

Later, we zoom in on the chosen categories for ENTITY X and we try to find potential savings. The categories will be handled in detail to show the exact costs per department and cost center. Furthermore, the link between the cost sub-categories and the P&L statement of COMPANY X will be explained later.

To make sure the ZBC methodology creates a new way of working instead of a one-time effort, a closed loop approach is made. The closed loop approach provides deep visibility to identify, eliminate and prevent unproductive expenses on a sustainable basis. This can be seen in Figure 4.5.

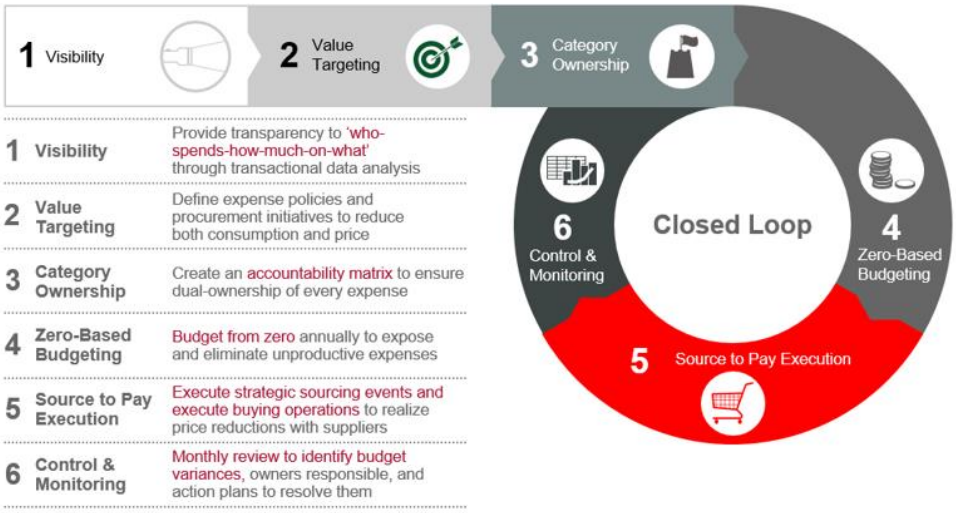


Figure 4.5: ZBC Closed Loop Approach.

An understanding as shown in Figure 4.5 is one of the targets of this project. To tackle the cost problems of COMPANY X we need to create this understanding among all employees. Only in such a way this project will have a sustainable influence.

To summarize, ZBC consists of 3 targets:

1. Full cost visibility:
    - Full cost visibility at a consistent level of detail across different parts of the organization.
    - Creating cost visibility in every department within the organization.
    - All costs will be investigated, this forms a comprehensive view of overhead spend.
2. Clear accountability:
    - Cost category ownership for each of the chosen cost categories from the taxonomy.
    - Each cost category will be handled with the category owners within COMPANY X to develop a plan.
3. Culture change:
    - Proactively manage the transformation process through an integrated change template.
    - Work together with the business to embed the changes.
    - For sustainability, drive the organization to become more cost aware.

4.3.1 ZBC analysis

To identify the fixed costs of ENTITY X we make use of the ZBC method as shortly explained in Section 1. The first step in the ZBC progress is to identify the cost categories. To identify them, all costs of ENTITY X need to be available and explored. COMPANY X has an internal system called BLINK; this is a database with all costs made on every side of the supply chain within COMPANY X. Linked to this system we can make a pivot table in EXCEL where we show the P&L of COMPANY X. With this pivot table all cost can be identified from many different angles. For example, the cost per department of COMPANY X, the cost centers and the dates can be shown. This can be done into detail all the way into the exact receipt of a single invoice. However, we noticed that the invoices are not always filled in correctly.

For a large company such as COMPANY X it is understandable that we first have to make a clear overview of groups of cost drivers before we can analyze more details. This is why the P&L statement is looked at on the highest level first. As shown in Figure 4.6, we have categorized all costs of ENTITY X. This has created clear visibility of the size of each category, facilitating prioritization.

To decide which cost categories are relevant in ENTITY X we need to make an estimation of the costs and together with the ZBC team decide which categories are relevant. As shown in Figure 4.6 we made a first estimation of the costs per category in 2016 and 2017. Furthermore, a potential savings percentage is taken from a benchmark of other OpCos where similar projects were undertaken in the past. On the right-hand side of the table we made a distinction on what level, from 0 to 2, the specific category can be changed. For example, for *Facilities and Related Services* we notice a big potential in the change of the prices, medium potential on consumption and limited potential on visibility and control.

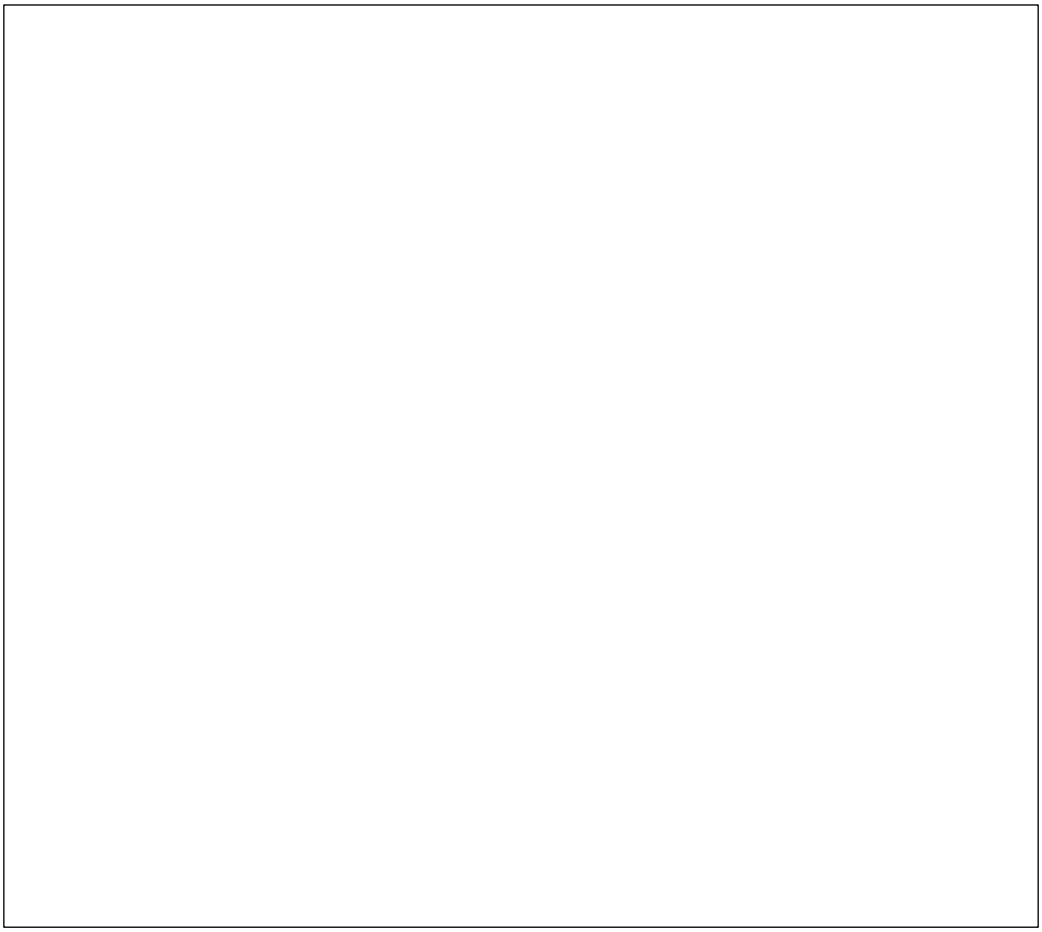
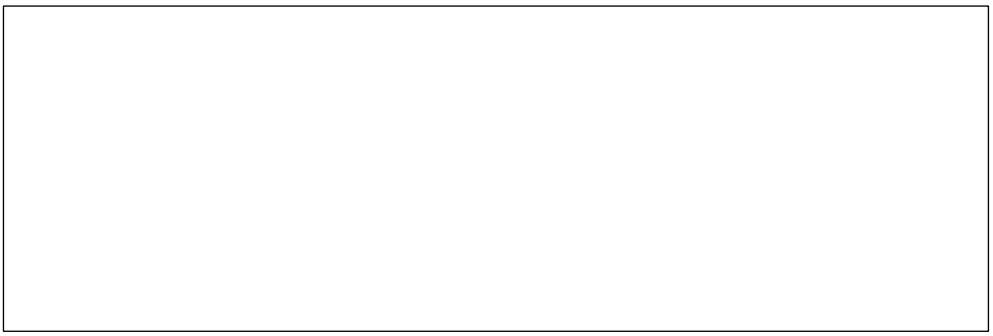


Figure 4.6: Potential categories to tackle during ZBC project.

During the meeting with the ZBC team, for which I am responsible, we made a first decision on which categories to tackle. These categories are marked with a certain color as seen in the table to the right. The categories in the color red are not significant to tackle and the categories in blue have already been changed in previous years. The other categories are interesting to research for potential savings. In the meeting with the 4 members of the ZBC team we came to the conclusion that the following 8 categories are the most interesting to find potential savings:

red	Not significant
Blue	Done in previous years
Orange	Small potential
yellow	difficult
green	Most potential



Furthermore, we discussed on how these categories need to be handled within each department, so the potential savings and changes we identify, really make an impact. This is why we created 4 roles in which each team member has a specific responsibility. These roles are shown in Figure 4.7.

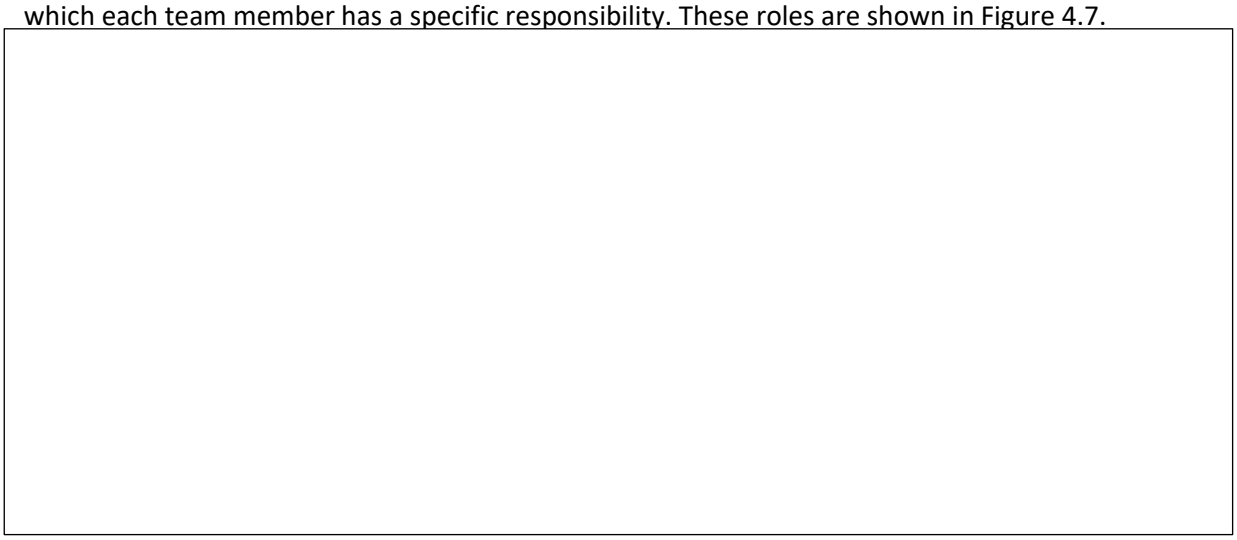


Figure 4.7: Roles and responsibility within ZBC project.

The MT member is someone from the management team of ENTITY X. He or she will be responsible for the coordination and will give strategic guidance on how to achieve the changes we identify. The category Co-owner will be someone who has a lot of knowledge of the department we investigate so that new insights can be discussed with this person. The finance business partner will generate more knowledge on the financial perspective of the potential changes and budgets. Finally, the procurement business partner will give insights on what can be changed on the price of certain potential changes we identify.

To implement all potential savings we identify, a timeline of 2 years is needed. Therefore, we initiated waves of three months in which we want to implement the savings for the category handled at that time. This timeline is shown in Figure 4.8. In each wave, one to two cost categories will be handled, in this way we try to make sure the savings identified get implemented properly.

Figure 4.8: Timeline ZBC waves.

After the first identification of the costs to see which categories are attractive to act upon, an updated version of all the costs was needed. Out of the data we made a P&L statement and defined all costs made within ENTITY X. We divided these costs into categories using a method which we found most logical in comparison to the work of each department. In Figure 4.9 all costs have been identified over the past three years. The blue colored categories have been investigated in previous years so for this research the top eight categories are most interesting.

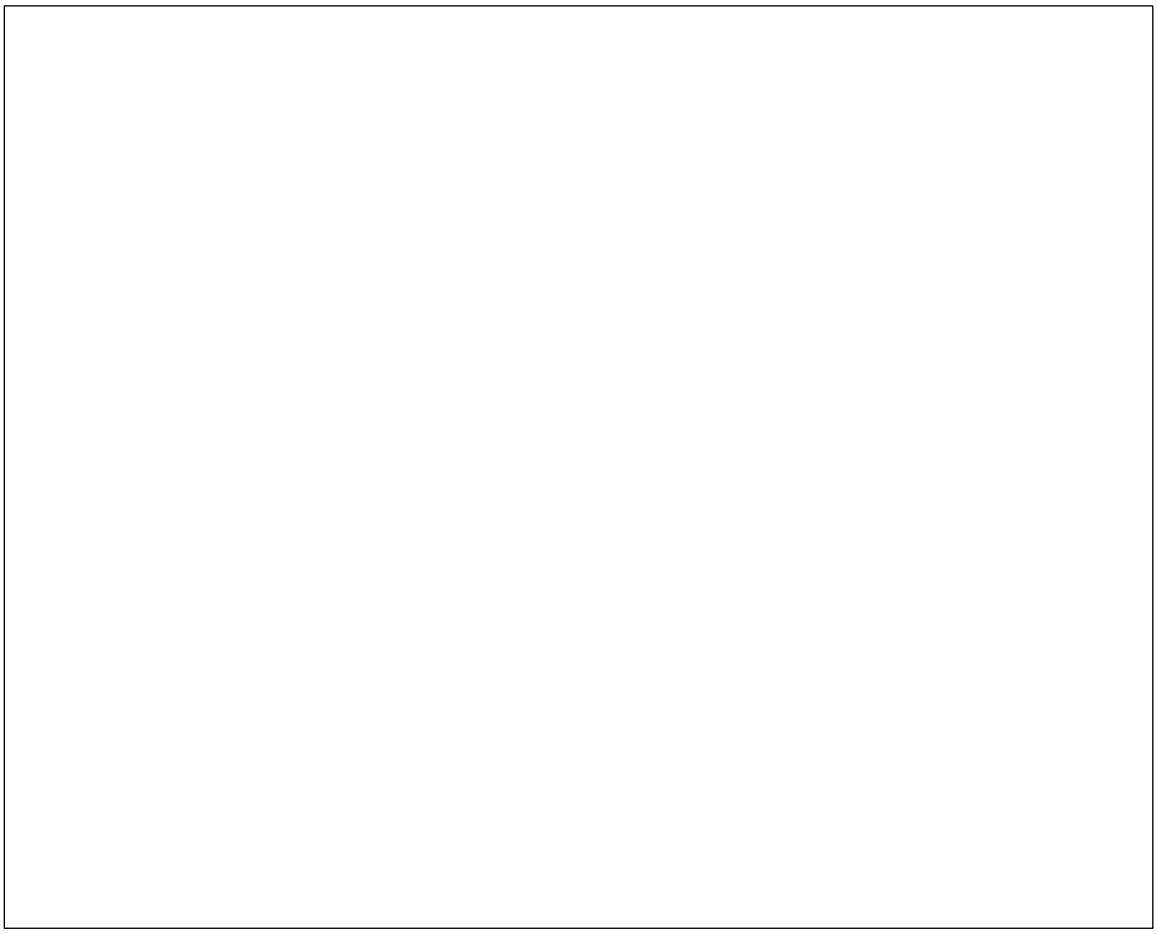


Figure 4.9: Estimated savings potential ENTITY X

With these 8 categories identified for the next two years and a planning made, we focus on compensation and benefits category to be researched in the first wave. We chose compensation and benefits as the first category because of the influence it could have on the collective labor agreement

and the new clothing and catering contracts that COMPANY X wants to change in the near future. Furthermore, this category involves multiple costs such as overtime and banqueting that are imbedded in the current culture of ENTITY X which we want to change.

Within my research we want to develop a general blueprint to identify and decrease costs within the organization. This blueprint will be explained in detail in the next section. Furthermore, the blueprint will be applied on some of the cost categories mentioned above. For this report, a distinction has to be made for compensation and benefits and the categories analyzed in further waves. This category will be the main focus of this report because the analysis and implementation all fit in the timeframe of my research. The actual savings we identify after the creation of the cost optimization blueprint and cost analysis will be mentioned in a later section.

4.4 Cost analysis Compensation & Benefits

As explained, after the first cost analysis, the potential savings will be analyzed per category in certain waves. In wave one, we analyze Compensation and Benefits (C&B) in detail. This means that we want to create cost visibility by further categorizing the C&B category to establish a clear overview of the total costs. The Compensation and Benefits category consists of the following cost elements and their additional costs.

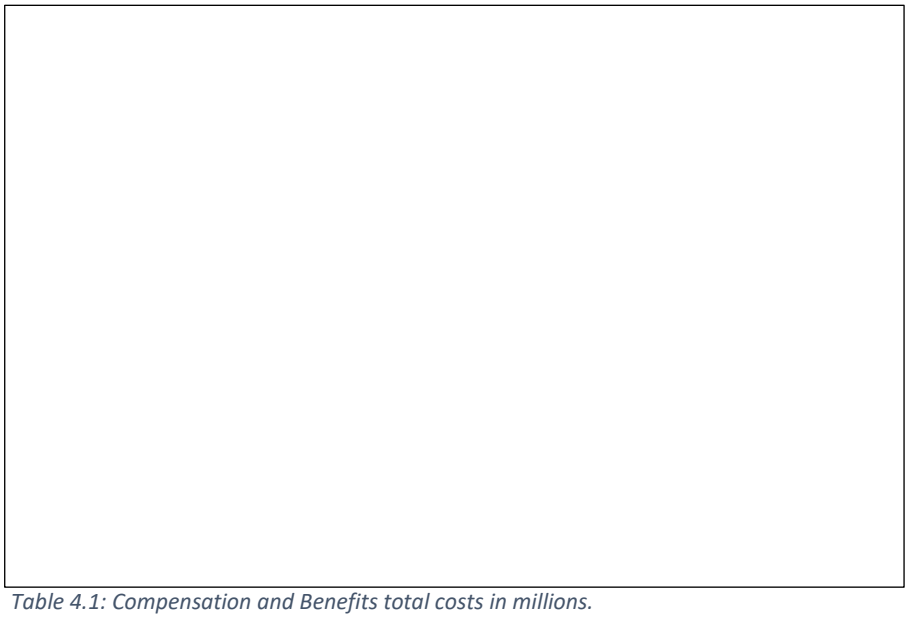


Table 4.1: Compensation and Benefits total costs in millions.

As shown in Table 4.1, C&B consist of 8 cost elements. Overtime is a particularly difficult element because of the impact it has on the current culture. It exists of overtime hours from own and external FTE and of consignment hours. The latter are stand-by duty hours where someone may get called from home to, for example, fix a problem in the production process. Clothing consists of company clothing and special personal protective equipment (PPE). These are items such as earplugs, glasses and safety shoes. We want to identify and potentially decrease the costs of these clothing items and also research whether we can increase the sustainability of these items. Catering consists of the costs of the catering company that delivers the lunches and of all the banqueting costs. These are the meals employees order during lunch meetings. The focus during this project will be on the banqueting costs. The bonus consists partly of individual bonuses and partly of a bonus called 'Delen in succes' which incorporates bonuses for all employees if COMPANY X makes profit in that year. This is a cost element which will not be a subject of my research because COMPANY X wants it to remain unchanged. Relocation is a

small portion of the C&B costs that involve the costs when an expat moves to the Netherlands and these moving costs are paid by COMPANY X. This again will not be part of my research because of the small impact it can have. Health consists private health premiums for the employer and employee and of medical fees. These consist of requirements such as medicines and bandages and of the consultancy department for research and inspections. The last cost element within C&B is individual costs. These consist of gifts and jubilations, employee transportation benefits, defined benefit plans, and other remaining personnel costs such as vacation days, provision hours and business and company events. Altogether C&B has a total cost of X million Euros as shown in Table 4.1.

To create cost visibility within a cost category it is important to know the costs on a high level as well as the costs per production line or team. Therefore, the cost data in BLINK will be used to identify all these costs. Furthermore, we identified all the full-time equivalents (FTEs) to make a connection with the costs. Following this method, we can identify the costs per FTE, per brewery, per department and per line.

4.4.1 Overtime:

We started with an analysis of the profit centers of ENTITY X. In this way we can clearly give an overview what the costs are per location and benchmark them. When we make a distinction between own, external and overtime FTEs and link them to profit centers we can identify the annual overtime costs per FTE and the spend on overtime in comparison to the normal amount of FTE. All costs of 2017 and 2018 can be seen in Tables 4.2 and 4.3. When we have a closer look at the figures below, we notice that Place Y has really high average costs per FTE in comparison to the other profit centers. What is remarkable is that Place Y has X FTE less than Place X but has more overtime FTE and higher overtime costs. For example, in 2018 the overtime costs where X Euro per normal FTE, this can be seen in the fifth column and is marked red. Furthermore, we notice that an overtime FTE on average costs about X Euro In 2018.

Table 4.3: Total overtime costs 2018.

These insights give a good understanding on where the costs are made on a high level. What we now want to know is where these costs are made within these cost centers. Therefore, we compare the three breweries because they have the same cost structure. In Tables 4.4, 4.5 and 4.6 we show the costs of 2018.

Table 4.4: Overtime costs for 2018.

Table 4.6: Average costs per overtime FTE for 2018.

In Table 4.4, we show the total costs per department within each brewery. Here we notice that most costs are made within packaging, followed by technical services and beer production. Logically, Place X and Place Y have the highest total costs because these are the two largest breweries. Therefore, we can make a good comparison between the costs of the departments of these breweries. Again, we made a color scale from green having the lowest costs and red the highest costs. In Table 4.5, the average costs of overtime per own and external FTE is shown. This is relevant because the costs of an overtime FTE are compared to the normal working hour costs. When we have a closer look at Table 4.5, we notice that in Place Y technical services and the beer production have high overtime costs. We have made a detailed analysis of these costs per production line. The full Excel-file with this analysis has been made available to COMPANY X and a screenshot is attached in Appendix B. The changes we eventually make to decrease the overtime costs will be stated in the results Section where we will mention the most important changes per department and line. In Table 4.6, the average costs of overtime per FTE is shown. Here you can see how expensive an overtime FTE is per department. This is relevant when a decision has to be made if COMPANY X could better have an extra employee working on a specific line instead of having overtime hours. In Table 4.7 the costs of a normal FTE per location in 2018 is shown. On average a normal FTE costs X and an overtime FTE X. However, when deciding on having more employees or having more overtime hours not only the salary has to be considered but also the productivity and motivation.

Table 4.7: Average costs of a normal employee.

4.4.1.1 Consignment

As shortly explained, consignment costs are stand-by duty hours where someone gets called from home to get to the brewery to fix a problem. This is part of an escalation model, shown in Figure 4.10, which takes place when there are quality problems and technical issues for the packaging and brewing department. These are expensive hours and could maybe be decreased by using a different model. In different meetings we noticed that the system in Place Y is outdated and there should be a new consignment system. The estimated consignment costs in Place Y are X a year. The current consignment method has some perks but has the following downfalls:

- The feeling of ownership of the production managers when a problem occurs is low because there is always a back-up plan with consignment.
- Help from a distance via the phone is not always effective.
- Technicians that arrive after 00:00 at the brewery are not effective and expensive.
- The consignment process is difficult to monitor. Are these hours and extra costs necessary?

We believe that we have to research the possibility to either change the current escalation model or remove the current model and develop a new method. We have to find out why there are consignation hours and how useful they are.

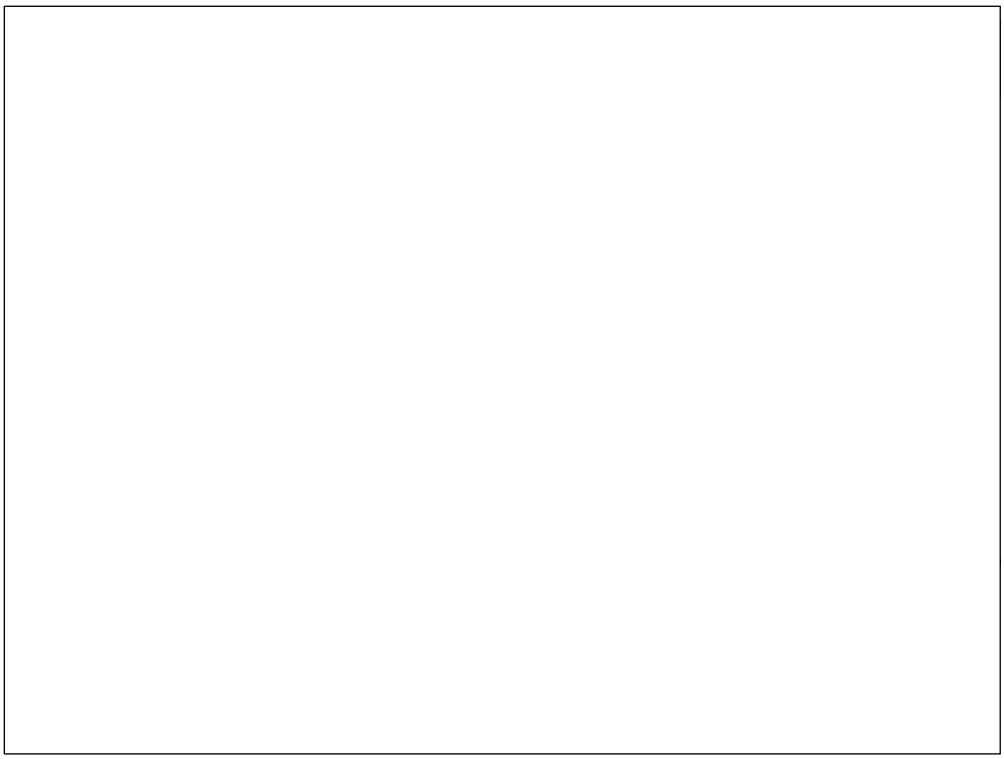


Figure 4.10: Escalation model consignment.

4.4.2 Clothing:

Clothing consists of two aspects. These are work clothes such as shirts and trousers which are part of a contract with COMPANY A. This is the provider of all the clothing for COMPANY X. Besides regular work clothes there are Personal Protective Equipment (PPE). These again can be divided into three categories. First, in vending machines small items like earplugs and glasses are provided for employees. Second, slow movers consist of clothing items such as working boots, shoes and masks. Third, special PPEs consist of custom earplugs and glasses. These are the most expensive to make.

To analyze the clothing costs of ENTITY X we used similar methods as we did with the overtime costs. We analyzed the total costs and compared the different departments. Furthermore, we calculated the own and external FTE of ENTITY X to compare the average costs. In Table 4.8, we notice that the average costs per FTE is similar in Place X and Place Y. In brewery Place Z however the costs per FTE seem out of proportion. Having checked the details it appeared that costs have been incorrectly booked. This highlights the need for uniform cost booking systems.

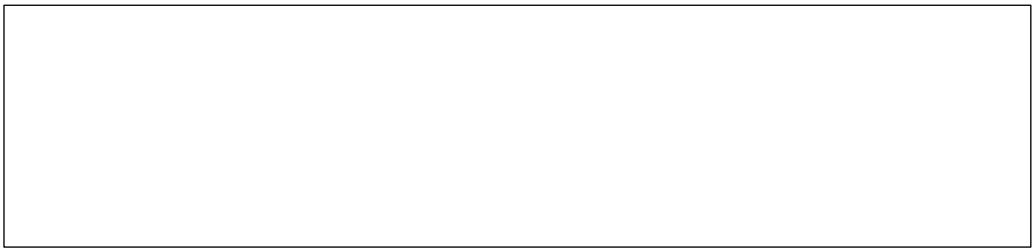


Table 4.8: Total clothing costs of 2018.

Besides the costs per location we made a distinction between the costs per department to create a benchmark for each brewery. However, we noticed that these costs are not booked correctly. Therefore, the costs are very different per department as seen in Table 4.9.

Table 4.9: Clothing costs per department.

One of the targets of ZBC is to establish cost visibility, therefore it is essential to change the way costs are booked in the system. Using a new method, we can realize cost visibility which would make it possible to benchmark breweries and create cost insights.

The goal is to develop total insights of all clothing materials and PPEs to know how much is spent where. Furthermore, we want to do research on how many clothes are needed with the goal to generate savings in comparison to the current situation, keeping safety indicators on the same level.

4.4.3 Catering

Catering costs consist of fixed costs of the facilities and variable costs of banqueting. The fixed costs are negotiated with an external company and are not scope of my research. The banqueting costs however are interesting to research because there could be big differences in costs and culture between the locations and departments of ENTITY X. We started again with analyzing all the banqueting costs of ENTITY X and compared them with the own, external and overtime FTE. These costs and FTE of 2018 are shown in Table 4.10.

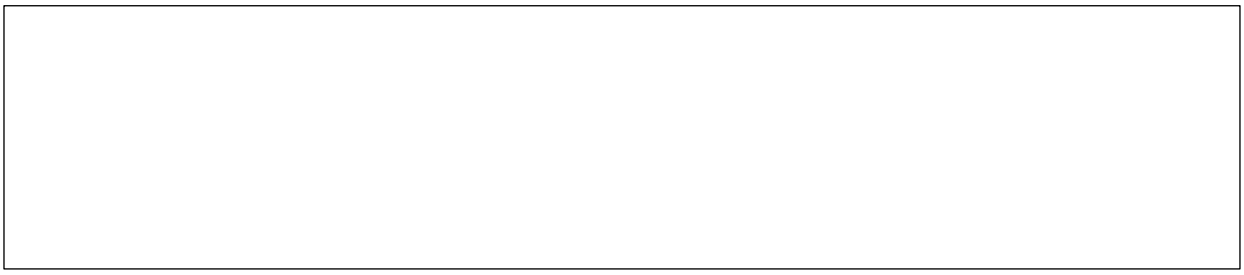


Table 4.10: Total catering costs of 2018.

As seen in the figure above, we notice that the total costs of Place X and Place Y are the highest due to the amount of FTE's. In the fourth column we compared the total costs to the own and external FTE's which creates a good overview of the costs per location. To form more cost insights, we benchmarked the costs of the different breweries per department. These costs are shown in the tables below.

Table 4.11: Total catering costs per department.

Table 4.12: Average catering costs per own and external FTE.

In Table 4.11 we notice that most of the costs are made in overhead and packaging. Furthermore, the costs in beer production are higher in Place Y than in Place X. In Table 4.12, we notice that the average costs per FTE are highest in overhead. This can be explained due to the fact that most of the banqueting costs are booked on overhead. Therefore, it is key to categorize the departments in ENTITY X to exactly see where most costs are made.

The costs per department of overtime, clothing and catering also show a pattern. It is clear that Place Y, almost on a consistent basis, has higher costs per FTE than the other locations. Clothing costs are higher than the market standard and there is no standard of booking these costs. Furthermore, we notice that the amount of overtime also has an influence on the catering costs. Therefore, it is essential to create cost visibility to make benchmarking between the departments possible. The cost analyses in this section show that the current cost culture is outdated and needs to change.

4.5 Remaining cost categories

Besides the analysis of the cost categories mentioned in Section 4.4 we also made an analysis of the remaining costs within C & B. These are not mentioned in detail because these cost categories were of lower priority for COMPANY X. Given the timeframe of this project only high-level analyses have been made, as shown in Appendix C.

4.6 Scope

Analyzing the current situation at COMPANY X, we noticed multiple opportunities to decrease costs. In the cost categories mentioned before, the main problem areas are identified which lead to potential savings. Furthermore, we noticed the need for a standardized method of booking costs within these cost categories. This is important in order to develop cost visibility. We also noticed a cultural problem embedded in the company structure. Because of the current culture, changes need to be communicated well and need to be monitored in the future.

To realize sustainable cost reduction and change the cost culture we will design a standardized blueprint. This blueprint will be suitable for all cost categories within COMPANY X and also for future use for other companies. In the blueprint all steps needed to decrease costs within an organization like COMPANY X will be explained in detail. These steps will be shown systematically in a scheme. Further on in this report the results of applying this blueprint to ENTITY X will be described.

5. Solution design

In this section we describe the steps necessary to identify an organization's cost structure, to decrease costs and change a company's cost culture. We explain these steps via a governance framework and a detailed blueprint we designed. We generalized the framework and blueprint with the goal to be suitable for multiple organizations and departments.

5.1 Governance framework

We make a distinction between a governance framework and a more detailed blueprint which describes all steps and choices in detail. In the governance framework the basic steps are described that are necessary to provide change in the cost structure of the organization. In Figure 5.1 this governance framework is shown. Further on in this Section we provide a more detailed blueprint which provides key information on how to identify and decrease costs within different cost categories.

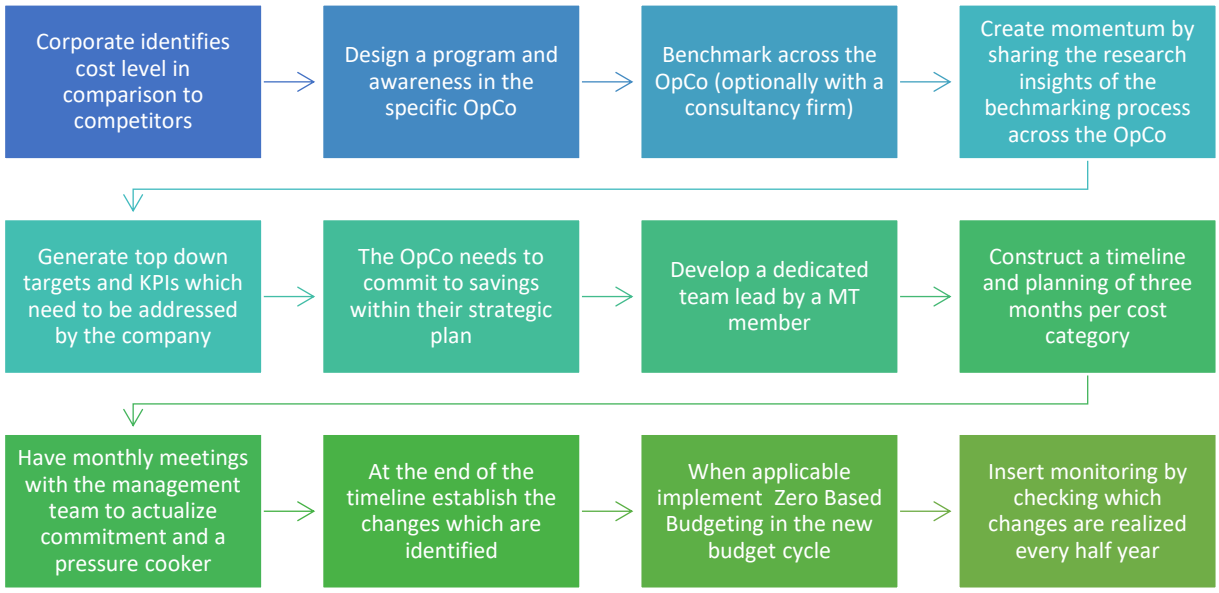


Figure 5.1: Governance framework to provide change.

The steps shown in Figure 5.1 are the following:

1. *Corporate identifies cost level in comparison to competitors.*
   The use of this framework all starts with the urge for change of an organization. This happens when you identify a higher cost level in your organization in comparison to your competitors or similar departments within your organization.

2. *Design a program about the current cost level to create awareness in the specific OpCo.*
   Start with setting up a program that emphasizes the need for change. Show the first reasons on why a change is needed and what needs to be done to realize it. This can be a basic program which has a few important key words that stick with the organization. Furthermore, try to get awareness of the program by putting information on the organization's workplace and by organizing meetings with management.

3. *Benchmark across the OpCo (optionally with a consultancy firm).*
   After creating some awareness for the need of change, it is important to get facts and figures which show exactly why there needs to be a cost reduction program. This can be done by getting in contact with a consultancy firm which identifies the organization cost level and can benchmark the cost level across different OpCos and the market.

4. *Create momentum by sharing the research insights of the benchmarking process across the OpCo.*
   When the benchmark research is finished and the different OpCos are analyzed on a high level, detailed information is available on where change is needed. With this information the cost levels per OpCo are analyzed and it is possible to identify different cost categories.

   - *Set up workshops and meetings with management to introduce the ZBC project.*
     Organize workshops and brainstorm sessions on specific cost categories to discuss cost optimizing strategies. By gathering information from different levels of the organization, a complete situation report can be produced.

5. *Generate top down targets and KPIs which need to be addressed by the company.*
   With the information identified in the previous step it is important to construct deliverables by writing down targets and KPIs for each cost category. In this way a common goal is formulated which can be added to the strategic plan.

6. *The OpCo needs to commit to savings within their strategic plan.*
   As mentioned in the previous step the new targets need to be added to the strategic plan. By adding these it becomes an important part of the organization which can lead to commitment from the whole organization.

7. *Develop a dedicated team, led by a MT member.*
   With the benchmark analysis done by the consultant and the commitment from the organization it is now of essence to organize a team that will lead the program. This team exists of different roles and responsibilities as explained in Section 4.3.

   - *This team needs to be linked to a member of the management team to establish change within the whole organization.*
     By linking the team that will lead the project to one of the members of the management team you form top-down and bottom-up communication. This also provides the opportunity to make incremental changes faster.

8. *Construct a timeline and planning of three months per cost category.*
   As explained in Section 4.3, it is important to make an accurate timeline of the project. We propose to commit approximately 3 months per cost category to research the current status, review guidelines and find savings opportunities. After three months new policies with the potential savings should be ready to roll out.

9. *Have monthly meetings with the management team to actualize commitment and a pressure cooker.*

    - *In these meetings every idea needs to be pitched to create commitment from management.* Besides the weekly meetings with the project team, a monthly meeting with the MT needs to be held. In these meetings, the targets and the developments of that month can be discussed. The management team then have the opportunity to see what is going on in the organization, and also to make changes where they see fit. In this way you forge a pressure cooker which can give insights that are applicable for the whole organization.

10. *At the end of the three months establish the changes identified and provide new policies where needed.*
    From the cost analyses made and the creation of the new policies it is key to provide standardization across the department at each OpCo. This is done by creating a folder with rules and policies on which changes need to be made and on how these need to be applied. This is a combination of facts, targets and policies which make a clear overview on which changes are necessary.

11. *When applicable implement Zero Based Budgeting in the new budget cycle.*
    Having established new policies, ways to decrease costs and standardization across the organization it is in some cases possible to implement Zero Based Budgeting. As explained in Section 3.6, budgeting from zero each year helps to remove unnecessary costs and design a detailed forecast. The process can take several years to implement it in a right way.

12. *Insert monitoring by checking which changes are realized every half year.*
    To build a monitoring tool, it is often useful to develop a dashboard. In this dashboard the KPI's can be listed and you can show if these are achieved. To realize change it is most important to monitor it and organize aftercare. Changing a company is not a one-time spin off as explained in Section 3.3. Therefore, the organization must implement meetings and sessions with the teams to check if the changes made are being realized.

To construct continuous improvements, alignment needs to be formed within the organization. Therefore, standards are needed within data, rules and control techniques. The problem is that many cost optimization programs deliver a one-time improvement. According to PWC (2016) five steps are needed which focus on optimizing and not just on cutting expenses.

1. Start with strategy: Have a clear strategy and ensure consistency across the organization.
2. Align costs to strategy: Differentiate the organization 'good costs' from the non-essential 'bad costs'.
3. Aim high: Use technology, innovation and new ways to optimize the costs base.
4. Set direction and show leadership: Deliver the costs optimization program as a strategic business transformation.
5. Create a culture of cost optimization: Ensure you embed a culture of ownership and incentivize continuous improvement.

It is vital to include a cost optimization program into the strategy and finally embed it into the culture of the organization. Furthermore, in Section 3.3 we explained which steps are necessary to initiate a culture change within a company. This is something we also want to incorporate into our blueprint to

realize this change in the cost culture. This is also why ZBB can be an important factor. As explained in Section 3.6, ZBB can realize continuous improvement when applied correctly.

5.2 Detailed cost optimization blueprint

An effective cost optimization program, is based on deep analysis and fact-finding techniques such as cost driver analysis or spend analysis to assist management in understanding better cost structures in order to identify, quantify and prioritize savings opportunities (KPMG, 2008). It is a business-focused, continuous discipline to drive spending and cost reduction, while maximizing business value.

After having described the basic steps in Section 5.1, we identify all steps in detail that are necessary to provide a cost reduction in the organization. Therefore, we developed a blueprint that is shown in Figure 5.2. A larger version of the blueprint is placed in Appendix D. The steps will be generalized so they will be applicable for multiple organizations. However, for my research this blueprint is used to provide cost savings and change in the organization of COMPANY X and in particular ENTITY X. Therefore, the details and results later on in this report will be about ENTITY X. The goal of this blueprint is to create cost reduction within the departments researched. Furthermore, standardization is a very important aspect. Not only departments need to be aligned but also cost structures and data sets to construct a method to decrease costs in a continuous endeavor.

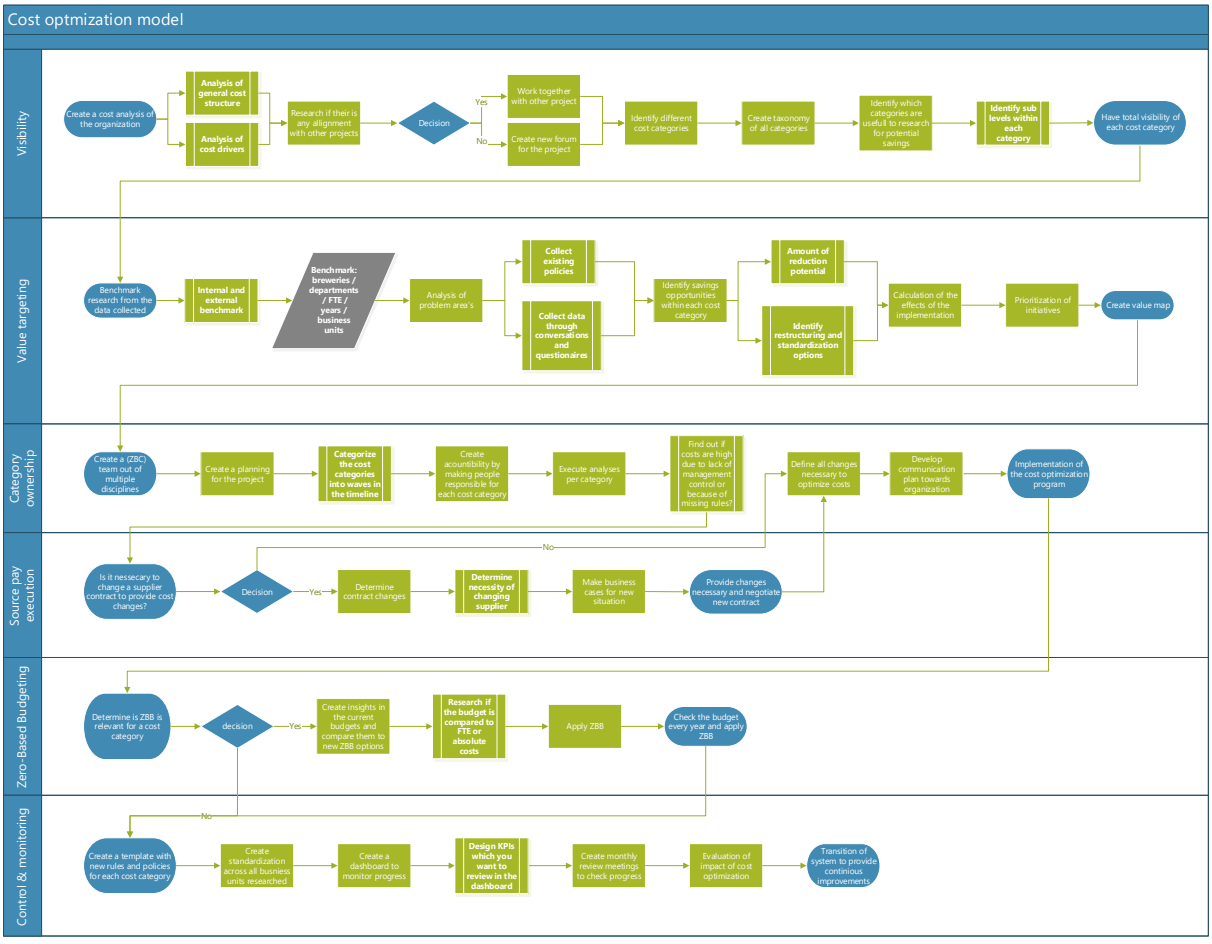


Figure 5.2: Cost optimization blueprint.

To understand each step and establish a cost reduction all steps are described in detail:

1. **Visibility**
   It is of essence to create visibility in the total costs and the cost structures of the organization. We want to establish full cost visibility to identify bad costs and to form alignment between the departments. Therefore, the following steps are necessary to take:

- Construct a cost analysis of the organization and departments , extract data to realize visibility.
  - Therefore, we need to make an analysis of the general structure of costs.
  - Make an analysis of cost drivers, these are units of an activity that causes the change in activity's cost.

- Before fully going into detail, investigate whether there is any alignment with other projects.
  - If there is any alignment with other projects within the organization, try to work together.
  - If there is not, develop a new forum for the project.

- When all costs of the organization and your department are clear and gathered in a data set, it is possible to identify different cost categories. Here we want to divide all costs into categories to create an overview. An example of this is Figure 4.6, here we identified all costs per category to decide which cost categories are the most important to tackle first.

- Develop a taxonomy of all categories. This is a further categorization within each cost category where the costs need to fit to the business model, reporting standards and expected materiality of spend. This makes it possible to design a standard method to identify and link costs to the cost categories fur further use in the future. It is best to compose a taxonomy as close as possible to the Standard Chart Of Accounts (SCOA) of the organization.
  - Build cost categories and make a taxonomy to link costs to P&L statement.
    - Look at the P&L by nature.
    - Difference between cost and profit centers.
    - Identify further splits possible in the subcategories up until the invoices.
    - Find out what is in the scope of the project and what is not.

- Decide which categories are going to be investigated and are most useful for potential savings. This is shown in Figure 4.9.
  - Identify the potential of the sub levels within each category to make a good overview of all costs saving opportunities. This is what we did for ENTITY X for the category compensation and benefits shown in Table 4.1.

- At the end of the first step we want to have total visibility of all costs in each category. Try to estimate what the potential of savings are and decide which costs to tackle first.
  - As explained, creating full cost visibility is not only important to identify the main cost drivers but also to establish standardization for the ZBC project. This is done by creating a taxonomy that fits with the organization’s data.
  - When going through the data you often find out that costs are registered under different cost centers. These differences need to be sorted out so that all costs are registered in the same way.
    - This is of essence when you want to create benchmark opportunities.

2. **Value targeting**
   When all costs are identified we want to know what the main cost drivers are and how they differ from similar departments in the organization. Here we want to apply an internal and external benchmark to ultimately develop a prioritization of initiatives.

- Excel data analysis: Internal and external benchmarking on the following attributes:
  - Benchmark different breweries, for ENTITY X these are the breweries in Place X, Place Y and Place Z.
  - Benchmark different departments such as brewing, packaging and technical services.
  - Benchmark per FTE.
  - Benchmark the departments for different years.
  - Benchmark different OpCos when possible.

- Analysis of problem areas. When the problem areas are identified by benchmarking the organization it is important to find out why there are difference between similar departments or locations.
  - Collect data trough conversations, this can be done via questionnaires and meetings.
  - Collect existing policies and find out if they are applied correctly.
    - When something has impact on employees, communication is important. Lawful alignment with the collective labor agreement needs to be checked.

- Identify potential saving opportunities for the problem areas identified.
  - Estimate the amount of cost reduction potential.
  - Identify restructuring and standardization options. Besides cost savings it can be very beneficial to align departments and operations with each other.

- Calculation of effects of the implementation. What is the effect of the changes in terms of savings, structures and work environment?

- Construct a prioritization of initiatives. Here we decide which areas are most important to tackle on the potential savings and on the importance of the strategy of the organization.
  - This can be done by creating a value map.

3. **Category ownership**
   Besides the quantitative part of ZBC it is important to create accountability for the project. Therefore, a team needs to be organized which will handle the project and implement the changes made.

- Forge a ZBC team out of multiple disciplines. The team needs to consist of people who have knowhow on the subject but also of people who can look at the problem areas objectively. The roles in the teams are explained in Figure 4.7. Furthermore, it can be helpful to organize workshops within the department to come up with new ideas on how to tackle the problems and costs.

- Build a planning and implementation plan for the ZBC project. This is a detailed plan of events and activities combined with the responsible persons.
  - Develop a timeline by categorizing the cost categories into waves, these are periods of around 3 months where we want to identify all changes needed.

- Establish accountability by making people responsible for cost categories and subcategories in the project. A different methodology is needed for each cost category, therefore assign different roles depending on the situation at hand.
    - When necessary people can be added to the project.

- Execute analyses per cost category (planned duration of 3 months).

- Find out whether costs are high due to lack of management control or because of missing rules?
    - Find out whether there are any rules are not followed that cost money.
    - Create alignment with HR when you want to change any fundamental work rules in the organization.

- Define all necessary changes per category of the project and per individual to decrease costs. This is the results of three months research where at the end you know what needs to be changed to achieve a certain saving or standardization.

- When all problem areas are identified and the team has identified all necessary changes with the accompanied savings a communication plan towards to organization needs to be made.

- Implementation of the optimization program. A good planning and communication plan need to be set out to deliver all changes necessary. It is of essence to have a detailed plan so that the changes identified are realized.

4. Source to pay execution (Figure 4.5)

Renegotiation of terms and conditions with suppliers can have a large impact.

- Is it necessary to change a contract to provide cost changes? When the potential savings are determined in the financial analyses and you find out that a change of contract is needed to provide these changes, research whether this is possible.

- Determine contract changes needed for the organization. This can be done in consulting with the current supplier.

- Determine necessity of changing supplier. Try to come to terms with your current supplier, however, sometimes it is needed to change your supplier to provide cost savings and changes in strategy.

- Make new business cases for the new situation. This can be done internally as well as together with the supplier.

- Provide changes necessary and change contract when all changes are calculated and accepted by both the organization and supplier.

5. Zero-based budgeting

As explained in Section 3.6, ZBB can be very helpful for some cost categories. Budgeting from zero each year helps to remove unnecessary costs and realize a detailed forecast.

- Determine whether ZBB is relevant for a category. These are categories where each year the budget changes regarding the budget from last year. Therefore, applying ZBB can help you to save costs by critically analyzing the budget amount.

- Create insights in the current budgets and compare them to new options of ZBB.
    - Explain what ZBB is and how to implement it.

- Research if the budget is compared to FTE or to absolute costs. Often a budget is compared to the number of employees instead of the absolute costs. It can give new insights to look at these costs and explain why a certain budget is needed each year instead of just increasing it.

- Apply ZBB on the cost category.

- Check the budget every year and apply ZBB again.

6. Control & monitoring

When the goal is to establish a sustainable change in costs, control and monitoring are of the greatest essence. With ZBC we do not only want to make a one-off cost saving but want to realize standardization and continuous savings in costs. Therefore, evaluating the changes made each period is very important. This can for instance be done by creating a dashboard.

- Design a template with new rules and policies
  When the wave of a cost category is over, all previous steps should be finished. All the changes identified with the estimated potential savings can now be written into a template. This template can then be sent to everyone in the organization to explain all changes.

- Create standardization across all business units researched. This means that if you change something that influences employees directly it should be similar for every department and OpCo. You do not want to generate friction between employees due to new changes.
    - In terms of a cost structure, standardization can be very important as well. To realize benchmark opportunities in the future and design a reliable dashboard, the cost structure needs to be standardized.

- Organize monthly review meetings to check progress, this can be done by reviewing the different KPIs in a dashboard.

- Evaluation of the impact of costs optimization. After a few months it is possible to evaluate the changes made during the ZBC project. This knowledge can be passed on future ZBC projects.

- Transition of cost culture to provide continuous improvements. When all steps are finalized a cost culture is developed where costs are analyzed on a continuous basis.

6. Results ZBC ENTITY X

In this section the results of the application of the Zero Bad Costs project at COMPANY X will be described. These results can be split in four areas:

1. The design of a blueprint and process to be applied within COMPANY X.
2. Results of the application of the blueprint on ENTITY X and the first wave of cost savings in €.
3. The impact of this method on the cost culture of ENTITY X.
4. Ongoing application of ZBC and areas for future application.

6.1 Change blueprint and process

The main goal of my research is to change the cost culture of ENTITY X. Therefore, we needed to design a blueprint which describes all steps necessary to realize cost visibility, find potential saving areas, process action and ultimately create sustainable savings by changing the cost culture of the organization.

During my project I was responsible for setting up the program as well as leading the cost change project for ENTITY X. We designed a generalized blueprint as explained in Section 5. As a result, we have shown how to develop and complete a cost change project. This project will be an example for future projects for ENTITY X.

One of the most important parts of a change project is to identify the cost structures and problem areas. For ENTITY X we analyzed all costs and categorized them in multiple layers. For this project we constructed a taxonomy that COMPANY X can use as an example for future projects.

To identify key problem areas, we developed a benchmark research for the OpCos. Here we identified a pattern between the costs in certain areas. We noticed that for the cost category 'Compensation and Benefits' several costs are higher in Place Y than in similar operations in other OpCos. Therefore, we analyzed these problem areas and came up with solutions, which are explained in Section 6.2.

By analyzing costs and identifying patterns we have created visibility and awareness for ENTITY X on key problem areas. This is an important step in trying to change the cost culture. In the blueprint we explained how organizations can detect these problem areas and reorganize their cost structures.

Another key issue throughout the project was the lack of standardization in the rules and data. We analyzed the differences between the OpCos and tried to form similarity between them. This means that we applied the same rules on employees for similar departments. Furthermore, we retrieved data sets and combined them to realize cost visibility for certain cost categories. We made agreements with suppliers to deliver standardized monthly cost reports so ENTITY X has continuous cost visibility.

Using the blueprint, we followed every step to eventually decrease costs within the different cost categories of ENTITY X. These results are explained in the next section.

While using the blueprint and creating the ZBC process within ENTITY X we improved the blueprint through various iterations. We believe we have now come to a point that the blueprint is complete and the process is well described and handed over to the organization.

6.2 Actual saving results of ZBC blueprint, Wave 1 at COMPANY X

— Deleted due to confidentiality —

6.2.1 Overtime

6.2.2 Clothing

6.2.3 Catering

6.3 Culture change ENTITY X

The blueprint and the results of the ZBC project are good examples on how ENTITY X can create cost visibility, -awareness and -savings. However, to realize a change in the cost culture, sustainable changes are needed within the organization.

The ZBC project secures a great first step in trying to change the cost culture of ENTITY X. It provides the opportunity to get familiar with the strategic vision of COMPANY X and to generate savings along the way. During the project we noticed that many employees were not familiar with ZBC and with the new Finance vision. We also noticed anxiety of employees for possible changes, as explained by Schein (1985). This was due to the fact that we targeted cost categories that directly impact them. Furthermore, we noticed that some managers find it difficult to accept changes. Therefore, it is important that the ZBC project will be repeated and will become an important factor in each OpCo. Only when it becomes normal to analyze cost categories critically each year, a culture change is possible. To realize the recommended changes from this ZBC project, we created guidelines which COMPANY X will release as one pagers.

In the cost categories analyzed we found several ways to provide sustainable changes. In the breweries we noticed that overtime is a difficult subject where it will take time to initiate all changes recommended. We already made some changes, as explained in Section 6.2.1, but for a culture change there needs to be more overall control. Furthermore, we noticed that cost visibility provides a good start for a change in cost culture. With creating cost visibility and reviewing costs per category you create cost awareness. This provides benchmark opportunities which enables you to see patterns which can lead to identifying problem areas. This is something we realized in the cost categories analyzed but needs to be done on every level within ENTITY X. A dashboard with the monthly overtime reason-codes, KPIs and targets should be incorporated in the culture. COMPANY X is in the process of implementing Power BI, which is a dashboard software program, to structurally use KPI dashboards and the ZBC project will be included in that program. Due to the lack of time and data this process was still work in progress at the end of my research.

By creating cost visibility and using the dashboard it is also possible to develop cost control by analyzing budgets, costs and targets each month. This is also an important factor of changing the cost culture and should therefore be incorporated in the reporting routine of COMPANY X.

Applying the Beckhard and Harris (1987) change model, as described in Section 3.3, to ENTITY X gives the following result:

- **D**issatisfaction: Current cost levels identified as too high by top management.
- **V**ision: COMPANY X Finance Vision 2021 (Figure 4.3).
- **F**irst steps roadmap: ZBC project.
- **R**esistance to change.

These four conditions generate the following change formula:

$D * V * F > R$.

As described in Section 3.3, this is not an exact formula, but it does indicate what factors are needed to realize change in the organization. All three elements on the left side must be present for change to occur. This ZBC project represents the missing link in the key elements necessary to change the COMPANY X cost culture, albeit just the start of the process.

To conclude, it was the first time that the ZBC project was launched within ENTITY X. We successfully created cost savings and designed a blueprint that can be used for the coming years. Furthermore, we managed to form a more cost focused mind-set in some areas of ENTITY X. However, as described above, people do not accept changes easily. Changing a cost culture will take time and will generate resistance. Therefore, it is of essence that COMPANY X will continue with the ZBC project to create standardization and realize a true culture change.

6.4 ZBC wave 2 (ongoing cost analyses)

As explained the focus of my research was to develop a blueprint for cost culture change by changing cost structures and finding potential savings. At the end of 2019, ENTITY X wants to focus on Transport and Above The Line (ATL) and Below The Line (BTL) expenses. Therefore, we constructed a first cost overview for these categories. The transportation costs are shown in Figure 6.11.

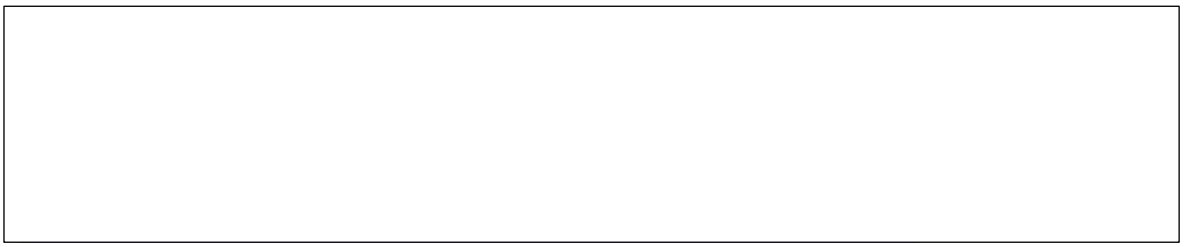


Figure 6.11: Transportation costs ENTITY X.

To find out if this cost category is worth investigating, we developed a survey which is shown in Appendix H. The results of this survey will determine whether it is interesting to apply ZBC to transportation cost. This will be handled by ENTITY X in the future.

For ATL and BTL we identified the highest cost areas. Here we noticed that the costs are already declining over the last four years. This can indicate that there is no need for a project such as ZBC. Furthermore, we noticed that almost all costs are made in Place Z development. Therefore, we recommend ENTITY X to analyze Place Z development and determine whether improvements can be made.

Figure 6.12: ATL & BTL cost trend Entity X.

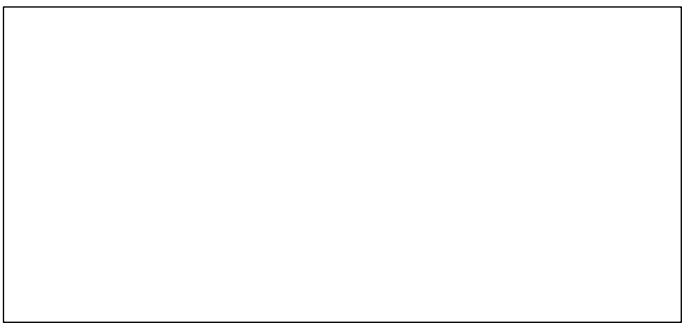


Figure 6.13: ATL & BTL cost analysis.

7. Conclusion and further recommendations

This study explains the process of creating cost visibility and awareness, decreasing costs and changing the cost culture of ENTITY X. We identified problem areas and developed a blueprint which explains all steps necessary during a cost reduction project. Here we discuss the conclusions of my research and provide some recommendations for further research at ENTITY X.

7.1 Conclusion

The problem addressed in my research is the incapability of ENTITY X to compete on costs with other similar OpCos. Therefore, we identified the following research question:

How can the cost culture within Entity X be improved to lower costs and create a sustainable competitive advantage?

The aim of this research was to increase cost awareness, eliminate bad costs and change the cost culture within the organization. Therefore, we initialized and performed a cost reduction project named ZBC for which we developed a new blueprint which COMPANY X can use as an example for future projects.

Initially the ZBC project was unknown to most COMPANY X employees. In order to avoid this project to be a one-off initiative, a blueprint for repetition needed to be developed. Only when ZBC is embedded in the corporate governance and is performed across the company on a continuous basis it will change the cost culture within COMPANY X.

We developed a blueprint for cost reduction by category in the organization, as described in Section 5, to drive the ZBC projects and to achieve repetition. It describes all steps necessary to ultimately change the cost culture of an organization and ranks them into six phases:

- Creating cost visibility through data analysis.
- Identifying saving targets through benchmarking.
- Determine category ownership and accountability.
- Review of supply contracts for potential renegotiation.
- Zero-Based Budgeting.
- Set up control and monitoring processes.

We applied this blueprint for the first ZBC project within ENTITY X. We have found a lack of cost awareness amongst ENTITY X employees. In one area for example employees had created their own system to manage overtime by rotating shifts. This system maximized overtime pay for individuals and did not minimize cost for the company.

Following the steps of the blueprint systematically will not only correct these issues but will also change the attitude of people towards cost and therefore ultimately the cost culture in HEIKENEN.

Parallel to the development of the blueprint for ZBC, the following practical results have been achieved:

1. The ZBC project has been started up.
2. The Cost Optimization Blueprint has been designed and applied.
3. Cost visibility has been established for ENTITY X (within targeted cost categories).
4. The need for standardized cost reporting has been demonstrated.
5. On the targeted cost categories X€ saving opportunity has been identified.

6. MT members have been given ownership of cost categories, and therefore responsibility and accountability have been secured.
7. Wave 2 of ZBC has been initialized for continuity.
8. Culture change:
    a. Awareness: The ZBC project has created cost awareness with the employees.
    b. Acceptance: In some areas initial acceptance of the project has emerged.
    c. Support: Some employees actually start to support the ZBC project.

During our project we discovered a cost saving opportunity of approximately X€. This is a relatively small amount compared to the X million Euros ENTITY X want to save with ZBC. Nevertheless, we targeted cost categories that have a direct impact on employees. These cost categories where visible and tangible, and therefore a good first step in changing the cost culture of ENTITY X. Because of the personal impact we experienced some anxiety but after a while we also noticed initial acceptance of changes. This exercise has demonstrated the need to COMPANY X for ongoing ZBC projects. We have already identified new cost categories for COMPANY X to apply the blueprint for ZBC in the coming years.

In combination with the dissatisfaction of COMPANY X with the current cost levels and the COMPANY X Finance Vision 2021, we believe that our blueprint as the base for the ZBC projects has the potential to be the missing link in actually changing the cost culture of ENTITY X.

7.2 Recommendations

Based on the findings the following recommendations are made:

Recommendation 1: Continue to apply ZBC, following the steps in the newly developed blueprint, both in ENTITY X and other organizations within COMPANY X. In this study we provided a map on how to apply ZBC and made a start in changing the cost culture of ENTITY X. As explained, we targeted cost categories that directly impacted employees to realize this change, this should improve their understanding of ZBC and possibly make following ZBC projects easier to implement.

Recommendation 2: Standardize the booking rules for costs across ENTITY X. This allows transparent cost control for all categories. During the research we identified a lack of control in multiple areas as costs were booked in various ways. Standardization allows proper benchmarking.

Recommendation 3: Create continuous visibility by using KPI dashboards. These boards should be identical across all OpCos. Certain KPIs should be clearly visible to all employees at all times in the breweries in order to develop the necessary awareness for a culture change.

Recommendation 4: Incorporate after care and post completion evaluation when a ZBC project is finished. Evaluate the results of the project after three months and check follow up of the applied rules. If necessary, retrain the employees involved. Only a consistent follow up can result in a culture change.

Future research should investigate new cost categories using the blueprint developed. By applying the blueprint to more case studies its validation will be tested. Furthermore, when applying ZBC on categories such as transport, costs need to be allocated correctly to draw accurate conclusions. Therefore, cost allocation needs to be studied. I also recommend investigating whether a true cost culture change has been achieved after executing a number of ZBC projects in several OpCos.

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Appendix A.

The project schedule

To complete this report, a timeline is made with the goal to graduate in September 2019. For my research timeline, we identified six phases.

Phase 1:
The goal of Phase 1 is to get acquainted with all the stakeholder for my research and to identify the problems. It is important to get familiar with the company to formulate the research problem well. Furthermore, after a few weeks I want to have the final approval for my assignment from my professor.

Phase 2:
The second phase focusses on obtaining data and to formulate a team with whom I can work with. The data can be formulated in different ways. From the literature I will attract theory on cost analysis and cost culture which I can use for my research. Furthermore, I need to get familiar with all the data systems Company X uses. From these systems, I want to collect all the necessary cost data which I need to make analysis in Phase 3. Besides obtaining data I want to learn what ZBC exactly is about and how COMPANY X wants to implement this project. Therefore, I will create a team with whom I can have meetings on what the goals are of ZBC and where we can discuss our findings. At the end of Phase two I want to have a very well understanding of what needs to be done for the project, who we need and how we are going to implement the results.

Phase 3:
The third phase is all about making the costs analysis for ZBC. We need to define cost categories to create a clear overview of costs for COMPANY X. These categories need to link with the data systems to make it sustainable to use in the future. When the overall cost categories are defined it is important to analyze each cost category to know how high the costs are per category. This will give a good first impression on where possibilities are to reduce costs.

After the cost categorization, a planning needs to be made and we want to asses which cost categories are the most important to tackle first. Furthermore, we make a deep dive into these categories to analyze all the costs of wave 1. In a wave we analyze one or 2 of the cost categories in detail with the goal to provide a template on how to reduce costs. In the cost analyzation we compare the costs between different OpCos and departments so we can clearly see where there is potential for change. At the end of phase, we want to deliver a PowerPoint with the cost analysis provided with a first impression of potential savings. With the ZBC team we made we are going to review this analysis and will make a planning on how to work for the coming three months.

Phase 4:
In phase four, two objectives are to be dealt with. The first one is to work on the first wave of the ZBC project. We will analyze the detailed categories for 3 months and try to reduce costs where possible. The second objective is to work on the following cost analysis for wave 2. This will be a second period of three months in which we will analyze a different category for potential savings. This second wave will start at the end of the year when I won't be working at COMPANY X anymore.

In this fourth phase we will meet every week with the team to discuss findings of the first wave. We will try to follow the timeline we made in the first weeks but we also have to be realistic. We want to focus on the most important cost reductions and want to finish each wave in 3 months' time.

Phase 5:
During Phase 5, we want to finalize the cost reduction template for the first category. This template is provided to make sure we provide guidelines that are sustainable. It will be hard to change the cost culture within a company like COMPANY X and therefore I think it will take time and a lot of communication before every potential cost reduction in implemented. Besides delivering template my personal goal is to be finished with my master thesis around August. This is why I would like to have my green light meeting with the professor in phase 5 so that I can graduate in phase 6.

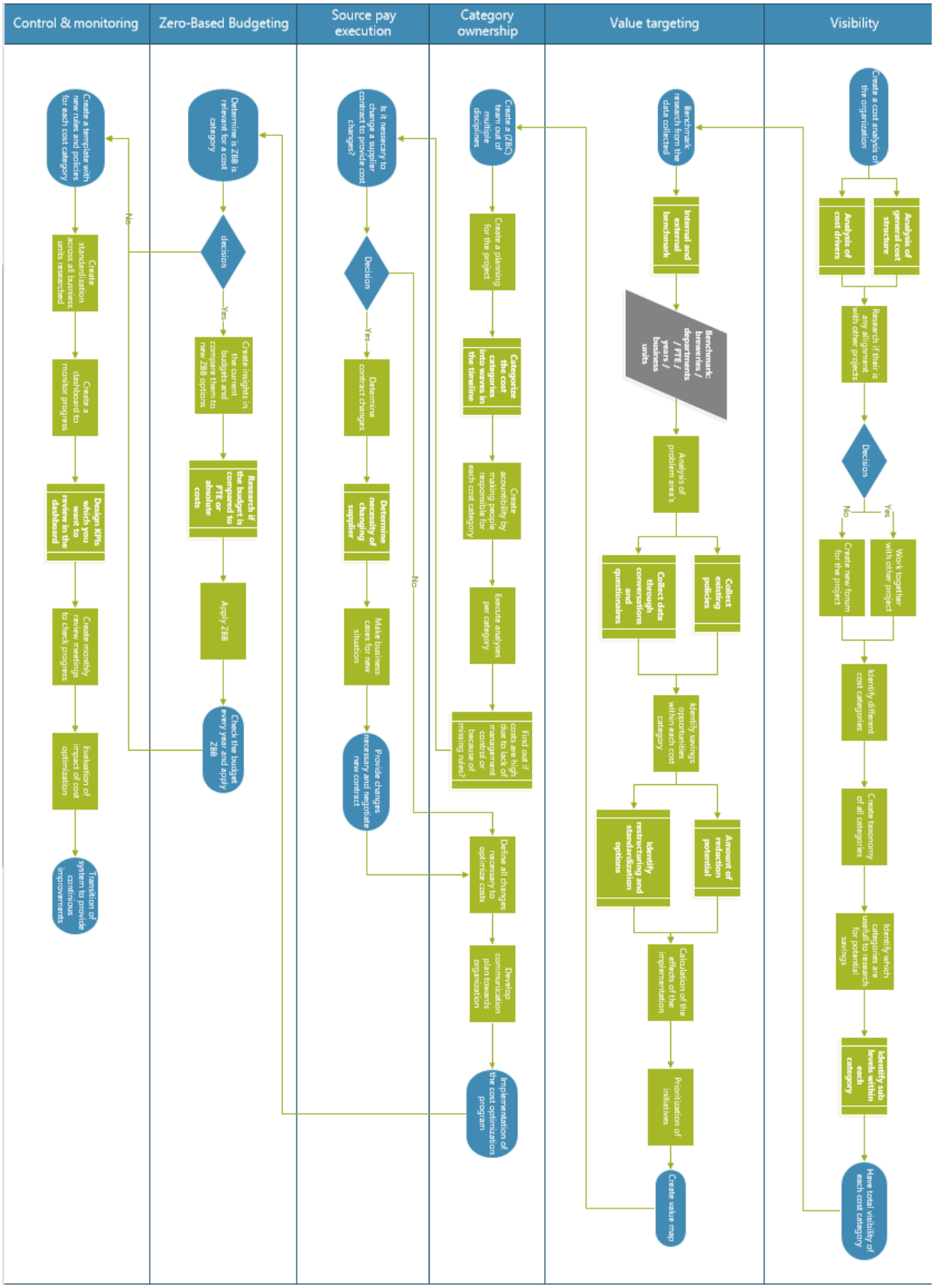
Phase 6:
In the final phase the goal is to have my graduation presentation. This phase will consist of multiple meetings with my professor and finalize my presentation. Furthermore, I want to finalize my work at Company X and provide them with good guidelines on how to work further on ZBC. This is also important because the ZBC project is a multi-year project which I started for ENTITY X.

Appendix B.

Appendix C.

Appendix D.

Cost optimization program



Appendix E.

Appendix F.

Appendix G.

Appendix H.

Transport survey wave 2

Transport ZBC Survey

Efficiency:

1. Switch to more optimal vehicle sizes (LWT's, double trailers, etc.) or other transport modalities? (rail, barge, etc.)
   ☐Yes
   ☐No
   Comment:

2. Optimize transport planning / routing efficiency or optimize truck loading strategy? (which SKU's to combine)
   ☐Yes
   ☐No
   Comment:

3. Increase number of layers per pallet or optimize loading plan per vehicle type?
   ☐Yes
   ☐No
   Comment:

4. Improve RPM management? (e.g. planning empties in FTL)
   ☐Yes
   ☐No
   Comment:

5. Optimize Minimum Order Quantity and optimize delivery frequency?
   ☐Yes
   ☐No
   Comment:

Network:

6. Improve stock allocation and optimize depot network?
   ☐Yes
   ☐No
   Comment:

7. Optimize customer allocation, Optimize production allocation (brewery footprint) or investigate direct deliveries?
   ☐Yes
   ☐No
   Comment:

Price:

8. Optimize mix and planning of LSP Contracted / LSP Dedicated / Own Fleet & Spot Market?
   ☐Yes
   ☐No
   Comment:

9. Re-tender for transportation?
   ☐Yes
   ☐No
   Comment:

10. Review price structure? (e.g. Spot vs dedicated, payment per km vs per lane, 1way/2way/empty returns etc.)
    ☐Yes
    ☐No
    Comment:

11. Ensure tariff compliance versus contract and agreed allocation and review fuel clauses into contracts?
    ☐Yes
    ☐No
    Comment:

12. Introduce LSP Management to manage contract value, optimize LSP re-allocations and optimize payment terms with LSP's?
    ☐Yes
    ☐No
    Comment:

13. Optimize fuel type mix or reduce fuel consumption? (LSPM Fuel management program)
    ☐Yes
    ☐No
    Comment:

14. Reduce truck waiting / residence times at Breweries and customers?
    ☐Yes
    ☐No
    Comment:

15. Reduce empty loads: 1-way/2-way mix, inbound/outbound mix, backhauling opportunities, etc.?
    ☐Yes
    ☐No
    Comment:

16. Introduce Zero Touch Transport Order? (monitoring, disruptions, invoicing etc.)
    ☐Yes
    ☐No
    Comment:

17. Reduce demurrage cost and surcharges?
    ☐Yes
    ☐No
    Comment: