



Kiel University
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***Development of a sustainability-consulting concept
for small and medium-sized enterprises***

- with a case study of a bakery in Kiel -

**Master's Thesis
MSc Sustainability, Society and the Environment**

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by

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List of abbreviations

| | |
|-------|---|
| DILO | day-in-the-life-of |
| DNK | Deutscher Nachhaltigkeitskodex |
| EC | European Commission |
| EFQM | European Foundation of Quality Management |
| EMAS | Eco-Management and Audit Scheme |
| EMS | Environmental Management System |
| EU | European Union |
| GHG | greenhouse gas emissions |
| GRI | Global Reporting Initiative |
| GWÖ | Gemeinwohl-Ökonomie |
| IIRC | International Integrated Reporting Council |
| ISO | International Organization for Standardization |
| RNE | Rat für Nachhaltige Entwicklung |
| SMART | specific, measurable, achievable, realistic, time-bound |
| SME | small and medium-sized enterprises |

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Abstract

Small and medium-sized enterprises represent an important segment of the German industry. To reach the climate targets set by the 21st Conference of the Parties, these enterprises need to implement sustainable processes for the entire value chain of their products. Many of them, however, do not see the potentials of corporate sustainability for their businesses and lack management competences. The present thesis develops an approach to support them by designing a sustainability-consulting concept applicable to small and medium-sized companies. A dogmatic application of management systems currently used in consulting is not suitable for these kinds of organisations, so that a mix of different methods is used for the consulting concept design.

In the first place, a benchmark analysis is used to collect best practices for the successful implementation of corporate sustainability. In the second place, a case study of a medium-sized bakery in Kiel is applied to test the developed consulting concept.

The eight-level consulting process focuses on direct processes of the organisation and covers the most relevant business areas for the value creation of the company. It contains: management commitment, process observation, process analysis, stakeholder identification, prioritisation of sustainability issues, objectives setting, measurement and continuous improvement.

Environmental management systems, the lean management philosophy and the EFQM excellence model are used as inspiration for the concept design. Process orientation, measurability, continuous improvement, people involvement and transparency form the main principles applied in for the consulting concept.

The application of the consulting concept proves that it is able to detect sustainability potentials in a structured way and to develop improvement ideas that find acceptance

in the organisation. To ensure the implementation of highly impacting improvements regarding sustainability, the consulting support needs to be carried on subsequently to the applied process.

1 Introduction

1.1 Problem

In Germany, the majority of organisations consist of small and medium-sized enterprises (Statistisches Bundesamt 2015). Pursuing a business as usual-strategy, they contribute significantly to the emissions of green house gases, which need to be strongly reduced to reach the latest climate targets (cf. EC n.d.).

Among those organisations, some eco-pioneers have recognized the potential of *sustainability* for the future development of their businesses. However, most focus on technical qualifications and miss a strategic business orientation. For them, sustainability management is rather a burden than an urgent topic (Gelbmann 2009, p. 117; Birke, Schwarz and Göbel 2003, p. 49f).

The bakery sector, being part of those organisations, encounters similar problems: bakery owners often lack management expertise and are highly involved in their daily business activities (Neubauer 2017). Moreover, the central training academy for the bakery sector does not approach sustainability as an urgent future challenge (cf. Akademie Deutsches Bäckerhandwerk Weinheim n.d.). However, bakery owners have a great interest in reducing resource input and energy consumption, as those represent a major part of their costs (Biebeler 2014, p. 14).

A new form of sustainability consulting for small and medium-sized enterprises is hence necessary to overcome these conflicts. It might even play a central role in the implementation of sustainable development on the corporate level. Possible consulting concepts, however, are not sufficiently analysed (Birke, Schwarz and Göbel 2003; Martinuzzi, Schubert and Zachhalmel 2002).

1.2 Research objective

This thesis deals with the difficulty to make sustainability-oriented business processes relevant to small and medium-sized companies. Here, a marketable solution in the form of a consulting concept is developed to support these companies in seeing the potentials of sustainability for their businesses.

As described above, the target market for this thesis, namely small and medium-sized companies, is characterized by constraints in time and management resources. Considering their circumstances, the following research question shall lead the development of this master thesis:

How should a sustainability-consulting concept be designed to make it applicable to small and medium-sized organisations?

To discuss this question throughout the outline of this thesis, the following considerations shall be taken into account:

Which general management frameworks, already applied for consulting and present in the sustainability discussion should be taken into account for the consulting concept, and how? Which management tools are applicable to the consulting process? What are the best practices to apply for the successful outcome of the consulting process?

1.3 Methodology

In order to examine how a marketable sustainability-consulting concept might be designed, a multidimensional approach is applied in this thesis:

First, a literature study on the corporate sustainability framework will give insights on considerable aspects of sustainability as well as relevant business areas for sustainability consulting. Different management frameworks, applied on the consulting market, shall be examined by their applicability to small and medium-sized enterprises.

Secondly, in order to investigate deeper how the described sustainability aspects and management frameworks can be implemented in practise, a benchmark analysis of *Märkisches Landbrot*, an outstanding medium-sized enterprise in terms of sustainability management, is carried out. Here, a review of company data is accomplished in a first step, followed by a face-to-face expert interview.

Lastly, the gained knowledge is used to design a consulting concept applicable to small and medium-sized enterprises. It is tested in a medium-sized bakery in Kiel in a time frame of six months.

1.4 Structure of the thesis

The structure of this thesis is as follows:

Chapter 2 represents the theoretical foundation of this paper, giving definitions of the relevant terminology, presenting aspects of corporate sustainability and business areas where they can be applied. Relevant management frameworks for sustainability consulting are presented.

In Chapter 3, the bakery *Märkisches Landbrot* is presented as a benchmark for sustainable small and medium-sized enterprises. A best practice catalogue of their sustainability actions is developed. Lessons learnt regarding the implementation and regarding the application of different management frameworks are presented.

In Chapter 4, the consulting approach for small and medium-sized enterprises is developed. Therefore, in a first step, how the management frameworks presented in Chapter 2 are taken into consideration for the consulting process is explained. In a second step, the role of the consultant is defined. Thirdly, the different phases of the consulting processes are outlined, explaining the methods used in every step.

The designed consulting process is then applied in Chapter 5, testing it in the medium-sized bakery *Bäckerei Lyck* based in Kiel. After presenting the enterprise, the results of every consulting step are presented accordingly to the process developed in Chapter 4.

In Chapter 6, the results are discussed with regard to the research question.

Chapter 7 gives an outlook of actions to be taken to introduce the consulting concept to the market after the first practice test conducted in this thesis.

2 Theoretical Foundation

Since the Rio Conference in 1992¹, the understanding for the need of sustainable business processes has been growing among corporations and industry organisations. The inherent need to develop a management concept of putting the climate related demands into practice, challenges management, employees and stakeholders of organisations. It, furthermore, reveals the emerging need for consultants supporting this substantial process of change. Setting a new maxim for corporative consulting, namely the balance between economic, social and ecological sustainability, means to develop a completely new consulting kit (Birke, Schwarz and Göbel 2003, p. 9).

The following chapter introduces existing frameworks and methods present in the sustainability discussion and partly already applied within sustainability consulting. The aim is to analyse whether those frameworks are suitable for sustainability consulting of small and medium-sized enterprises.

2.1 Definition of small and medium-sized enterprises

The definition of small and medium-sized enterprises (SMEs) is established by the European Commission Recommendation 2003/361/EC.

According to the recommendation, SMEs have not more than 249 employees, less than 50 Million Euros of annual turnover or less than 43 Million Euros total annual balance (see Table 1, EC 2003, p. 39):

| size of enterprise | number of employees | and | annual turnover (€) | or | annual balance (€) |
|--------------------|---------------------|-----|---------------------|----|--------------------|
| micro | up to 9 | and | up to 2 million | or | up to 2 million |
| small | up to 49 | | up to 10 million | | up to 10 million |
| medium sized | up to 249 | | up to 50 million | | up to 43 million |

Table 1: Definition of micro, small and medium-sized enterprises (EC 2003, p. 39)

¹ With the United Nations Conference on Environment and Development in Rio de Janeiro in 1992 (Rio Conference), the right for sustainable development was established on a global level for the first time. Three Conventions, the Convention on Biological Diversity, the Convention to Combat Desertification and the United Nations Framework Convention on Climate Change derive directly from the Rio Conference (Convention on Biological Diversity n.d.).

2.2 Definition of corporate sustainability

The term *sustainability* is broadly used on a global level. Scientists claim a lacking consistency in its interpretation as, depending on the context, its understanding differs essentially (Shearman 1990, Hahn and Scheermeister 2004): It reaches from environmental protection over robust production processes or fair working conditions up to long-term profitability (D'heur 2014, p. 1). A clear definition of what is meant by *sustainability* in this thesis is hence necessary.

The term is rooted in German forestry (Ott 2008, p.1). With the Brundtland Commission in 1987 it gained new popularity, as the term sustainable development was defined for the first time: "Sustainable Development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED 1987)

According to Dyllick and Hockerts, sustainability within a corporation can therefore be defined by "[...] meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders." (Dyllick and Hockerts 2011, p. 131)

The three-pillar sustainability model, addressing ecological, social and economic sustainability, has been introduced in politic discussions in the 1990s. Among scientists, it is being widely criticized due to its "[...] empty compromise character [...]" (Ott 2008, p.2) and the missing guidance about the ranking of the pillars (Ott 2008 p. 2f, Winter 2007 p. 256f).

Nevertheless, all three, social, ecological and economic sustainability, seem essential for corporate sustainability (Dyllick and Hockerts 2011, p. 132). Having realized that economic sustainability is not sufficient to overall sustain the stakeholder's interests on a long run, a simultaneous consideration of all three dimensions is necessary in managing a corporation (Lotter and Braun 2014, p. 15). This triple-bottom-line, defined

as such by John Elkington (Elkington 1998), underlines the interrelation and mutual influence of the three dimensions *people*, *planet* and *profit* (Dyllic and Hockerts 2011, p. 132).

For this thesis, the triple-bottom-line *people*, *planet* and *profit* and the definition given by Dyllick and Hockerts is used for the interpretation of the term corporate sustainability (see Figure 1). In literature, the term corporate social responsibility is often used as a synonym for corporate sustainability (D'heur 2014, Lotter und Braun 2014).

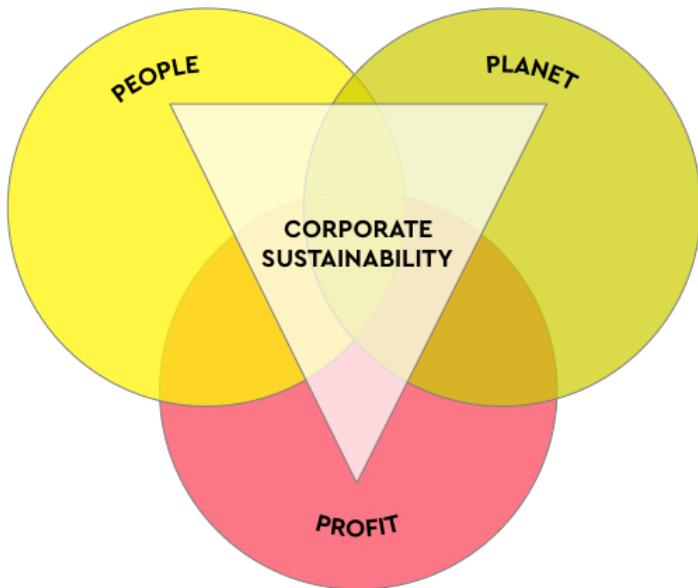


Figure 1: The triple-bottom-line *people*, *planet* and *profit* as basis for corporate sustainability (own graph)

When implementing a concept of corporate sustainability in an organisation, an approach that integrates all three dimensions is necessary. Otherwise, by separating ecological and social aspects from the core business, there is an inherent risk of reducing corporate sustainability efforts to financially successful periods (Hahn and Scheermeister 2004, p. 11).

2.3 Aspects of corporate sustainability

Within the previous chapter, the three dimensions people, planet and profit were set as a basis for corporate sustainability. To analyse those dimensions within a corporation, however, the three dimensions need to be described in depth regarding their according sustainability aspects.

The reporting guidelines published by the Global Reporting Initiative (GRI) are accepted by the European Union (EU) as standard for integrated reporting, combining financial and non-financial performance indicators (EU 2014, p.2). The updated GRI indicator set G4 (GRI 2015a) therefore shall be used as fundamental source for the following set of sustainability aspects.

The criteria by the Deutscher Nachhaltigkeitskodex (DNK), developed by the Rat für Nachhaltige Entwicklung (RNE), represent a second source for the classification of sustainability aspects (RNE 2015). According to the RNE, the DNK acts as transparency standard on European level (RNE 2015, p. 7) to fulfil the conditions of the European directive regarding the “[...] disclosure of non-financial and diversity information by certain large undertakings and groups [...]”² (EU 2014).

The sustainability aspects of both frameworks the DNK and the GRI shall be considered for the sustainability-consulting concept developed in Chapter 4. Figure 2 represents the relevant aspects of both frameworks classifying them by the dimensions *people*, *planet* and *profit*.

In Annex I, the linkage between the three dimensions, the GRI aspects and DNK criteria can be reviewed in detail.

² The European directive 2014/95/EU sets the duty for “large undertakings which are public-interest entities [...] having an average number of employees in excel of 500” to disclose information of their corporate sustainability efforts regarding environmental, social and employee-related matters (EU 2014).

The dimension *people* contains both of the following approaches:

1. aspects that address social sustainability within the organisation
2. aspects that address the organisation as a body within society

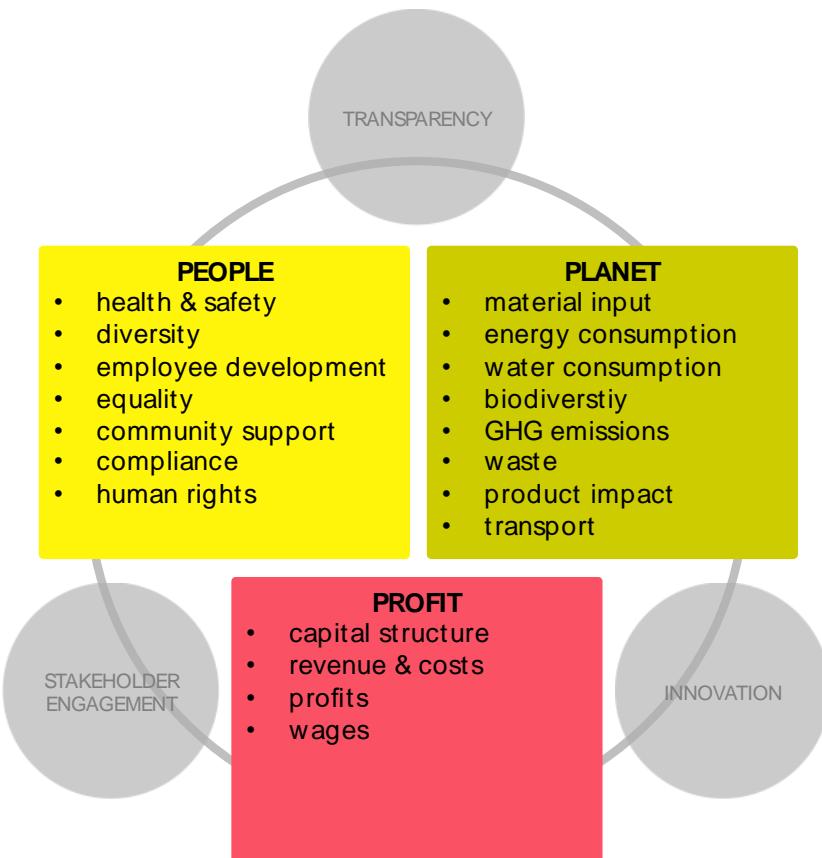


Figure 2: Aspects of corporate sustainability (own graph)

The aspects transparency, stakeholder engagement and innovation play an important role within the concept of corporate sustainability. They are considered as omnipresent aspects for the dimensions *people*, *planet* and *profit* (see Figure 2):

- The essential reason for the creation of the International Integrated Reporting Council (IIRC) is to provide transparency by communicating about the organisation's value creation (IIRC 2013, p. 1).
- The more an organisation involves their key stakeholders' in their decisions and actions, the more likely it is that their “[...] legitimate needs and interests [...]” are

considered (IIRC, p. 18). Next to the IIRC, also the economy of the common good³ puts especial emphasis on this point as it sets societal needs in the centre of their concept (Gemeinwohl-Ökonomie 2018).

- In addition to that, a continuous improvement in terms of process or product innovations is necessary to adapt to the stakeholders' needs over time.

2.4 Areas of corporate sustainability

To tackle the above described sustainability aspects, it is necessary to break the organisation down into the relevant business areas – the areas of corporate sustainability.

The value chain of an organisation shall give a basis to that. According to Porter⁴, the profit or the competitive advantage of an organisation is determined by each activity of its value chain (Porter 1989, p. 37). He distinguishes primary activities and supporting activities (see Figure 3).

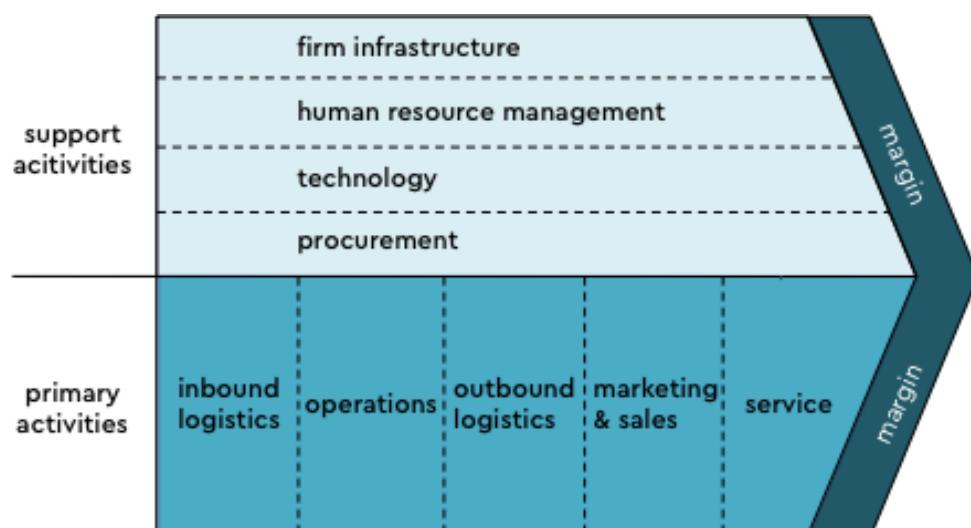


Figure 3: Value chain according to Porter (cf. Porter 1989)

³ The economy of the common good (Gemeinwohl-Ökonomie) is an economic system built on values fostering the common good and defines itself as transformational lever on economic, political and social level (Gemeinwohl-Ökonomie n.d.)

⁴ Michael Eugene Porter is an US-American economist and professor at the Harvard Business School. He is commonly seen as one of the leading management theoreticians.

Porter's model still represents a basis for the management of business activities within one organisation. However, the understanding of the term value chain has changed: It now includes all steps from raw material to its finite use by customers and is described by the term end-to-end sequence (D'heur 2014, p. 6f). Therefore, the whole product lifecycle has to be taken into consideration when addressing corporate sustainability (see Figure 4).



Figure 4: Value chain considering the product lifecycle and supply chain activities (own graph, cf. Cash and Wilkerson 2003, p. 2.8, p. 2.4)

The direct supply chain activities can be simplified by the processes procurement (SOURCE), production or use (MAKE) and distribution, including transports (DELIVER) (Cash and Wilkerson 2003, p. 2.8)

Accordingly, the areas of corporate sustainability can be summarized as follows:

1. direct and supporting activities of the organisation itself such as procurement, production, logistics, financing, planning, marketing, sales
2. pre- and post activities of the focus organisation, including all stages the product goes through until its disposal

2.5 Management frameworks for sustainability consulting

In the following chapter, three management frameworks are presented: The environmental management systems EMAS and ISO 14001:2015, the lean management system and the EFQM excellence model. They are currently applied for sustainability consulting and shall be analysed in regards to their suitability for SMEs.

2.5.1 Environmental management systems (EMAS and ISO 14001:2015)

Environmental management systems (EMS) such as EMAS and ISO seek to reconcile economic with environmental issues. The purpose of such a management framework is to standardize the process of setting, implementing and auditing environmental goals, policies and responsibilities (Bernadini Seiffert 2007, p. 1447).

The European regulation on the eco-management and audit scheme (EMAS) EG 1221/2009 aims to improve the environmental performance of organisations by addressing direct environmental aspects such as resource efficiency and CO₂ emissions on-site but also indirect environmental aspects such as procurement or the commuting of employees to the production site (EC 2009, Art. 1). Applied successfully, EMSs help to improve processes and create an economic incentive for the protection of the environment (Birke, Schwarz and Göbel 2003).

According to ISO14001:2015, the following requirements (Table 2) have to be met. To fulfil them, they need to be documented as demanded in the standard (Dentch 2016).

| Requirements of ISO 14001:2015 |
|--|
| 1. Demonstration of leadership and commitment by top management |
| 2. Environmental policy supported by senior management |
| 3. Identification of environmental aspects and impacts |
| 4. Process to identify and address environmental risks and opportunities |
| 5. Process to identify and address environmental compliance obligations |
| 6. Setting objectives and a system to achieve them |
| 7. Definition of resources, roles, responsibilities and authorities for the EMS |
| 8. Definition of competence, training and awareness procedures |
| 9. Definition of a communication process of the EMS to all stakeholders |
| 10. Preparation of EMS documentation |
| 11. Definition of EMS operational control procedures |
| 12. Definition of emergency preparedness and response procedures |
| 13. Definition of procedures to monitor and measure operations that can have significant impact to the environment |
| 14. Definition of procedures for compliance evaluation |
| 15. Definition of procedures for the management of non-conformance, corrective and preventative actions |
| 16. Definition of a records management procedure |
| 17. Definition of a program for completing internal EMS audits and corrective actions |
| 18. Definition of procedures for management review by senior management |

Table 2: Requirements of ISO 14001:2015 (cf. Dentch 2016)

The EMAS requirements are mainly regulated by the environmental management norm ISO 14001:2015. It, furthermore, complements the ISO norm with the following requirements (EC 2009, Annex II, III):

- prove of compliance with legal obligations
- establishment of a continuous improvement process and prove of improvement between different certification audits
- involvement of employees in the improvement of environmental aspects
- establishment of an environmental council to follow up the improvement process
- establishment of an environmental suggestion scheme
- exchange of environmental impact information with stakeholders and collection of their needs
- transparency on environmental information
- the disclosure of key environmental performance indicators (environmental performance evaluation)

In Germany, about 8.000 organisations are certified according to ISO 14001. A voluntary based certification on EMAS or ISO is especially relevant for an organisation that trade globally: Not being certified might affect its capability of selling products internationally (Bernadini Seiffert 2007, p. 1477). For SMEs, an EMS certification therefore could be useful when acting on a global level. According to the Federal Environment Agency, however, the implementation and maintenance of an extensive EMS is too time consuming and carries too much cost for most SMEs (Umweltbundesamt 2001, p. 44).

Also, the recently launched “Practical Guide for SMEs” (ISO 2017) might represent an obstacle for the implementation of the ISO 14001:2015, as it comprises more than 200 pages.

German trade unions and environmental organisations generally criticize the ISO-norm, for missing employee participation and transparency (Umweltbundesamt 2001, p. 11). Birke, Schwarz and Göbel claim that EMS so far did not achieve to foster the implementation of continuous improvement processes and endogenous learning

processes within organisations (Birke, Schwarz and Göbel 2003, p. 17). Miriam Benarey-Meisel and Thomas Henn add that there is the potential of a perception of *green washing* when using environmental management norms. SMEs therefore rather fear away from those practices (Benarey-Meisel and Henn 2017 p. 242f).

Despite the fact, that EMSs such as EMAS and ISO 14001:2015 are not suitable for all SMEs, some elements might be taken into consideration for creating a sustainability-consulting concept. The key may lie in the adaptation of those elements to the business model and processes of the designated SME (Birke, Schwarz and Göbel 2003, p. 17, Lotter and Braun 2014, p. 88).

2.5.2 EFQM excellence model

The European Foundation for Quality Management (EFQM) aims to support corporations to continuously perform at best on all management levels and provides them with tools to measure their performance (Lotter and Braun 2014, p. 88).

The *EFQM excellence model* has been developed taking into account the ten principles for sustainable and socially responsible businesses established by the UN Global Compact in 2000 (EFQM 2013, p. 2)⁵. Assuming that an excellent organisation “[...] will respect and comply with the ten principles [...]” (EFQM 2013, p. 2), the model was built upon the following premise (commonly represented by the model in Figure 5):

“Excellent results with respect to performance, customers, people and society are achieved through a leadership that drives policy and strategy, people, partnerships, resources, and processes on a high level.” (Lotter and Braun 2014, p. 89)

The model basically distinguishes (1) enablers towards an excellent organisation and (2) results of an excellent organisation (see Figure 5). Leadership and processes on the one hand and business results on the other hand represent the three main pillars

⁵ They are classified by four categories: labour, human rights, environment and corruption (United Nations Global Compact n.d.).

within the model. The six connecting elements can be understood as necessary drivers to implement the integrative approach of the EFQM excellence model: people, strategy, partnerships & resources on the enabler side and people, customer and society on the result side (EFQM 2013, p. 9f).

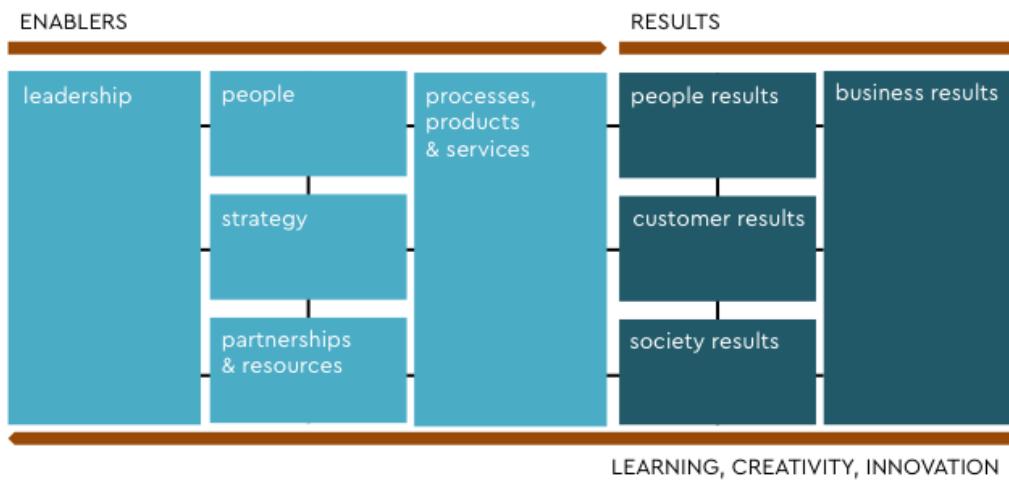


Figure 5: EFQM excellence model diagram (EFQM 2013, p. 9)

To successfully achieve the status of an *excellent* organisation, the model provides an improvement management tool, called RADAR (see Figure 6):

- **Results** to be determined as part of the strategy
- **Approaches** to be planned and developed to deliver the set results
- **Deploy** the defined approaches in a structured way
- **Assess and refine** the approaches based on the analysis of the achieved results and learning (EFQM 2013, p. 22).

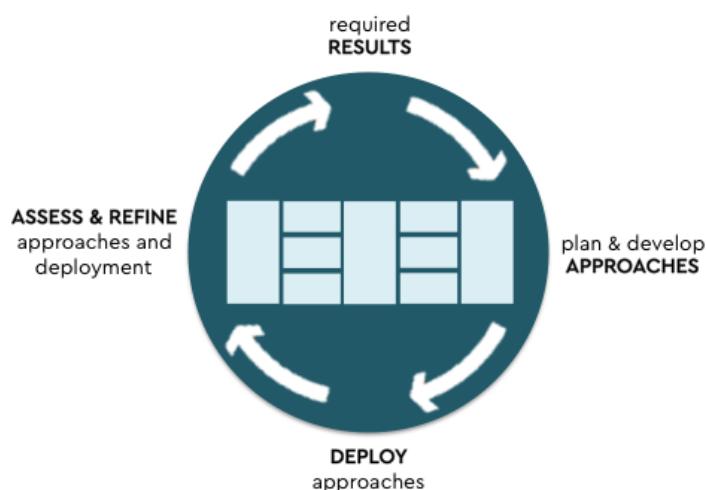


Figure 6: RADAR model (EFQM 2013, p. 22)

According to Lotter and Braun, the EFQM excellent model represents an “[...] ideal basis for the implementation of a corporate social responsibility management system [...]” (Lotter and Braun 2014, p. 91) as it provides an integrative, process oriented approach that considers different stakeholder perspectives and that includes non-financial indicators (Lotter and Braun 2014, p. 90f).

Comparable to the environmental management systems, also the EFQM excellence model is mainly applied within big corporations (McAdam 1999, p. 307). According to Rodney McAdam, “[...] there are some potential problems when these approaches are applied in an SME environment [...]” (McAdam 1999, p. 307). Next to the fact, that the development of the EFQM model is too time consuming, such a complex model might not be necessary for a SME: Instead of a “[...] sophisticated customer measuring system [...]” (McAdam 1999, p. 308), e.g. the voice of the customer⁶ can be integrated in a more simplistic way, “[...] incorporating it within the business improvement effort [...]” (McAdam 1999, p. 308). Also, employee participation, as essential element of the excellence model, can be managed using more non-bureaucratic methods (McAdam 1999, p. 309). However, an appropriate application of the excellence model might help small organisations to “[...] improve communication [...] and increase involvement in improvement initiatives.” (McAdam 1999, p. 317). In regard to processes and measures, however, the “[...] setting of targets and benchmarks [...] (is) seen as important [...]” (McAdam 1999, p. 319) for SMEs.

2.5.3 Lean management

Lean management can be understood as “[...] the best manufacturing system in the 21st century [...]” (Rose et al. 2001, p. 872).

Historically, it was developed by the automotive company Toyota aiming to reduce the lead time from ordering raw material to the finalisation of a product, following the premise of waste elimination throughout this process (see Figure 7, Ohno 1993, p. 15).

⁶ The voice of the customer is an essential principle of total quality management: a process of customer feedback to provide the best product or service to the customers.

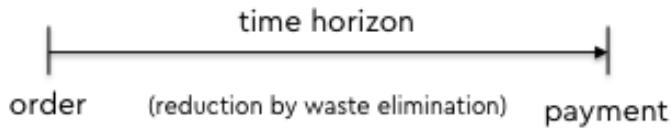


Figure 7: Lead time reduction (Ohno 1993, p. 15)

The need of a *lean* production system is linked to Toyota's missing financial after the Second World War. Different kind of cars had to be produced with little machinery and few human resources available. To be economically sustainable, Toyota had to reinvent their way of production, stressing the importance of customer satisfaction (Womack and Jones 1992, p. 53f).

Taiichi Ohno, the founder of the Toyota Productive System defined seven types of waste that should be eliminated or at least minimised (Ohno 1993, p. 152):

1. **Overproduction:** the production of pieces that are not needed when produced
2. **Waiting:** employees waiting for machines or pieces to proceed the process
3. **Transport:** transporting processes that do not support the value creation
4. **Over processing:** production processes that the customer does not need
5. **Inventories:** buffer areas without any control mechanism
6. **Movements:** unnecessary movements that overburden the workers
7. **Defects:** defects within pieces or products that create costs

Liker added an eighth waste type (Liker 2009, p. 60):

8. **Not used potential for creativity:** the neglect of ideas of employees leading to demotivation to be part of the change process

Due to its parallels, the connection of lean management and ecological, social and economic sustainability is being broadly discussed among scientists. José Martínez-Jurado and José Moyano-Fuentes made a profound literature analysis, revealing connections towards all three pillars of sustainability.

Regarding environmental sustainability the following parallels can be defined:

- **Principle of waste reduction:** The lean management goal of zero waste along the value creation process and the efficient use of resources “leads to the prevention and reduction of environmental pollution” (Martínez-Jurado and Moyano-Fuentes 2014, p. 138).
- **Principle of process orientation:** Within the philosophy of lean management, errors have to be analysed finding the root cause within the production or management process, preventing that one same error does not reoccur. Also in environmental sustainability, the prevention of irreversible environmental impact is key (King and Lenox 2001, p. 245).
- **Principle of people involvement:** The continuous improvement culture is essential for lean management. Employees of all hierarchical levels are at the centre (1) involving them in the continuous improvement process with the help of kaizen (see further explanation of kaizen in Chapter 4.1) and (2) giving them space for creativity and trial-and-error experiences (Martínez-Jurado and Moyano-Fuentes, p. 138).

Consequently, Andrew A. King and Michael L. Lenox point out that lean management mainly improves resource efficiency in terms of use of material and energy, and leads to less pollution because of waste prevention rather than waste management (King and Lenox 2001, p. 253).

The analysis of *lean* companies has shown that lean management facilitates “[...] the adoption and implementation of environmental practices [...]” (Martinez-Jurado and Moyano-Fuentes, p. 139). Nevertheless, lean manufacturing principles do not automatically lead to a *greener* production. The ecological focus when assigning resources, for example, is crucial for a positive influence of lean management to environmental results (Martínez-Jurado and Moyano-Fuentes 2014, p. 138).

Scientists stress the point that there is not only a connection between lean management and ecological sustainability but also to social sustainability, particularly related to health and safety in the work place (Martínez-Jurado and Moyano-Fuentes, p. 140). Motivation of workers, communication, problem solving and teamwork is

essential for a successful implementation of lean management: a high involvement of every worker is realized by assigning them responsibilities. Suzanne de Treville and John Antonakis point out that lean management, thereby, can generate intrinsic motivation and increased autonomy of the workers (de Treville and Antonakis 2006). Nevertheless, observing lean management put into practice, other scientists criticize the high involvement of employees for reducing their freedom and increasing their stress level (Martínez-Jurado and Moyano-Fuentes 2014, p. 140).

In a context of SMEs, Rose et al. propose to implement feasible practices of lean management “[...] which are in their control and manageable with limited resources [...]” (Rose et al. 2011, p. 873) such as visual control and standardization of operations.

3 Benchmark Analysis of the Eco-Bakery *Märkisches Landbrot*

In various literature resources, the bakery *Märkisches Landbrot* is cited as benchmark⁷ for sustainable production and management processes in SMEs, especially for bakeries (Wittke 2017, Loew et al. 2003, Zell et al. 2015). Also in society, the activities of *Märkisches Landbrot* are honoured: In 2015, the company won the German Corporate Social Responsibility Price and the best Corporate Responsibility Index among SMEs (*Märkisches Landbrot* 2017a).

Märkisches Landbrot therefore is chosen for the following benchmark analysis. The aim of this analysis is to extract best practices and lessons learnt⁸ for the implementation of sustainable processes; more precisely to analyse:

1. concrete activities to balance sustainability within the dimensions *people, planet and profit*
2. the methodology and frameworks used to manage the implementation process

In a first step, a review of the available company data is used to establish a best-practice catalogue. In a second step, an expert interview with the managing director and environmental manager of the bakery, Christoph Deinert, is used to reveal lessons learnt for the implementation of sustainable business processes.

Both the best practice catalogue and the lessons learnt, serve as input for the development of the consulting process and, especially, its application in Chapter 5.

3.1 Company presentation

The bakery *Märkisches Landbrot* was founded in 1930 as traditional bakery for coarse rye breads in the district of Neukölln in Berlin. Since the takeover by Joachim Weckmann in 1981, the products have been produced biologically. With the relocation

⁷ The term benchmark refers to the comparison of business processes to the best performing company in the according industry sector.

⁸ The term lessons learnt refers to the collection of experiences in the implementation of e.g. processes regarding advantages, risks or advices

of the production site in 1994, the whole organisation was aimed to be sustainable (Märkisches Landbrot 2017b). It now counts 55 permanent employees, ten of them being part of the management team. The product range of *Märkisches Landbrot* reaches from 34 types of bread over 13 types of rolls to five types of pastries. The trade of their products is done solely via resale in wholefood stores (89%), FoodCoops or educational institutions (11%), making a turnover of seven million Euros (Märkisches Landbrot 2017c).

Setting quality at first level of the purpose of their activities, *Märkisches Landbrot* describes its mission as follows:

“Märkisches Landbrot contributes to the earth recovery having a consequent ecological production with biological raw material and, with its products, serves the health and well-being of people.” (Märkisches Landbrot 2017d)

3.2 Sustainability milestones

To manage and monitor their activities, *Märkisches Landbrot* follows various ecological standards and conducts detailed integrated performance reports on annual basis. The milestones in pursuing the vision of a sustainable business are the following (Märkisches Landbrot 2015):

- **Demeter⁹ certification:** Since the first publication of the Demeter guidelines for food production in 1994, *Märkisches Landbrot* uses them as production guidelines.
- **Environmental performance evaluation (Ökobilanz):** Since 1992, *Märkisches Landbrot* evaluates its environmental performance on annual basis.
- **EMAS:** As first organisation in food production, *Märkisches Landbrot* obtained the EMAS certification in 1995. The organisation was used as study case to check if the eco-audit scheme according to EMAS is applicable to SMEs (Märkisches Landbrot 2017e). Having the EMAS certificate, *Märkisches Landbrot* also covers the requirements for the ISO 14001:2015.

⁹ Demeter is seen as standard for ecological food production with the most rigorous criteria.

- **Product Carbon Footprint (PCF):** For all their products, *Märkisches Landbrot* has developed a PCF. Since 2010, the PCF of each product can be reviewed online.
- **Management review:** Since 2005, social efficiency indicators are annually published in the management review.
- **Gemeinwohl-Bilanz:** As first organisation in Berlin-Brandenburg, since 2012, *Märkisches Landbrot* uses the balance sheet of the Gemeinwohl-Ökonomie (GWÖ) as annual reporting method.
- **GRI-Index:** In 2012, *Märkisches Landbrot* expanded its reporting scheme by the criteria of the GRI.
- **Deutscher Nachhaltigkeits Kodex (DNK):** In 2014, *Märkisches Landbrot* additionally joined the DNK. The DNK-criteria are covered by the GRI-indicators.

All certificates and reporting matrixes are published on the company owned website¹⁰.

3.3 Best practice catalogue

In the following, a best practice catalogue for *Märkisches Landbrot* is developed. The report of the environmental performance evaluation 2016 (Ökobilanz) (*Märkisches Landbrot* 2016), the GWÖ-report 2017 (*Märkisches Landbrot* 2017f) and the management review 2017 (*Märkisches Landbrot* 2017g) are used for the research. The reports have been analysed by the sustainability aspects defined in Chapter 2.3.

In the following, the results are outlined briefly. The detailed collection of best practices can be reviewed in Annex II.

1. Processes

Social and environmental impact is aimed to improve by the establishment of processes and actions regarding transparency, innovation and stakeholder engagement.

¹⁰ <http://www.landbrot.de/aktuelles/oefentlichkeit/downloads.html>

Transparency: Being certified by EMAS, *Märkisches Landbrot* develops extensive annual reports on their ecological performance. Besides that, the economic and social dimension, regarding employees and society, is covered by the annually published GWÖ-Bilanz. All information is published online via the company's website to be accessible to external and internal interest groups of the organisation. Additionally, the carbon footprint is calculated for every product and can be reviewed online, just as the product pricing. Striving for knowledge sharing, the managing director, Christoph Deinert, published a book on how to calculate the PCF¹¹.

Innovation: To constantly improve their processes and products, *Märkisches Landbrot* has established a schedule of regular team meetings where problems are reviewed and ideas for improvement are developed. Besides that, the innovation process is nourished by cooperation projects with universities.

Stakeholder engagement: The most important stakeholders for *Märkisches Landbrot* are suppliers, employees and customers. The suppliers, mainly represented by the farmers, are strongly involved in the pricing for the cereal each year by the Runder Tisch Getreide¹². A survey to all employees is done on annual basis to analyse their satisfaction in regard to the company. Decisions on investments are done involving all affected employees. Customers are involved in decisions by using a standardized feedback process where both claims and ideas for new products are addressed to the company. By regular open tours through the production site, also consumers are invited to propose ideas for improvement.

2. People

For the dimension *people*, the GWÖ-Bilanz shows outstanding results regarding human rights (81%), solidarity (79%) and social justice (81%) for the interaction with employees and other social interest groups. People with migratory background are

¹¹ Deinert C, Pape J (2010): PCF - Die Methodik bei Märkisches Landbrot, oekom Verlag, München.

¹² The managing team of Märkisches Landbrot and the involved farmers meet once a year to discuss on fair prices for the next harvest. A demeter employee serves as moderator for the meeting (Deinert 2017).

supported by language courses; affordable and nearby apartments are provided to employees; back pain prevention courses are offered as well as various possibilities to improve the work-life balance of all employees. The employee's personal development is fostered by annual training schedules. Human rights are included in investment and supplier decisions and a code of conduct seeks to prevent discrimination of minorities. The direct local community, such as kindergartens and homes for senior citizens is supported by price reductions. Monetary donations are given to local social and environmental projects as well as educational projects in Nepal and Africa.

3. Planet

The ecological aspect is dominant in all company activities. The impact on the environment is reduced using solely biological food resources, most of them following the strong Demeter standard. For all materials, used in production and management processes, purchasing decisions are made taking into account the existence eco-labels or regional suppliers. Several installations aim to reduce energy and water consumption, such as heat recovery plants, insulation of the entire building, a company-owned well and rainwater recovery plants. Greenhouse gases are measured and compensated through reforestation projects so that the company produces CO₂ neutral. The environmental impact through transports seeks to be reduced by the cooperation with other bakery and pastry companies for the customer delivery. *Märkisches Landbrot* decided to limit the customer structure by regional ones. Organic remnants are either reintroduced into the bread production or recycled to fodder.

4. Profit

Märkisches Landbrot does not seek for profit maximisation. Therefore, the operating cash flow is kept lower than 15% by investments or the positive adaptation of wages. Due to an equity capital of 75%, the company is autonomous to a large extent. Instead of bank loans, *Märkisches Landbrot* collaborates with other stakeholders to get liability support. At least five percent of the company earnings after income and taxes are donated to social and environmental projects. The company owner, Joachim

Weckmann, does not personally receive the company revenues but a 6% interest rate on his equity capital. Fair product prices and fair wages for all employees thereby are realized. Fair money transfer is done via GLS bank.

3.4 Lessons learnt

For the lessons learnt analysis of *Märkisches Landbrot*, insight information is necessary as there is no existing literature available.

To get useful input for the development of a sustainability-consulting concept in the second part of this thesis, the expert interview was chosen as research method.



Figure 8: Christoph Deinert
(Märkisches Landbrot 2008)

Christoph Deinert (Figure 8) is the managing director and environmental manager of *Märkisches Landbrot* since 1993. Due to his previous experience as an independent energy consultant and construction planner, he managed to reduce energy consumption for the reallocated production site by 60%. Today, he is the main responsible person for the continuous improvement process within the company regarding ecological, social and economic sustainability and therefore is chosen as the expert for the interview.

According to Gläser and Laudel, the expert interview must follow a *natural* conversation style, giving the interviewee the impression of spontaneous questions asked by the interviewer (Gläser and Laudel 2010, p. 112). Standardized questions and answer possibilities therefore are not appropriate to this type of interview (Gläser and Laudel 2010, p. 41). A question guide, however, can be useful to make sure that every important aspect is covered within the interview (Gläser and Laudel 2010, p. 43).

The questions itself need to have the following characteristics (Gläser and Laudel 2010, p. 131ff):

- Openness: avoidance of *dichotomy* (yes or no answer possibilities)
- Neutrality: avoidance of suggestive, appropriate introduction to ‘delicate’ questions
- Clearness: avoidance of double negative questions, easy grammatical structure, avoidance of *why*-questions
- Simplicity: avoidance of multiple questions

The question guide prepared for the expert interview with Christoph Deinert included the following topics: (1) environmental management systems, (2) continuous improvement process and (3) engagement of stakeholders.

The question guide can be reviewed in Annex III. The full version of the interview is attached to the thesis in digital from.

The lessons learnt can be summarized as follows (Deinert 2017):

1. Environmental management systems and performance indicators

- A detailed environmental performance evaluation is not important to improve in the beginning of the change process.
- To create an environmental performance evaluation that complies with the EMAS requirements is time consuming. However, one can start with a simple version.
- Small steps in the beginning are important to not be frightened off by the amount of improvement potential.
- EMAS certification is not necessary to start working on environmental issues.
- ISO is not recommendable due to its missing focus on continuous improvement.
- Working with counters and performance indicators helps to monitor energy and water consumption.
- An energy consultant is recommendable to create a first environmental performance evaluation.
- EMAS is a helpful framework to monitor the compliance of the whole organisation and to be insured.

- Any management system needs to be adapted to the conditions of the company. An implementation without considering the needs of the company is not recommendable.

2. Continuous improvement process

- Regular team meetings of all functions are necessary to live a culture of discussion and a culture of mistakes.
- A monitoring system of all improvement actions is helpful for follow up their status.
- Following up suggested improvement actions is necessary to keep the employees motivated to participate in the improvement process.
- External consultants are helpful in case of missing internal time or knowledge resources.
- For concrete improvement projects, university students can be a valuable resource.

3. Engagement of stakeholders

- Being in regular exchange with the external stakeholders via tours through the production site, the cooperation with universities or on-site meetings with other bakery owners supports a learning culture.
- Trustful relationships with suppliers support fair prices for raw materials.
- The reclamation and feedback process with their customers help them to improve in quality and to adapt their product range to the wishes of the consumers.

To reduce energy consumption significantly, Deinert recommends the following steps:

1. Change to eco-electricity supplier
2. Installation of heat recovery plants
3. Installation of a filter system to heat the warehouse using the hot air in the oven areas

According to Deinert, the strong environmental and social dedication of *Märkisches Landbrot* is possible through savings in energy consumption. Applying for governmental funds for environmental development helped them to reallocate their production site without any additional costs (Deinert 2017).

4 Approach Consulting Concept

The literature review shows that a dogmatic application of the presented management frameworks is not the optimal solution for leading the change within SMEs towards corporate sustainability. Nevertheless, some valuable principles and contents are extracted for the consulting concept to be applied in the business case in Chapter 5. The following chapter (1) explains the consideration of different contents of the management frameworks, (2) describes the role of the consultant and (3) leads through the developed sustainability-consulting concept.

4.1 Consideration of management frameworks

The management frameworks presented previously are visualized in Figure 9. While having different approaches, they apply five common principles: process orientation, measurability, continuous improvement, people involvement and transparency. They are considered as essential for a long-term functioning and credible sustainability-consulting concept and therefore are applied during the process.

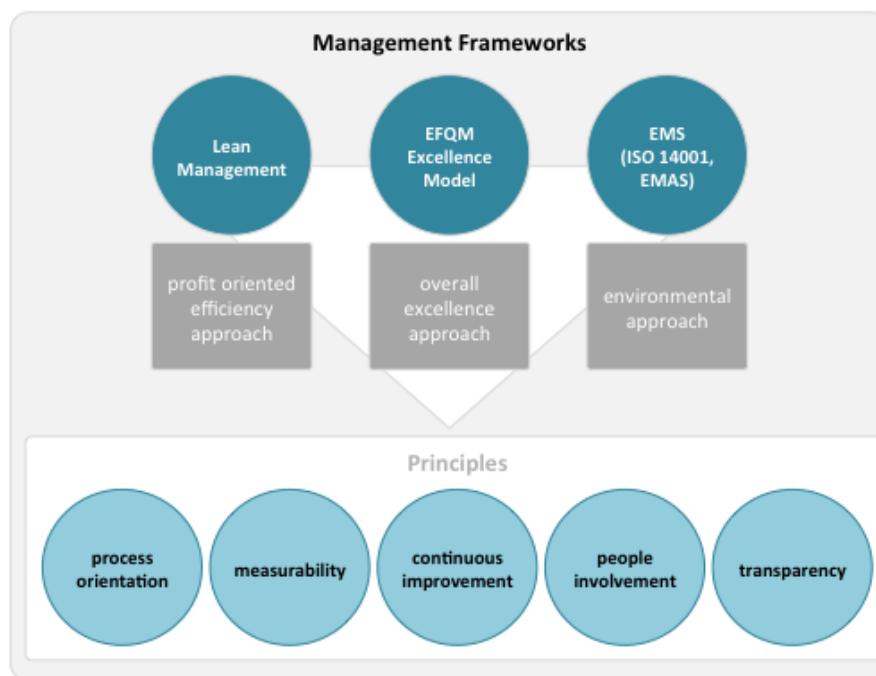


Figure 9: Management frameworks used for developing the consulting concept (own graph)

The different management frameworks for the design of the consulting concept are considered as follows:

Lean management is used to gain a deeper understanding of the value creation of the company. Gemba, the *real place*, is where value creation takes place. For lean management, this is the most important organisational area to detect *waste* within the process (Ohno 1993, p. 46f).

Next to gemba, the kaizen philosophy is applied to the consulting process. Kaizen means *change for better* and was introduced by Masaaki Imai, claiming a “[...] continuous improvement by involving all employees [...]” (Imai 1992, p. 15). Instead of making big investments, the improvement process shall happen in small steps, fostering a commonly accepted and long-term oriented improvement process.

As process efficiency is essential for improvements regarding lean management, this aspect is additionally included as sustainability aspect within the *profit* dimension. Thereby, the needs of SMEs are taken into account as the existing personnel needs to be optimally used to efficiently employ the scarce financial resources.

The **EFQM excellence model** follows an integrated excellence approach, as the financial results of an organisation are interlinked with the effectiveness of its key elements, namely leadership, employees, processes and stakeholders. This integrated management approach seems to be essential for SMEs due to their limits in time and human resources. Additionally, the integration of the different dimensions of an organisation is considered as the most promising one to achieve financial targets on a long-term basis (see IIRC 2013, GRI 2015a). In the applied consultant concept, sustainability management processes are therefore not separated but merged with other management dimensions. Consequently, within the EFQM model, sustainability aspects are part of the enabler perspective. The EFQM philosophy of enablers and results is used for the measuring part of the consulting concept. In detail, the sustainability balanced scorecard (described in detail in Chapter 4.3.7) replaces the environmental balance sheet which solely focuses on environmental aspects and

which is too extensive for a start in corporate sustainability. The EFQM RADAR model is used to manage the continuous improvement process. Additionally, leadership is considered as important enabler for financial success. Therefore, during the consulting process, a close cooperation with the management team is applied and its ideas are integrated in the solution approaches.

The EMS **ISO 14001:2015** and **EMAS** are not applied entirely within the consulting concept, as their requirements are too intense for SMEs starting with corporate sustainability. However, they are partly included:

- A process to identify the environmental aspects and impacts is established using the materiality analysis (explanation see Chapter 4.3.5).
- Objectives to improve the environmental performance are set integrating the relevance for the important stakeholders of the organisation.
- A master plan, similar to the EMAS environmental programme, is used as a management basis for all improvement ideas and actions.
- A continuous improvement and communication process that involves employees is established.
- A monitoring system is set to measure the environmental performance and to set corrective actions.

Whereas the EMS focuses on environmental aspects, the applied consulting concept always takes all three dimensions of the triple-bottom-line, namely *people*, *planet* and *profit* into consideration.

4.2 The role of the consultant

Unlike a technical consultant, as for energy efficiency, the consultant for the hereby-applied consulting concept has a moderating role. The aim is to challenge the organisation and to push the organisational change using different consulting methods. Mario Schmidt and Mario Schneider claim that obstacles to the improvement of resource efficiency often lie in soft factors, such as misleading

communication (Schmidt and Schneider 2010, p. 163). The methods and tools applied, therefore, go beyond finding technical solutions. They trigger an autonomous change and improvement process within the organisation. The consultant, throughout the consulting process, analyses obstacles for improvement, develops solution proposals, supports and motivates the implementation of actions and cares for the success of actions.

4.3 The structure of the consulting concept

In this chapter, a sustainability-consulting concept for SMEs is developed according to the ideas outlined above. For a complete corporate sustainability concept, the whole product lifecycle theoretically needs to be analysed, as described in Chapter 2.3. However, the consulting process described hereafter, is limited to processes of the focus organisation. Supplier and customer processes are excluded. This decision is made due to the assumption that direct business processes, namely the own manufacturing processes, are easier to address for an organisation than indirect business processes, such as supplier processes. Additionally, this consulting process is designed for SMEs in which corporate sustainability has not been strategically addressed yet. It comprises only the direct business processes to enhance an easier start towards a holistic corporate sustainability approach. Supplier and customer processes, nonetheless, need to be addressed in a second step. However, due to limitations in time, this goes beyond the scope of the current thesis.

As previously explained, the consulting process is developed by extracting tools and management principles of the management frameworks presented in Chapter 2. It can be divided in eight steps (see Figure 10):

1. Gaining commitment of the management team for the consulting process
2. Observation of value creating processes
3. Detailed analysis of key processes
4. Identification and analysis of relevant stakeholders
5. Prioritisation of corporate sustainability issues

6. Setting of objectives for implementation of a corporate sustainability strategy
7. Establishment of a measurement system for continuous improvement
8. Establishment of a continuous improvement process

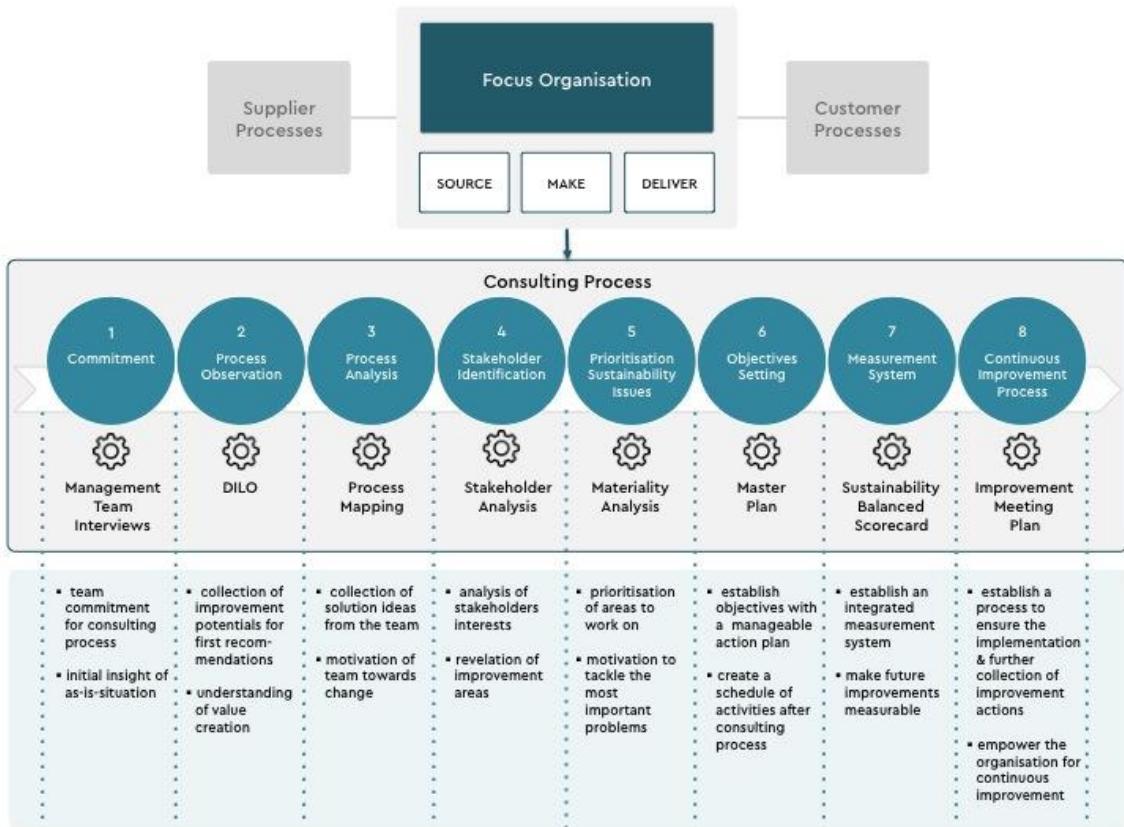


Figure 10: Consulting process and according tools and aims (own graph)

To keep the commitment of the managing director and to enhance the motivation to proceed with the change process, regular information and feedback meetings with the managing director are placed in between the different consulting steps.

4.3.1 Commitment

The first consulting step aims at gaining the management team's commitment for the whole process. A kick-off meeting with the management team is performed to inform about the consulting process and the general concept of corporate sustainability. The managing director plays a key role in this meeting as it is up to him to lead the meeting

and to introduce the process. Therefore, the empowerment of the managing director in preparation of the kick-off meeting is crucial.

Besides the commitment of the management team, a first insight on the situation as-is regarding sustainability management seeks to be gained. Non-structured interviews with the whole management team are used as consulting tool in this first step (see Table 3).

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|-----------------------------------|--|-----------------|---|--|---|
| Kick-off meeting | Managing Director (lead role), Management Team | 1.5 h | meeting room | agreement on consulting process | meeting room |
| Management Team Interviews | Management Team members individually | 1 h each | on-site close to production area or sales point | first ranking of sustainability issues | cards with sustainability aspects and questions |

Table 3: Consulting guide commitment (own table)

In a comfortable, natural situation, the important characters of the organisation seek to be known and the consultant is introduced to the management team. The interviews, therefore, are conducted in the working environment of the interviewed person and at a time chosen by the interviewee. All management team members are interviewed individually to give them the possibility to talk about personal experiences and issues related to sustainability topics. The non-structured interview seeks to create a relationship of trust between the management team and the consultant to gain their support for the further consulting process. To additionally get a first outcome of the interviews, besides the commitment effect, different sustainability and efficiency aspects are written on cards, together with some triggering questions (see Figure 11). The interviewee is asked to share personal experiences and observed improvement potentials. At the end of the interview, the interviewee ranks the sustainability issues to get a first impression of the most important topics to be confronted throughout the consulting process.



Figure 11: Supporting cards for management team interviews (own picture)

4.3.2 Process observation

The method day-in-the-life-of (DILO) is used in the second step of the consulting process. It is part of the lean management gemba philosophy and consists of observing a process during several hours and taking notes on the different waste types. Thereby, a deep understanding of the process activities seeks to be gained (Liker 2009, p. 97). For the observation, the seven waste types defined by Ohno (see Chapter 2.5.3) are considered. They contribute to improvements for the sustainability dimension *profit* by detecting efficiency potentials that might affect the cost structure. In addition to that, the sustainability aspects defined in Chapter 2.3 are taken as observation criteria. Besides the observation, oral exchange with the involved employees is also wanted.

Two types of questions are addressed to the employees:

- 1. Technical questions:** For a deeper understanding of the process and also to boost the self-esteem of the observed employees, technical questions are asked. Thereby, their motivation to participate in the consulting process seeks to be triggered.
- 2. Questions on the improvement potentials:** Questions on observed improvement potentials are asked to make the employees recognize those potentials by

themselves. Thereby, a thought process on possible improvement solutions seeks to be triggered.

The following guide (Table 4) summarizes the process observation activity:

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|--------------------|--|-----------------|---------------------------------------|---|------------------------|
| DILO method | no active participants but all employees involved in the process are observed and should be addressed with the help of questions | 4 hours minimum | on-site where the process takes place | list of observed improvement potentials and corresponding improvement ideas | clipboard and pen |

Table 4: Consulting guide process observation (own table)

4.3.3 Process analysis

With the third step of the consulting process, key processes seek to be analysed in detail for collecting improvement potentials and ideas.

Toyota's management is convinced that the best results are achieved automatically when the processes are designed in the right way (Liker 2009, p. 135). To design processes, the value stream method is the key method within lean management. Its aim is to reduce the lead-time by visualizing the whole value chain and thereby identifying the seven types of waste. The focus of this method, however, is put on process times to finally be able to design a one-piece flow¹³ (cf. Rother and Shook 2006, Erlach 2010).

As this thesis sets the focus on the redesign of processes towards more sustainability, a simpler process mapping is applied. Instead of lead-time, the sustainability aspects detailed in Chapter 2.3 are at the centre of the analysis.

¹³ The one-piece flow intends to hand over one single piece to the next production step as soon as the upstream process has finished its activities. As intermediate storage is eliminated, a one-piece-flow enables strong reduction in lead-time, improves flexibility and the ability to detect errors when they occur (Erlach 2010, p. 148, Liker 2009, p. 146).

The process mapping method can be applied to administrative as well as production processes. The flowchart is its central tool. It helps to visualize the process to be analysed. In detail, the following steps should be accomplished for the process mapping method (cf. Fischermanns 2009, p. 115ff):

1. **Preparation:** definition of the purpose for the analysis purpose and of the process frame
2. **As-is situation:** draft of the process using sticky notes (flowchart)
3. **Analysis:** identification of problems, risks, strengths and opportunities of each process step
4. **Prioritisation:** quantification of the improvement potentials
5. **Improvement:** idea generation to improve the as-is situation
6. **Scheduling:** revision of ideas with senior management to define an action plan including responsibilities and deadlines

For the process mapping, the physical proximity to the place where the value creation happens (*gemba*) is of great importance. As for the DILO-exercises, going on-site, involving the employees that carry out the process activities, helps to identify the improvement potentials (Ohno 1993, p. 46). In addition, Guido Fischermanns proposes to accomplish a workshop with the affected employees in order to conduct the process mapping more efficiently (Fischermanns 2009, p. 115). Quick-wins, actions that can be accomplished on short term and have a notable improvement effect, are important to keep the motivation for the change of processes on track and should be considered when defining the action plan (Lasko and Busch 2003, p. 190).

The following guide (Table 5) summarizes the process mapping activity:

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|------------------------|---|-----------------|--|---|--------------------------------------|
| Process Mapping | all employees involved in the process (also interfaces to other processes such as logistics); consultant as moderator | 1.5 - 2 hours | on-site where the process takes place or close to it | priorised and agreed ideas for improvement according to the process steps | brown paper, sticky notes, felt-tips |

Table 5: Consulting guide process analysis

4.3.4 Stakeholder identification

Stakeholder engagement is one of the key aspects of corporate sustainability. To identify the relevant internal and external stakeholders, the stakeholder analysis is used in the fourth step of the consulting process.

Stakeholders can be classified in two groups (Jain 2016, n/s):

- (1) **Internal stakeholders:** those who work for or with the company (e.g. employees or investors) and that are directly impacted by the organisation's performance
- (2) **External stakeholders:** those entities or individuals that are directly or indirectly affected by the organisation's performance, product or service (e.g. industry associations, customers or suppliers)

After identifying the different stakeholders of the organisation, they can be classified in a power matrix regarding their interest toward the organisation's performance and their power or influence towards the organisation's performance (see Figure 12).



Figure 12: Power matrix (cf. Jain 2016)

When establishing objectives, the key stakeholders (key players) should be highly considered making sure to address their sustainability concerns (Jain 2016, n/s).

The following guide (Table 6) summarizes the stakeholder analysis method:

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|----------------------|--|-----------|--------------|---|--------------------------------------|
| Stakeholder Analysis | depending on the size of the company, representatives of all departments | 1-2 hours | meeting room | power matrix of all the organisations' stakeholders; definition of activities to involve the different stakeholders | brown paper, sticky notes, felt-tips |

Table 6: Consulting guide stakeholder analysis (own table)

4.3.5 Prioritisation of sustainability issues

To address and mitigate negative environmental and social impacts of an organisation in the framework of corporate sustainability, the most relevant issues need to be identified. According to Timothy J. Mohin, a clear strategy based on high-priority issues is important to develop a successful corporate sustainability program (Mohin 2012, p. 43). The materiality analysis supports this process and represents the fifth step of the consulting process.

The materiality analysis does not only focus on the organisation itself but aligns the companies' priorities and the main stakeholder concerns (Mohin 2012, p. 44). Both the IIRC and the GRI reveal the importance of a materiality analysis to integrate the stakeholders' interests in the activities of an organisation and to embed an integrative sustainability perspective into the business activities (IIRC 2013, p.18, GRI 2015b, p. 11f).

Sustainability-aspects that are *material* to an organisation can be defined by the following:

"Material Aspects are those that reflect the organization's significant economic, environmental and social impact; or substantively influence the assessments and decisions of stakeholders." (GRI 2015a, p.7)

The IIRC defines three necessary steps to conduct a materiality analysis (cf. IIRC 2013, p. 3). All aspects are analysed by their past, present and future effect on the

organisation and by the magnitude of the effect and its likelihood of occurrence. As this process is very time-consuming, it is adapted to the SME environment taking into consideration Dr. Charu Jain simplification proposal (cf. Jain 2016, n/s):

1. **Top management materiality:** conducting a workshop with the top management to identify their material sustainability issues
2. **Stakeholder materiality:** conducting a survey on material issues to the *key players* detected in the stakeholder analysis
3. **Prioritisation:** Identification of the most important aspects (merging both those of stakeholders and of top management), thereby building a materiality matrix (see Figure 13)

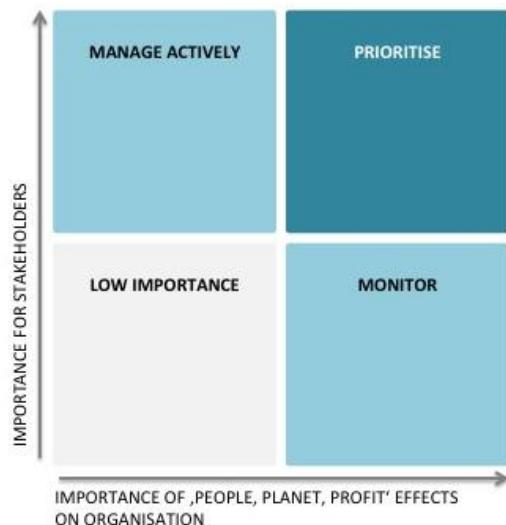


Figure 13: Materiality matrix (cf. GRI 2015b, p.12; Eifert and Briem 2015, p.140)

The following table (Table 7) summarizes the materiality analysis method:

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|-------------------------------------|--|------------------------------|------------------------------|--|--------------------------------------|
| Materiality Analysis: Step 1 | top management team; consultant as moderator | 1-2 hours | meeting room | relevant sustainability aspects rated on their importance for the organisation's performance | brown paper, sticky notes, felt-tips |
| Materiality Analysis: Step 2 | stakeholders defined as <i>key players</i> | depends on the survey method | depends on the survey method | relevant sustainability aspects rated on the importance to the stakeholders | depends on the survey method |
| Materiality Analysis: Step 3 | top management team; consultant as moderator | 1-2 hours | meeting room | materiality matrix for the organisation comprising stakeholders and the organisation itself | brown paper, sticky notes, felt-tips |

Table 7: Consulting guide materiality analysis (own table)

4.3.6 Objectives setting

After having identified the material sustainability issues for both the stakeholders and the top management of the organisation a strategy to tackle these issues is needed. In step six of the consulting process, objectives are set within an implementation master plan. The objectives and actions set in the master plan need to be agreed upon with the top management to enhance the accomplishment after ending the consulting process. Therefore, a workshop with the management team is applied in this phase. Open brainstorming is used as idea finding tool, followed by a rating of the most feasible and the most impacting activities (see Table 8).

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|--------------------|--|-----------------|-----------------|---|--------------------------------------|
| Master Plan | top management team; consultant as moderator | 1-2 hours | meeting room | master plan with prioritised activities, responsibilities and due dates | brown paper, sticky notes, felt-tips |

Table 8: Consulting guide master plan (own table)

4.3.7 Measurement system

To implement a strategic corporate sustainability concept, a valid measurement system is key. Thus, the aim of this seventh consulting step is to provide the organisation with a measurement tool, which supports the continuous improvement process subsequently to the consulting process. The sustainability balanced scorecard is a measurement system adapted to the organisation's business strategy incorporating the relevant sustainability aspects. It is therefore used as consulting tool in this step.

The balanced scorecard, introduced by Robert S. Kaplan and David P. Norton in 1997, aims at measuring performance not only by financial indicators but also by intangible assets regarding customers, processes, learning and growth (see Figure 14). Identifying them as important aspects for long-term competitive advantages of an enterprise, Kaplan and Norton integrated them into the traditional indicator system (Hahn and Wagner 2001, p. 1). The balanced scorecard nowadays is a commonly used tool for the “[...] successful implementation of corporate strategies [...]” (Figge et al. 2002, p. 1)

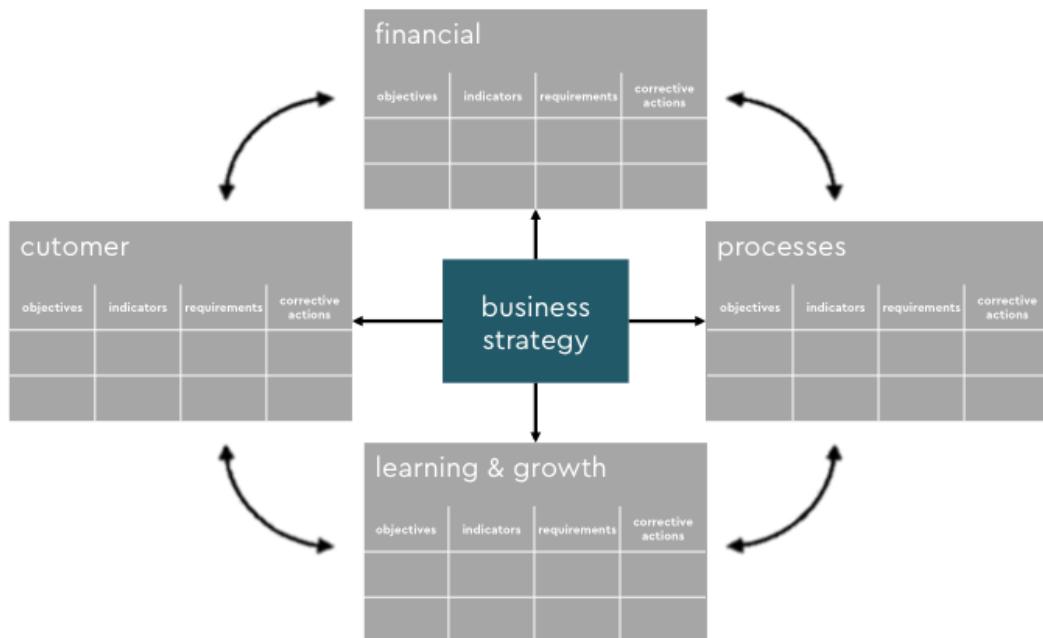


Figure 14: Balanced scorecard (cf. Kaplan and Norton 1997, p. 9)

Similar to the EFQM excellence model, the balanced scorecard distinguishes result-oriented indicators (lagging indicators) and enabling indicators (leading indicators) (Hahn and Wagner 2001, p. 2). It can therefore be used as an operationalization tool of the EFQM excellence model (Bernhard and Hoffschröer 2003, p. 66 f).

Frank Figge et al. (2001) and others introduced the sustainability balanced scorecard, which seeks to improve the performance of an organisation by integrating the triple-bottom-line *people, planet and profit* (Hahn and Wagner 2001, p. 2).

Why is the scorecard a valid tool for measuring sustainability performance?

- It is a balanced tool as it includes monetary and non-monetary aspects (such as environmental or social aspects).
- It shows causal relationships between the overall performance and environmental or social aspects (Hahn and Wagner 2001, p. 2)

To elaborate a sustainability balanced scorecard the following steps are recommended by Figge et al. (cf. Figge et al. 2001, p. 11f):

1. **Choice of strategic business unit:** The scorecard is applied to one specific business unit. The strategy of the business unit represents the basis for the scorecard.
2. **Identification of the environmental and social aspects affecting the business unit:** All social and environmental aspects, which are relevant for the performance of the business unit and for the organisations' stakeholders are identified. The materiality analysis accordingly can be used as preparation for this step.
3. **Determination of the strategic relevance of environmental and social aspects:** Starting from the financial perspective, all perspectives of the scorecard are gone through in a top-down process. According to Figge et al., the purpose of this step is to “translate the verbally formulated strategy (...) into causally linked objectives and indicators.” (Figge et al. 2001, p. 16) The cascade-like process guarantees this process (see Figure 15).

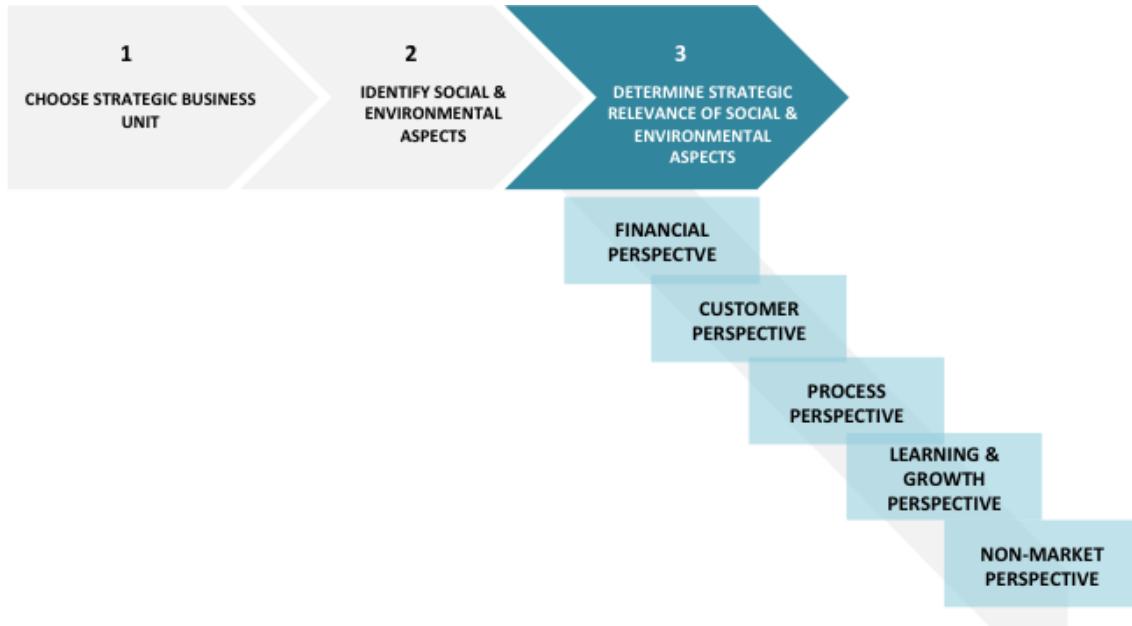


Figure 15: Process to elaborate a sustainability balanced scorecard (cf. Figge et al. 2001, p. 12)

Environmental and social aspects thereby can be translated into result-oriented indicators if they represent strategic core elements (e.g. market share of eco-segment) or into enabling indicators (e.g. energy efficiency as enabler for productivity).

For SMEs, it is especially important to link financial perspective directly with environmental and social aspects: It helps to use the limited budget only for environmental and social investments that influence the financial performance.

The following table (Table 9) summarized the activity:

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|-----------------------------------|---|---|--------------|--|---|
| Sustainability Balanced Scorecard | top management team; consultant as moderator | approx. 2 hours (if materiality analysis is conducted beforehand) | meeting room | set with relevant indicators and corrective actions adapted to the organisations' strategy | brown paper, sticky notes, felt-tips |

Table 9: Consulting guide sustainability balanced scorecard (own table)

4.3.8 Continuous improvement process

The last step of the consulting process aims at providing the organisation with a tool to continue the improvement process following the principles set in Chapter 4.1: process orientation, measurability, people involvement and transparency.

Therefore, a meeting structure on various hierarchical levels, from the employees to the top management, is implemented (see Figure 16). The topics discussed in the team meetings are in accordance with the material sustainability aspects. An agenda with trigger questions helps the teams to find potentials of improvement within their processes and to get involved in finding solutions. With the help of action plans managed by the team leader of every team, improvement can be either implemented autonomously or reported to the next hierarchical level. Feedback on the status of the improvement actions is reported back to the employees to keep involvement and motivation for change on the necessary level.

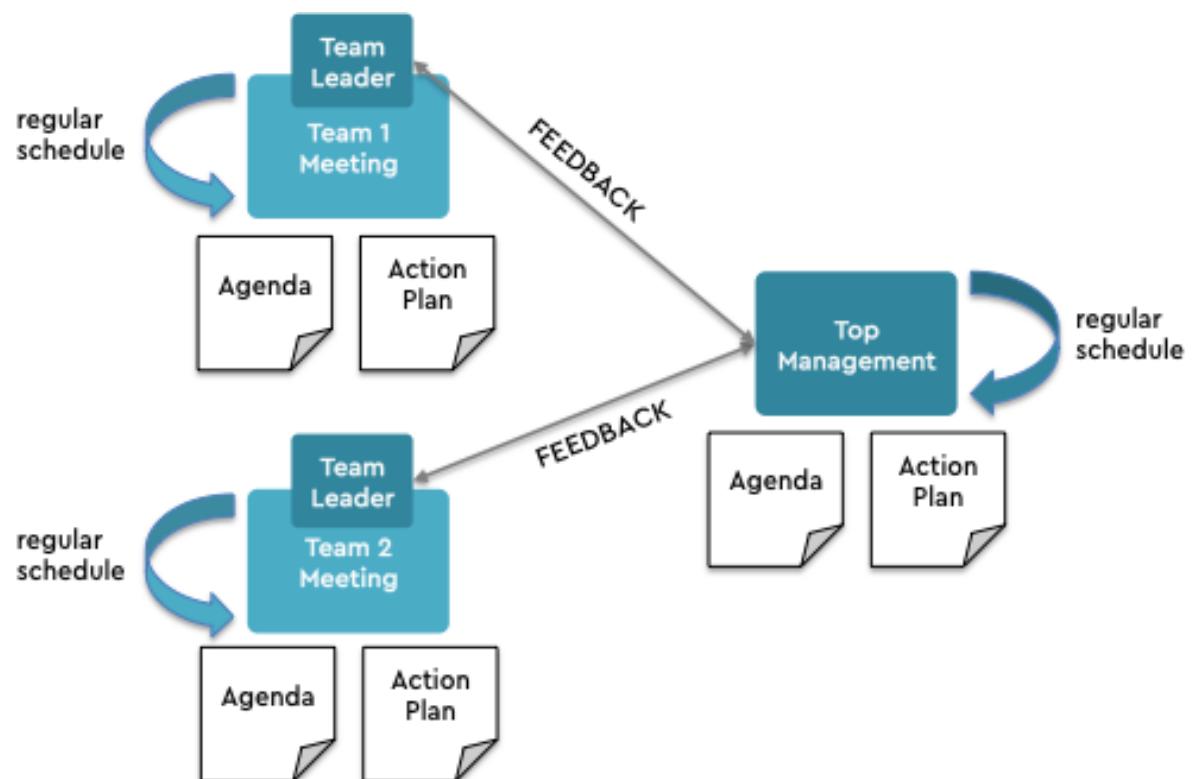


Figure 16: Improvement meeting process (own graph)

The following table (Table 10) summarizes the activity that is necessary to establish such a meeting process:

| | Participants | Duration | Location | Outcome for Organisation | Material needed |
|------------------------------------|---|-----------------|-----------------|---|---|
| Improvement Meeting Process | top management team; leader: managing director; moderator: consultant | 1-2 hours | meeting room | established improvement process, defined agenda and meeting schedules | brown paper, paper, sticky notes, felt-tips |

Table 10: Consulting guide to establish an improvement meeting process (own table)

5 Case Study: *Bäckerei Lyck*

In the following chapter, the results of the case study in the medium-sized bakery *Bäckerei Lyck* is presented. The aim of this chapter is to test the previously designed consulting concept in practice to verify its marketability.

5.1 Company presentation

Bäckerei Lyck was founded in 1919 by Rosa and Christian Lyck. They started by selling their bakery products on several weekly markets. Their son Waldemar changed the sales structure opening a bakery shop. In 1945, however, the bakery was bombed and the production area was completely destroyed. By selling groceries and bakery products from other bakers, the family made their livings until the 1970s. This is when Christian Lyck junior rebuilt an own production area and turned the two-man bakery to a successfully running business with a joint supermarket. Today's owner, Kai Lyck (Figure 17), took it over in 1989, running four points of sale in Kiel. The central production site is placed in the main branch, in Elmschenhagen, Kiel. Due to a fire, the production area was burnt in 2010. *Bäckerei Steiskal* and *Bäckerei Ratjen* helped out during seven months of construction and restoration works to keep production and sales running. In 2009, the first branch *RESTEZ!* was opened, selling special French products and establishing a semi-independent production area. The second *RESTEZ!* branch was opened in 2016.



Figure 17: Kai Lyck, managing director of *Bäckerei Lyck* (Kieler Nachrichten 2016)

Bäckerei Lyck sells a big variety of bakery products throughout the year, namely 20 sorts of bread, 50 sorts of rolls, 20 sorts of snacks and 25 sorts of pastry. All products are handmade, excluding some few products for the *RESTEZ!* branches (data given by Kai Lyck).

Today, *Bäckerei Lyck* employs 92 people, who mainly work in sales (65%) and production (22%). Only 4%, namely 4 people, work in management, counting Kai Lyck and his wife who work full-time in production and sales and two part-time employees for bookkeeping and daily counting of turnover. Besides those, there are four employees that take over team leading activities: one employee for the production team, one employee for the branches of *Bäckerei Lyck* and one person each for the *RESTEZ!* branches. They are included when the term *management team* is used for the activities conducted.

In sales, 60% are women, whereas in production 60% are men. A part of the employees have worked for the bakery over 20 to 30 years, and 38% of the employees are temporal, who all work in the sales department (see Table 11).

| Employee structure | Number of employees (%) |
|----------------------------------|-------------------------|
| Production | 22 |
| Sales | 65 |
| - permanent employees | 27 |
| - temporal employees | 38 |
| Management | 4 |
| Trainees (Auszubildene) | 7 |
| Permanent employees | 54 |
| Temporary employment (Aushilfen) | 38 |
| Women | 60 |
| - in production | 30 |
| - in sales | 92 |
| Men | 40 |
| - in production | 60 |
| - in sales | 8 |
| Migratory background | 5 |

Table 11: Employee structure of *Bäckerei Lyck* (data given by Kai Lyck)

The organisation has an annual turnover of 2.7 million Euros, making a profit of 200,000 Euros. On average, customers make an individual turnover of approximately 4.5 Euros per purchase (data given by Kai Lyck).

5.2 Focus area

As described in Chapter 4, the consulting process developed is applied to the internal business processes of the focus organisation. Supplier and customer processes are not part of the consulting process.

The organisation chosen for this case study has its main activities in sales and production of bakery products, as most of the employees work in those areas (see Table 11). Those two business areas therefore form the focus areas for the applied consulting process.

Both *Bäckerei Lyck* and *RESTEZ!* are included in the consulting process as they share resources for production and sales. In this thesis, when naming the company *Bäckerei Lyck*, all *RESTEZ!* branches are included if not indicated differently. Production takes place mainly centrally in the main *Bäckerei Lyck* branch in Ellerbeker Weg. From there, products are transported to the different points of sales. Most of them are ready to sell. Some sorts of pastries and rolls, however, are transported but still need to be heated up in the individual ovens of each point of sale. Both *RESTEZ!* branches have their own production area. For the *RESTEZ!* in Sternstraße, already prepared dough is provided, whereas the *RESTEZ!* in Koldingstraße prepares its own dough for most of the products. All six points of sale (see Figure 18) and the two main production sites in Ellerbeker Weg and Koldingstraße, are included in the analysis.

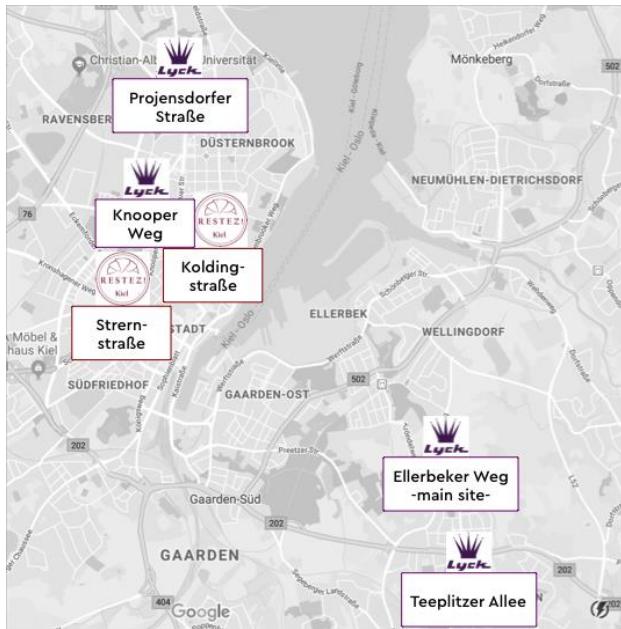


Figure 18: Points of sale *Bäckerei Lyck* (Google Maps; own graph)

5.3 Results

In the following, the results of the different consulting steps are presented. The activities are performed in a period of six months (see Figure 19). The blue squares represent individual meetings with the managing director, Kai Lyck.



Figure 19: Consulting process performed at *Bäckerei Lyck* (own graph)

5.3.1 Management team interviews

Individual management team interviews are conducted with the production team leader and three sales team leaders. Figure 20 shows a first compilation of the issues that are important to improve for the interviewees. All four management team members highlighted waste in form of overproduced bakery products (*Überproduktion*) as important sustainability issue. Transparency towards customers

(Transparenz), error management¹⁴ (Fehlermanagement) and the participation of the management team in decisions (Mitbestimmung) have been highlighted by two interviewees.

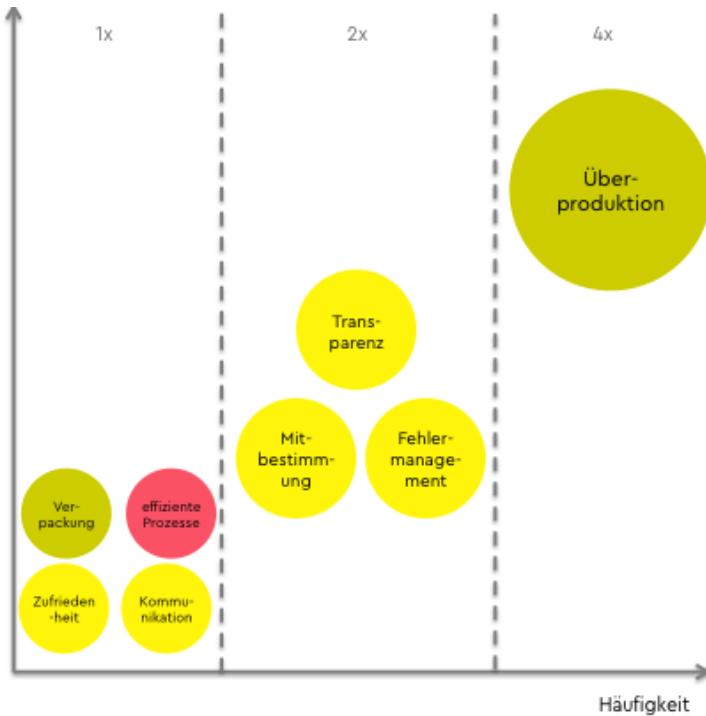


Figure 20: Sustainability issues selected by management team (green: ecological sustainability, yellow: social sustainability, red: economic sustainability; own graph)

Different ideas discussed during the interviews are brought together to a concept for reducing overproduction (*Retoure*). The concept outlined in Figure 21 is agreed upon with the management team and the management director in a subsequent meeting to the interviews. It basically seeks to reduce the source of overproduction by the following:

1. **Improvement of internal processes:** establish a measurement system to know which products are overproduced in which amount; optimize and standardize the product ordering system of the different points of sales towards production
2. **Improvement of the sales structure:** increase sales by online and social media marketing; standardize use of ovens in the point of sales for flexible production; reduce and adapt the product range to e.g. seasons

¹⁴ Error management refers to the structured analysis of the root cause of a problem. It is used in lean management to prevent errors from re-occurring.

- Involvement of customers in decisions:** increase the involvement regarding the offer of product variety or regarding the importance of sustainability aspects, such as food waste

Only the fourth step consists in improving the distribution of food waste by donations to different social organisations.

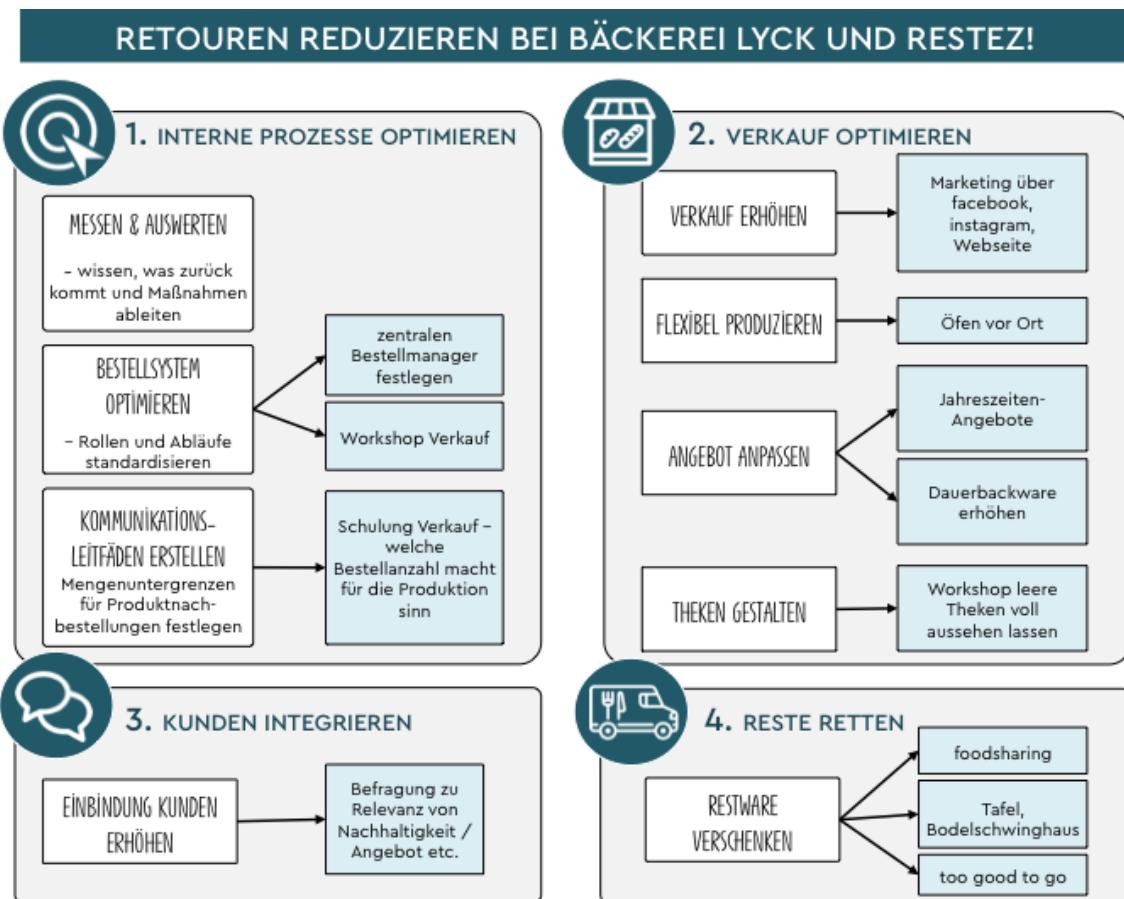


Figure 21: Concept to reduce overproduction of bakery products (own graph)

5.3.2 DILOs

In both main productions, in Ellerbeker Weg and in Koldingstraße, process observations of each five hours are performed using the DILO method (explanation of the method see Chapter 5.3.2). The production site in Koldingstraße is directly connected to the point of sale so that the sales process also is taken into consideration for the observation.

As a result of the observations, 82 potentials for improvement are detected. Figure 22 shows that the potentials for the dimensions *people*, *planet* and *profit* are mostly balanced.

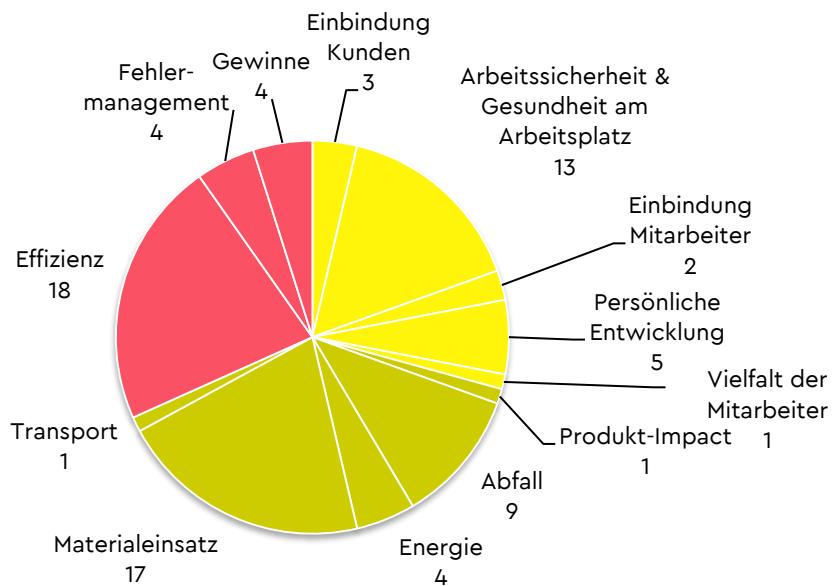


Figure 22: Number of improvement potentials classified by sustainability aspects (own graph)

For the dimension *people*, the aspects health and safety and personal development are especially relevant. 24 points for improvement are outlined, e.g.:

- use of harmful cleaning products for health and the environment
- regular carrying of approximately 40kg flour bags
- risk for accidents due to missing standards for the location of the materials
- missing knowledge on the product composition
- no rotation between employees of different production steps
- missing involvement of employees in decisions regarding activities in which they are involved

The dimension *planet* comprises 32 potentials for improvement, mainly regarding material input, waste and energy consumption:

- frozen bakery products purchased externally carry much more packaging than self-made products

- use of 1L milk packages for production where one pallet is used per week
- high amount of overproduced products
- no usage of organic products
- high consumption of disposables such as paper cups for sales
- coffee-to-go is cheaper than coffee to drink in-house
- poor isolation of walls of production site in Koldingstraße
- light stays on continuously in several rooms where activity takes place unregularly
- hot oven air is not used for energy supply but blown outside

The dimension profit comprises 26 improvement potentials, regarding efficiency, revenues and error management:

- dough making is based on experience rather than on standards so that rotation of employees is not possible and errors occur easily
- machines are not maintained regularly but are used until they break
- errors that occur during the shift are not analysed or communicated at the end of the shift to prevent reoccurrence

For each sustainability potential, improvement ideas are developed using the best practice catalogue developed in Chapter 3.3 and using ideas from the involved employees. The full results including ideas for improvement can be reviewed in Annex IV.

The improvement potentials also can be classified regarding the responsible area of the organisation. Figure 23 shows that next to production (39%) and sales (26%) another major part belongs to the procurement of materials, namely 17%. This comprises mostly the procurement of ingredients that either carry a lot of packaging or especially harmful packaging, such as aluminium, or that involve high CO₂ costs due to long distance transports¹⁵.

¹⁵ Due to its complexity, the quantification of CO₂ emissions is out of the scope of this thesis.

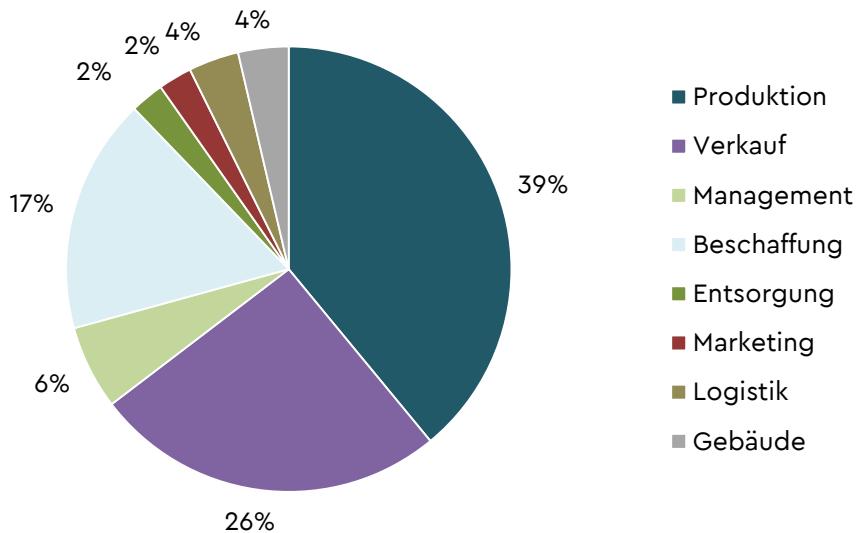


Figure 23: Improvement potentials classified by organisational area (own graph)

The managing director is informed of the results after the observations, providing him with a quantifiable need for improvement. The results are used as input and support for the further analysis.

5.3.3 Process mapping

The production process in the central bakery in Ellerbeker Weg is selected for the process mapping as it represents the most important part within the value creation for *Bäckerei Lyck*. All bakers, including the team leader, and the driver (logistics) take part in the workshop. In preparation, the process used for the analysis is discussed with the team leader (Figure 24).



Figure 24: Production process at *Bäckerei Lyck* (own graph)

For the process analysis, the most relevant sustainability aspects for production are selected based on the DILO analysis results: *Abfall, Energie, Materialeinsatz, Transport, Ablauf, Kommunikation* and *Wissensmanagement*. The naming of the aspects is adapted

for a better understanding by the employees¹⁶. As a result, 35 actions (see Figure 25) are identified, such as:

- development of a maintenance standard for all machines to be carried out by the involved employees and definition of one central maintenance responsible to assure longevity of machines
- standardisation of recipes and usage of already existing electronic tablets as calculator and checklist for dough-making to prevent errors and thus food-waste
- ensure, by defining responsibilities, that packing lists for drivers consist updated information to prevent additional transports
- future procurement of big packs for milk and check possibility to change to regional milk provider to prevent packaging



Figure 25: Results process analysis (own picture)

The actions can be reviewed in Annex V¹⁷. Subsequently to the workshop, the improvement actions are discussed and agreed upon with the managing director. Responsibilities for the implementation of the actions are set.

¹⁶ *Ablauf* is used instead of *Effizienz*, *Wissensmanagement* is used instead of *Persönliche Entwicklung*, *Kommunikation* is used instead of *Einbindung Mitarbeiter*. The category *Arbeitssicherheit & Gesundheit am Arbeitsplatz* is not listed, as according points are included in the category *Effizienz*.

¹⁷ The wording of the improvement potentials and improvement ideas is the one chosen by the employees and has not been changed.

5.3.4 Stakeholder analysis

The stakeholders of *Bäckerei Lyck* are visualised in the power matrix in Figure 26. The key players identified are (1) employees, for the category of direct stakeholders and (2) customers, in the category of indirect stakeholders.

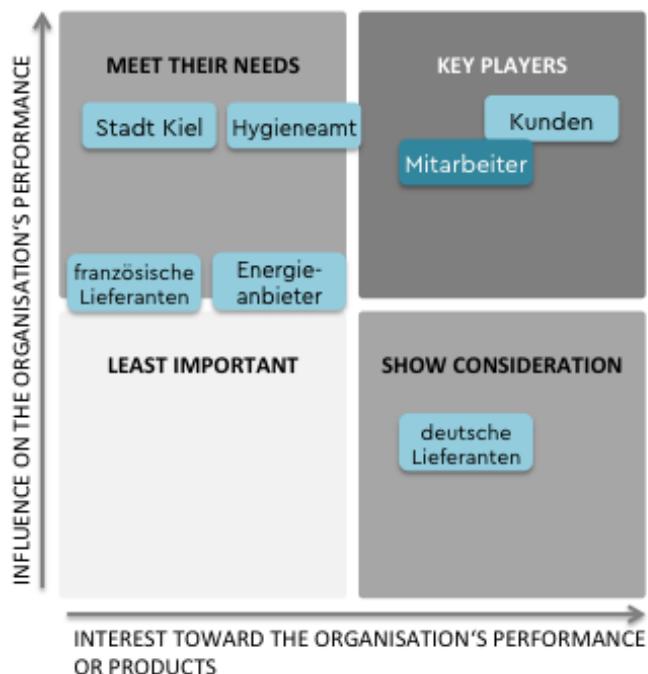


Figure 26: Power matrix for *Bäckerei Lyck* (dark blue: direct stakeholders, light-blue: indirect stakeholders; own graph)

Following the definition of corporate sustainability¹⁸, their needs are meant to be met by considering them in the organisation's decisions. To do so, the employee needs are analysed using the materiality analysis (see Chapter 5.3.5). The customer needs are examined with the help of a customer survey. To gain a broad range of customer opinions, a quantitative survey technique in form of questionnaires is chosen. To facilitate the survey process, the questionnaires are laid out in paper form in each of the six sales points. An incentive for filling out the questionnaire is provided in form of a mini croissant (see Figure 27).

¹⁸ [...] meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders." (Dyllick and Hockerts 2011, p. 131)

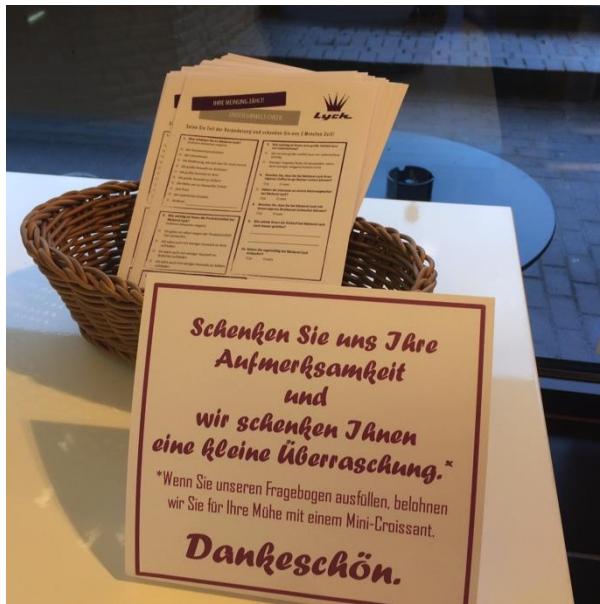


Figure 27: Customer survey on-site (own picture)

The questionnaire itself is designed to (1) reduce the burden to fill it out and (2) to facilitate an easy evaluation:

- only 10 questions are addressed
- mainly closed and semi-closed questions are chosen
- a simple question is chosen as entry question: *Was schätzen Sie an Bäckerei Lyck?*
- a *handy* paper format is chosen
- the design is adapted to the corporate design of *Bäckerei Lyck*
- most of the times, solely two answer possibilities are given
- answer possibilities for semi-open questions are given in form of sentences and scales are avoided

One open question however is chosen to give the possibility to develop own ideas for improving the shopping situation at *Bäckerei Lyck*. The questionnaire can be reviewed in Annex VI.

Within one week, 345 questionnaires are filled out, from which 82% participants are regular customers. The following results are gained¹⁹:

¹⁹ For both *Bäckerei Lyck* and *RESTEZ!* the average results are taken if not indicated differently. The raw data is attached to the thesis in digital form.

- A majority of the customers (more than 80%) likes the craft production and the taste of the products of *Bäckerei Lyck*²⁰ (see Figure 28a).
- The price and variety of products are perceived as less important (see Figure 28a).
- 91% of the participants of *Bäckerei Lyck* claim that activities for environmental protection are important to them; 95% for *RESTEZ!* (see Figure 28b)
- Out of 51 people (15% of all participants) that state to know about environmental protection activities, 63% mention the project *umtüten* in which *Bäckerei Lyck* participates²¹ (see Figure 28c,d).
- On average, half of the participants know that they can use their own bag instead of a disposable paper bag. However, on average, 66% do not know that they can use their own coffee mug for take-away coffee (see Figure 28g).
- 64% of the participants state that the variety of products at *Bäckerei Lyck* is one of the most important aspects for their purchasing decision. For *RESTEZ!*, it is 48% (see Figure 28e).
- 30% of the participants agree to reduce the bread variety and one quarter of the participants agree to reduce the rolls and pastries variety (see Figure 28e).
- However, a big majority of the participants, namely 89% for *Bäckerei Lyck* and 95% for *RESTEZ!*, prefer less product variety shortly before closing in order to reduce food waste (see Figure 28f).

After presenting the results to the management team, the following main actions are agreed on:

- introduction of a deposit system for reusable coffee mugs for take-away coffee
- continuation with the activities defined to reduce overproduction (see Figure 21)
- use of social media and website for more transparency about the production conditions and environmental goals
- involvement of customers in decisions on concrete topics, for example the elimination of certain bread products

²⁰ To know which aspects to include in the questionnaire, a pre-study of 20 customers is performed in each one point of sale of *Bäckerei Lyck* and *RESTEZ!*. Aspects that were mentioned more than five times are included.

²¹ *Umtüten* is a project in Kiel that promotes reusable bags for bakery products and that creates a network of bakeries where customers can use their own bag instead of a disposable paper bag.

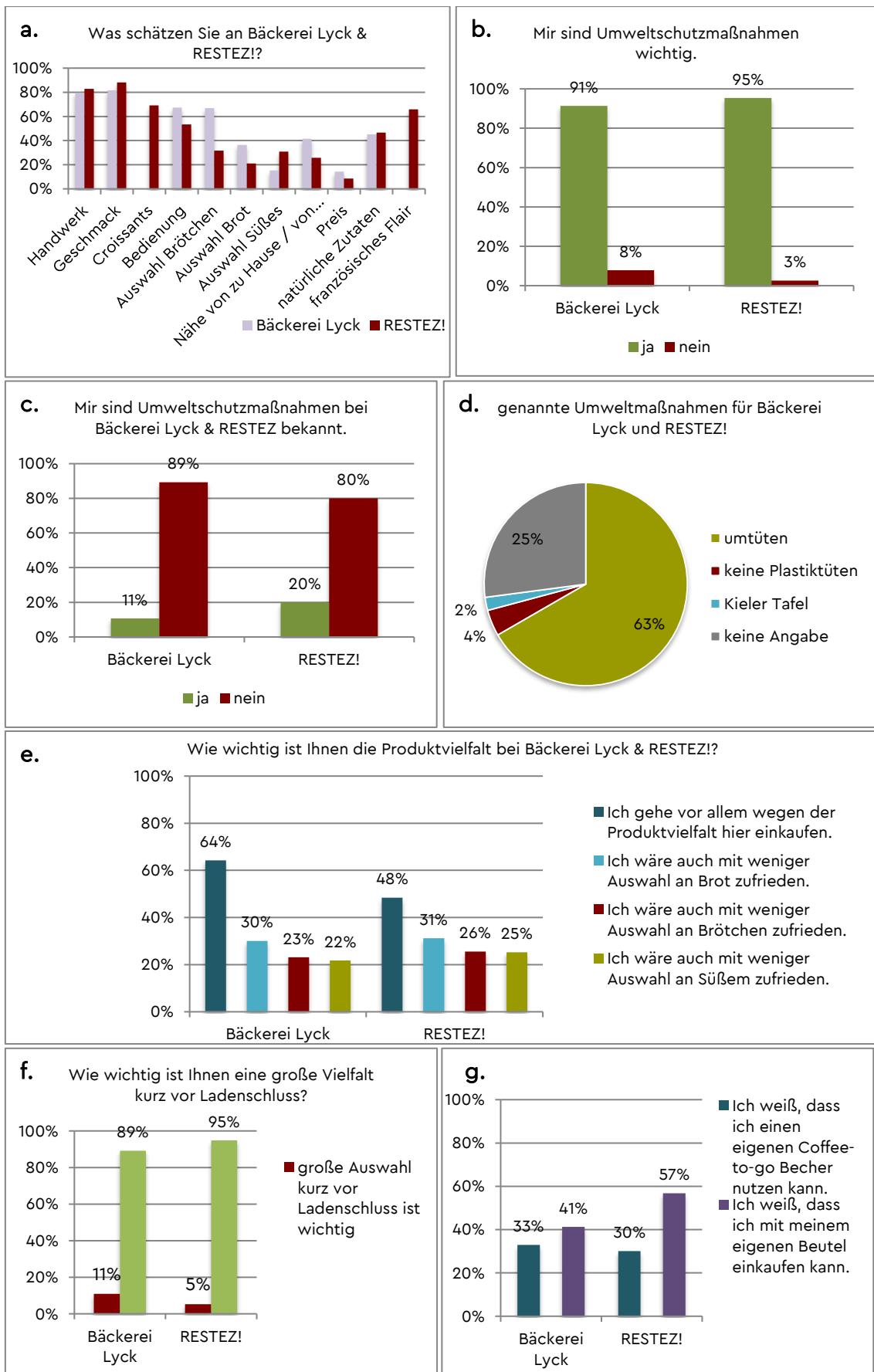


Figure 28: Results of the customer survey (own graphs)

5.3.5 Materiality analysis

To reveal the most relevant aspects of sustainability for *Bäckerei Lyck*, a materiality analysis is performed. It is conducted in three steps:

1. Identification of the most relevant aspects by the management team
2. Identification of the most relevant aspects by the employees
3. The comparison of the results and the creation of a materiality matrix

For the first step, a workshop with the management team is conducted. As a result, Figure 29 shows those aspects that are considered as most relevant. They are elected either because of their importance for the value creation or because of their significant improvement potential.

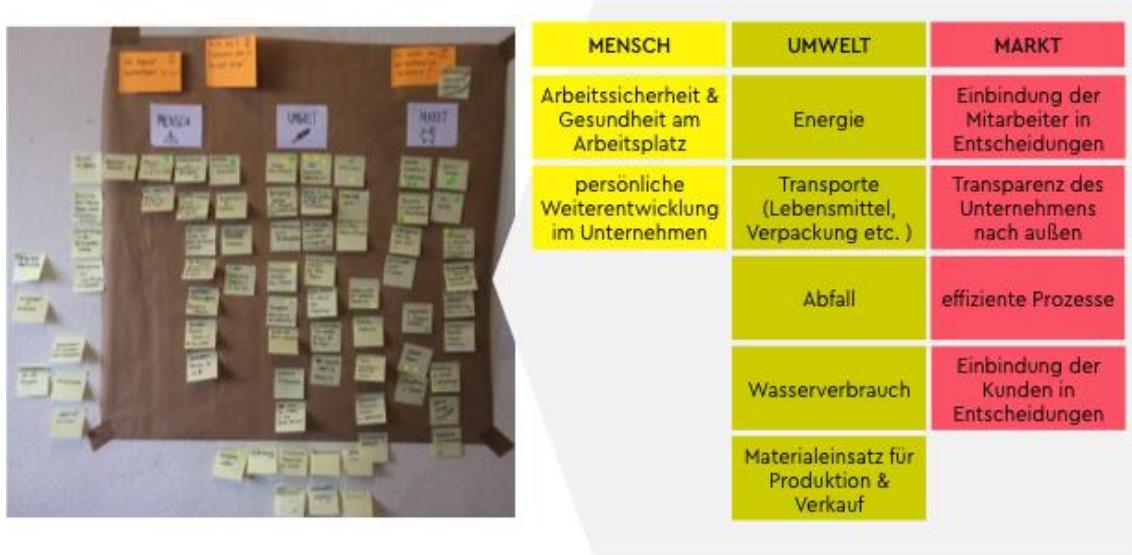


Figure 29: Relevant sustainability aspects determined by the management team (green dot: important aspect for value creation of organisation, yellow dot: significant improvement potential; own picture, own graph)

The second step seeks to identify the key stakeholders' most important interests. As detected in the stakeholder analysis, customers and employees are considered as *key players*. For the bakery customers, a detailed survey on the sustainability aspect is not suitable: the managing director, Kai Lyck, assumes that an extensive survey might frighten them away. However, the previous chapter shows that the customers do have a general interest and desire for environmental protection activities, e.g. in form of food waste reduction. Thus, the actions defined in Chapter 5.3.4 are included, when defining the master plan subsequently to the materiality analysis. The employees,

however, are involved in the materiality analysis by conducting a detailed quantitative survey. The survey is designed and implemented as follows:

- All employees, including temporal employees, are invited to participate.
- The team leaders of production and of each point of sale are informed individually about the background of the survey; they then are asked to introduce it to their teams.
- All sustainability aspects are asked to be valued regarding (1) their importance for the participants and (2) their potential for improvement.
- For the vast majority of the questions, statements are asked to be rated giving answer possibilities in the form of a four-level Likert scale²². The Likert scale is perceived as an efficient type of response design as it is commonly used and thereby known by the participants. Additionally, due to its repetitive structure, it allows to ask for a large amount of information in a small amount of time. Also, an efficient analysis of the collected data is given, as the answers can be easily transformed in values (Edwards et al. 1997, p. 43).
- To give the participants the possibility to contribute directly to the change process, open questions are used: they are asked to propose necessary corrective actions for the corresponding sustainability aspects.

The survey questionnaire can be reviewed in Annex VII.

The results are based on 36 questionnaires (40% of the employees)²³. Figure 30 shows a summary of the results gained regarding the relevance of the sustainability aspects to the employees.

On average, the dimensions *people* and *profit* are rated as more relevant than the dimension *planet*, as more people showed their strong or partly agreement for the first two. For the dimension *planet*, the number of participants giving no answer is significantly higher. Also, there is a bigger percentage of people that do not agree (rather or fully) regarding the importance of ecological aspects.

²² The scale used for the survey is the following: *Ich stimme voll und ganz zu*; *Ich stimme eher zu*; *Ich stimme eher nicht zu*; *Ich stimme gar nicht zu*.

²³ The raw data is attached to the thesis in digital form.

The following aspects are considered as most important to the participants:

- dimension *people*: health and safety (60% fully agree), equal possibilities (65% fully agree), compliance (42% fully agree)
- dimension *planet*: waste (49% fully agree), material input (35% fully agree), product impact on the environment (32% fully agree)
- dimension *profit*: wages (81% fully agree), error culture (52% fully agree), involvement in decisions (48% fully agree).

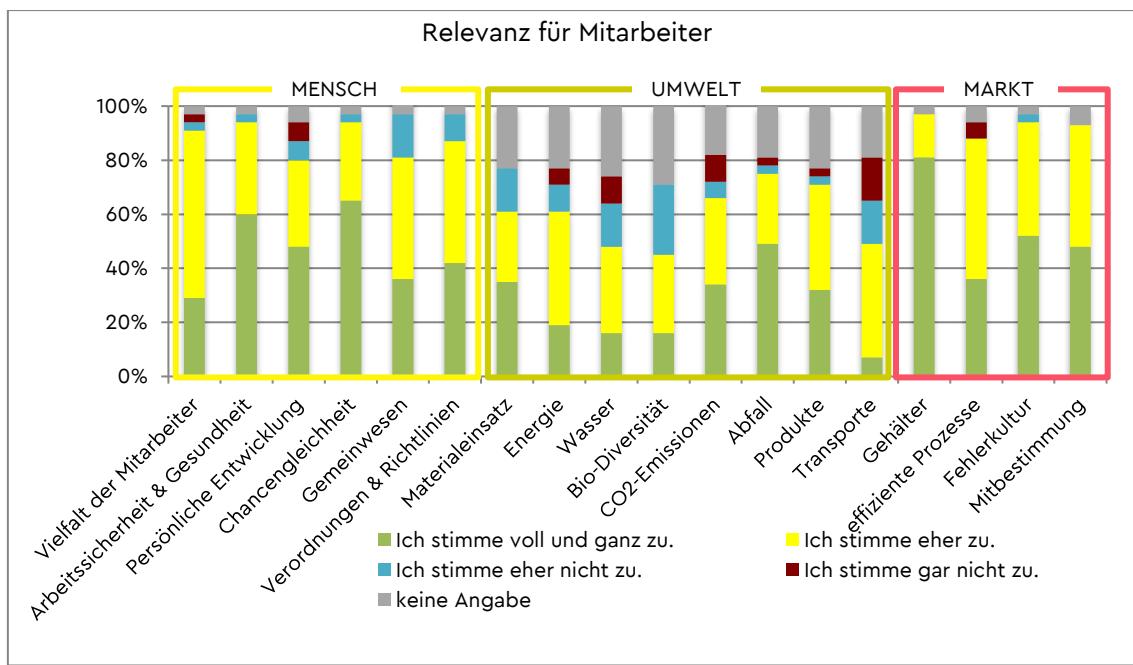


Figure 30: Relevance of the sustainability aspects for employees (own graph)

To gain information on the improvement potential, the implementation status of the different sustainability aspect is also included in the survey. The results are summarized in Figure 31. Additionally to the process observation and process analysis in the previous steps of the consulting process, a survey to all employees gives the chance to reveal improvement potentials that have not been observed so far. However, the results show that most of the employees see improvement potential in waste production and material input. Also, the aspect personal development seems to be especially relevant for improvement, as trainings and development meetings do not take place on a standardized level according to 87% of the participants. The same categories have been highlighted for having high improvement potential in the previous consulting steps.

In conclusion, the following aspects are the most relevant ones to improve, as the major part of the participants fully or partly disagree on their implementation status²⁴:

- dimension *people*: personal development (87%), health (39%), compliance (34%)
- dimension *planet*: material input (65%), waste (59%), transports (49%)
- dimension *profit*: wages (36%), efficient processes (33%), involvement in decisions (23%)

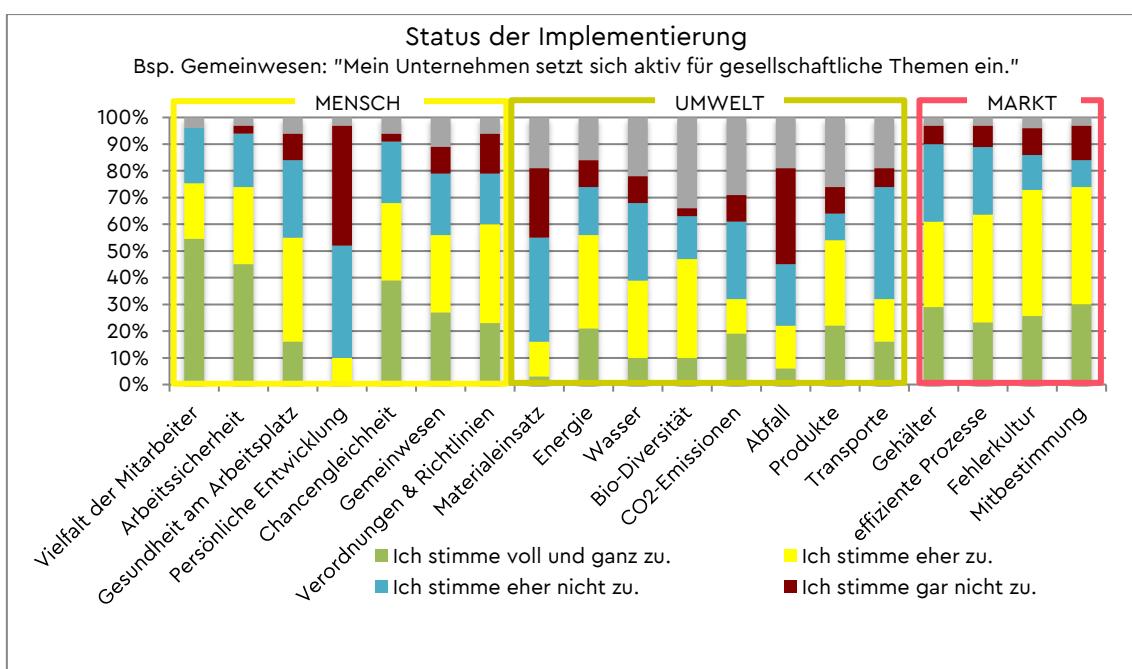


Figure 31: Implementation status of the different sustainability aspects according to the employees (own graph)

Six of the participants used the open questions to give proposals for corrective actions. They can be fully reviewed in Annex IX. Their ideas are partly covered by the topics identified during the observations and are used as input for the sustainability master plan in the following step.

Detailed graphs of the results can be reviewed in Annex VIII²⁵.

²⁴ For the dimension *planet*, the answers are visualised reversely to the question in the survey. In the survey, the statement, e.g. for waste is: *In meinem Bereich gibt es Verbesserungspotentiale bezüglich Abfall*. The full agreement thus means that there is improvement potential. In the Figure it is therefore considered within *Ich stimme gar nicht zu*.

²⁵ For some of the aspects, e.g. efficient processes or personal development, various questions are asked to analyse the improvement potential. In those cases, the average is taken for Figure 30 and 31.

The following materiality matrix combines the results of Figure 30 and Figure 31. Bigger bubbles visualize those aspects that are both important and not sufficiently implemented. The blue contour highlights those aspects that are identified as relevant by the management team. The materiality matrix (Figure 32) shows that most of the relevant aspects identified by the employees are also determined by the top management.



Figure 32: Materiality matrix for *Bäckerei Lyck* (own graph)

The following aspects, initially not included in the relevant topics for the management team, are considered in the sustainability master plan: compliance (*Verordnungen & Richtlinien*), wages (*Gehälter*) and error culture (*Fehlerkultur*).

5.3.6 Sustainability master plan

The sustainability master plan seeks to set objectives and to compile all corrective actions regarding the most relevant sustainability aspects detected by the materiality analysis. Due to lack of time, SMART²⁶ objectives are not defined for *Bäckerei Lyck*. The actions summarized hereafter, however, are rather described as objectives than as corrective actions. A clear action plan, responsibilities and due dates for each point still needs to be defined.

A number of 39 actions are agreed on for 2018, partly during the management team workshop (see Figure 29) and partly subsequently to the result presentation of the employee survey. The full master plan can be reviewed in Annex X.

- **Health & Safety:** All employees get training for machine handling. The machines are maintained by a standard and get an annual electronic check. Health of the employees is supported by special offers for back pain prevention.
- **Personal development:** Sales employees get the possibility to become trainers for new employees (Ausbildungsschein). Personal development interviews take place once a year. A training schedule for all employees is promoted.
- **Compliance:** Employees are asked to give regular feedback on the clear definition of legal processes.
- **Energy:** Motion detectors are installed. Concrete energy saving potentials are detected by accomplishing an on-site tour involving the employees.
- **Transports:** The transport routes are analysed and improved. The possibility to change to e-mobility is analysed. Minimum standards for additional transports to the sales points are established.
- **Waste:** Supplier meetings are established to return packaging to the supplier for reuse. Supplier network is analysed for big pack delivery possibilities. Cooperation with other small bakeries is established to make big pack delivery possible. Customers get price reduction of 2% if they shop without packaging.

²⁶ The abbreviation SMART stands for specific, measurable, achievable, realistic and time-bound objectives.

- **Water:** Usage of rainwater and training in adequate water consumption for production and sales.
- **Material input:** Overproduction is reduced by the activities established (see Chapter 4.3.1, Figure 21). Leftovers of flour are no longer disposed of but are filtered and reused for the next shift. Cleaning products are replaced by ecologically alternatives. A deposit system for coffee-to-go mugs is established. Reusable tongs replace disposable plastic gloves.
- **Involvement of employees:** The sales team gets the responsibility to employ their own team members. Employees are involved in investment decisions.
- **Transparency towards customers:** Regular tours for presenting the production site are established. Social media channels are used for product marketing.
- **Efficient processes:** Process innovations are fostered by a regular meeting schedule.
- **Involvement of customers:** Customers are asked for feedback regarding concrete topics, as the elimination of certain products.
- **Wages:** A bonus system for the end of the year is developed.

5.3.7 Sustainability balanced scorecard

To enable a control of the sustainability aspects, quantify the future improvements or detect deviations, a measurement system is established using the sustainability balanced scorecard.

To do so, the strategy for *Bäckerei Lyck* is defined in a first step:

Bäckerei Lyck bietet eine Vielfalt an geschmacklich ausgezeichneten, handwerklich produzierten Bäckereiprodukten an. Gemeinsam mit der persönlichen Kundenberatung setzt sie sich gegenüber preisgünstigeren Bäckereiketten am Kieler Markt durch.

The sustainability balanced scorecard defined thereafter is presented in Figure 33. The four basic perspectives (financial, customer, process, learning and development) each contain results (white boxes) and enablers (grey boxes).

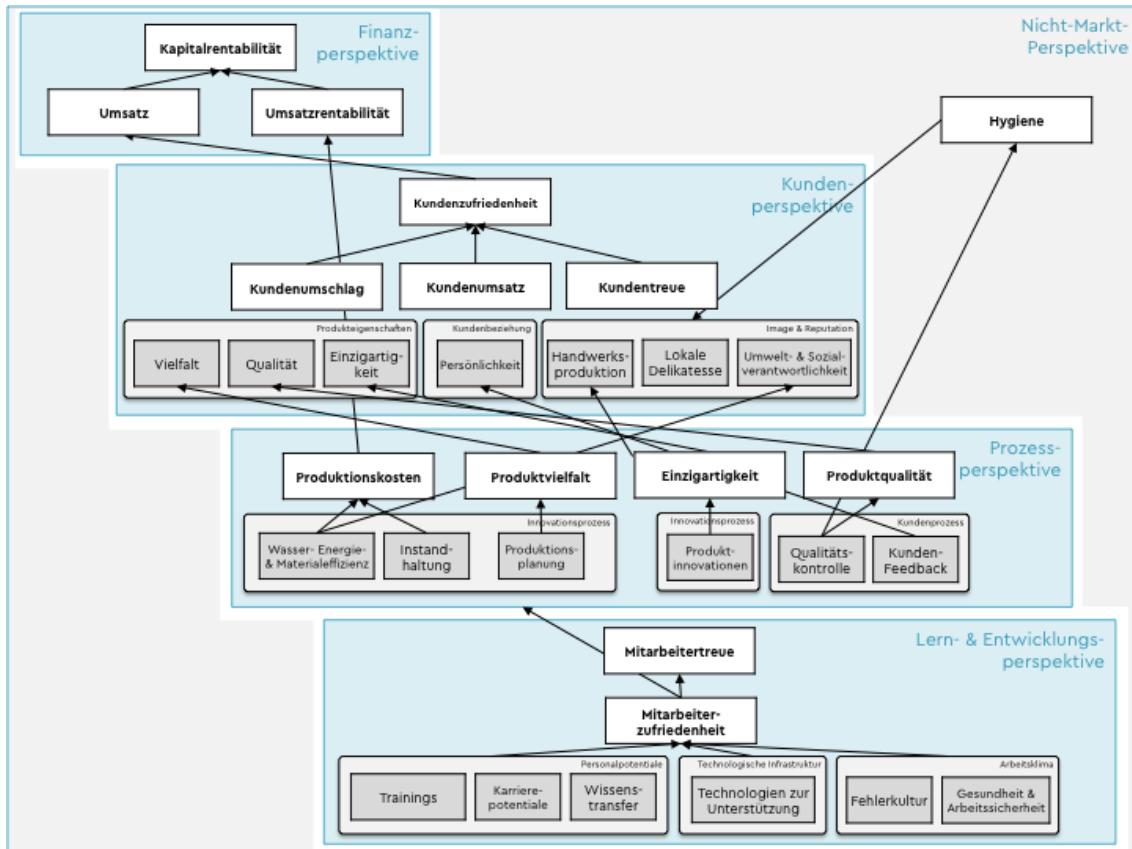


Figure 33: Sustainability balanced scorecard for *Bäckerei Lyck* (own graph)

The relevant sustainability aspects detected with the materiality analysis are used to give a sustainability character to the balanced scorecard: they are crossed with each enabler to build according enabler indicators (as an example see Figure 34). The results are translated into result-oriented indicators.

| KUNDENPERSPEKTIVE | | MENSCH | | | | | | UMWELT | | | | MARKT | |
|---|--|--|--|---|--|--|--|------------------------------------|------------|--|--|-------------------------|--|
| Ergebnisgröße | Leistungstreiber | Arbeitssicherheit & Gesundheit am Arbeitsplatz | persönliche Weiterentwicklung im Unternehmen | Einbindung der Mitarbeiter in Entscheidungen | Transparenz des Unternehmens nach außen | Einbindung der Kunden in Entscheidungen | Energie (Strom & Heizung) | Abfall (Lebensmittel & Verpackung) | Transporte | Wasser-verbrauch | Materialeinsatz für Produktion & Verkauf | Innovation in Produkten | Effiziente Prozesse |
| Kundenzufriedenheit : Kundenumschlag (Anzahl/Filiale) Kundenumsatz (Durchschnittsumsatz pro Einkauf) Kundentreue (% Stammkunden) | Produkteigenschaften: Produktvielfalt | | | | | | | | | | | | Verspätete Lieferungen an die Filialen |
| | Produktqualität | | | | | Abstimmungen über Geschmack neuer Produkte | | Nicht verkaufbare Produkte | | Standard für Wassereinsatz pro Produkt | Natürliche Inhaltsstoffe | | |
| | Einzigartigkeit in Produktion | | | | Einträge in Social-Media Kanälen über Produkte | | | | | | | Neue Produkt-kreationen | |
| | Kundenbeziehung: Handwerksproduktion | | | | Persönlich betreute Kunden über Führungen durch Backstube | | | | | | | | |
| | Image & Reputation: | | | | | | | | | | | | |
| | Lokale Delikatesse | | | Durchführung Back-Events, Presseauftritte offline | | | | | | | | | |
| | Umwelt- und Sozialverantwortlichkeit | | | Kommunikation von Aktivitäten offline / online | Kundenabstimmung über Aktivitäten für Umwelt- und Sozialengagement | | Spenden überriger Lebensmittel an gemeinnützige Organisationen | | | Nutzen von Alternativen für Einwegverpackungen | | | |

Figure 34: Matrix used to build enabler indicators (own graph)

Ten result-oriented indicators and 41 enabler indicators are defined, e.g.:

- **result-oriented indicators:** turnover per customer, production cost per production volume, number of products only available at *Bäckerei Lyck*, average time of employment, number of hygiene-flaws detected in audits
- **enabler indicators:** number of unsold products, percentage of natural ingredients per product, number of production tours accomplished, number of customer involvements in business decisions, percentage of customers that use reusable bags and cups, number of machine repairs, number of trainings accomplished per employee, percentage of employees with accomplished annual development interview

The complete indicator set can be reviewed in Annex XI. The indicators are now adapted to the organisation's strategy and serve as a preparation for the definition of targets to achieve and corrective actions to be accomplished. The latter is necessary to influence the enabler indicators positively. Some possible corrective actions are already outlined in the master plan and in the idea pool of the observation process (Annex IV, V, X).

5.3.8 Improvement meeting process

To enable a long-term change towards sustainable business processes, an adequate involvement of the employees is key. To do so, the following is necessary:

- inform the employees of relevant topics
- involve them in decision-making on e.g. investments
- listen to their ideas and take them into consideration
- let them be responsible for some of the corrective actions
- as a leader, transmit the vision to reach and boost the improvement process

The improvement meeting process developed for *Bäckerei Lyck* (Figure 35) shall support a long-term change process.

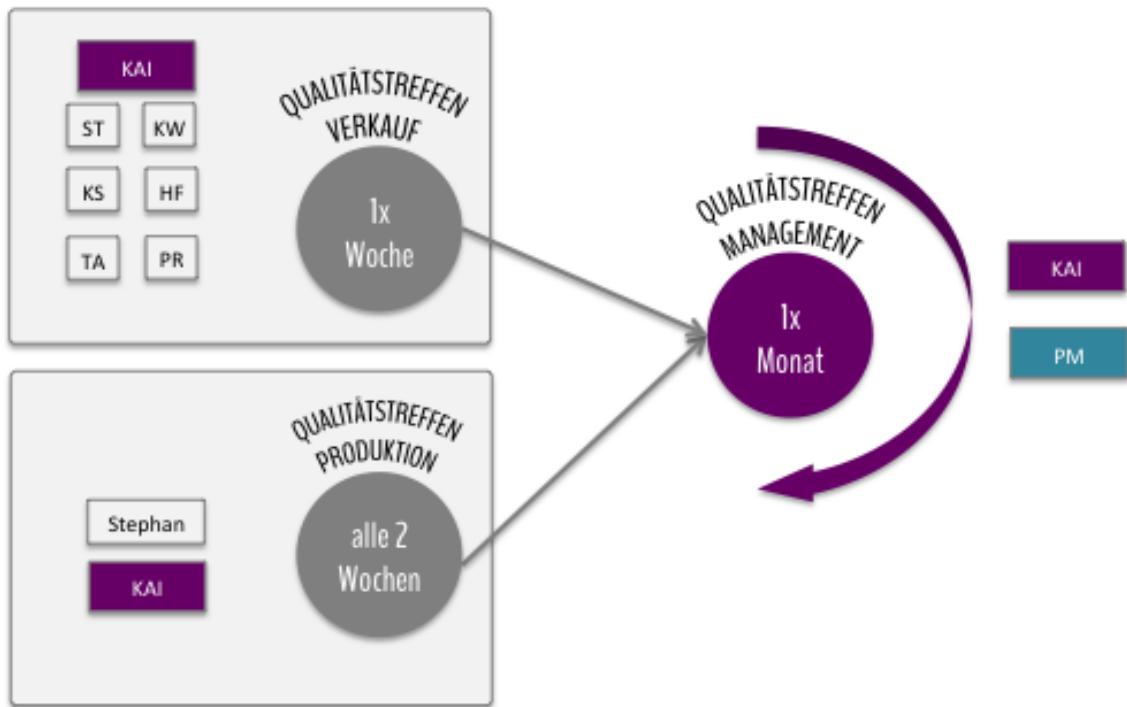


Figure 35: Improvement meeting process for *Bäckerei Lyck* (own graph)

On a weekly basis for the sales points and every two weeks for production, team meeting will take place (Qualitätstreffen). Kai Lyck will lead those meetings and follow the agenda in Figure 36. It covers all relevant sustainability aspects and helps to structure the meetings. On a monthly basis, meetings with an external business consultant (blue box in Figure 35) will take place to assure that the actions agreed on follow the overall business strategy.

- | | |
|---|--|
| 1. Arbeitssicherheit & Gesundheit am Arbeitsplatz Hat sich in der letzten Woche jemand verletzt? Welche Unfall- oder Gesundheitsrisiken haben wir bemerkt? | 6. Materialeinsatz Welche Materialien haben wir besonders stark verbraucht? |
| 2. Verordnungen & Richtlinien Welche Aspekte bezüglich Hygiene und Sauberkeit müssen wir verbessern? | 7. Wasser Bei welchem Prozess brauchen wir besonders viel Wasser? |
| 3. Persönliche Entwicklung Zu welchem Thema brauchen wir eine Schulung? | 8. Effiziente Prozesse Welche Aktivitäten nehmen viel Zeit in Anspruch? Bei welchen Aktivitäten muss man häufiger unterbrechen? Welche Prozesse machen wir alle unterschiedlich? |
| 4. Energie Welche Heizung- bzw. Stromfresser haben wir bemerkt? | 9. Fehler Was ist diese Woche schief gelaufen? Welche Fehler sind uns passiert? |
| 5. Abfall Welcher Abfall ist besonders ins Auge gestochen? | 10. Transparenz Wie können wir unsere Kunden mehr ins Tagesgeschäft einbinden? Was müssen wir besser nach außen kommunizieren? |

Figure 36: Agenda for the improvement meetings (own graph)

On the one hand, the meetings are used to transmit information to the employees. On the other hand, they enable the definition of corrective actions for improvement by the employees themselves. With the help of a corrective plan (Figure 37), actions are well defined, having a due date and a responsible person. Thereby, employees can be directly involved for the accomplishment of the actions. The status line helps to follow up existing corrective actions and to continuously inform on the implementation status.

Maßnahmenplan Qualitätstreffen Filiale -----

| Nr. | Problem | Häufigkeit (1-2-3) | Idee | Verantwortung | Bis Wann | Status |
|-----|---------|-----------------------|------|---------------|----------|--------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Figure 37: Action plan for improvement meetings (own graph)

5.4 Summary

The consulting process applied in practice for the medium-sized bakery *Bäckerei Lyck* reveals potential for improvement in all three sustainability dimensions *people*, *planet* and *profit*. The results gained from the first step of the process, the management team interviews, are reflected throughout the whole consulting period: The overproduction of bakery products, represented by the sustainability aspect material input, can be stated as most important improvement potential for ecologic sustainability. For the dimension *people*, the aspects health and safety, as well as personal development are proven to be the most relevant ones to be improved. Efficient processes represent the main obstacle for the *profit* dimension. Whereas the employee survey shows that the dimensions *people* and *profit* are more important to them than the *planet* dimension, it also reveals that there is similar improvement potential for all three dimensions. The same is observed during the DILO exercises. However, there are some of the

sustainability aspects that were mentioned significantly less than others in the analysis, such as human rights, community support, equal possibilities, diversity for the *people* dimension and CO₂ emissions, biodiversity and product impact for the *planet* dimension. It can also be observed that the aspects equal possibilities and diversity are rated as *well implemented* by approximately 70% of the employee survey participants. The aspect human rights is neglected for most of the activities due to its matter of course for the owner of the bakery.

For all the observed and analysed improvement potentials, ideas are developed based on the best practice catalogue of *Märkisches Landbrot* and on the ideas of employees. As the sales and production processes are at the centre of the analysis, most of the improvement ideas are related to those business areas. However, also for the bordering areas, such as logistics, procurement, marketing or facility management, ideas are developed. A master plan with objectives and corrective actions is defined for those sustainability aspects that are identified as relevant for the organisation and its' stakeholders. The triple-bottom-line *people*, *plane* and *profit* is then also used to build an integrative indicator system adapted to the organisation's business strategy. An improvement meeting process is initiated involving all hierarchical levels of the organisation to support a long-term improvement of the material sustainability aspects.

5.5 Internal discussion

After applying the consulting process at *Bäckerei Lyck*, the owner, Kai Lyck, was asked to give feedback to verify whether the process designed is marketable for SMEs²⁷. To gain useful information on the strengths and weaknesses of the process, the five-finger-feedback method was applied. The following questions were asked; one question standing for each finger: *What did you like? What did you learn? What did you not like? What did you wish for during process? What do you think should come now?*

²⁷ The full interview can be listened to in the attached hard drive.

Kai Lyck voiced his appreciation of the constant support and access to a personal contact for questions. Also, he noticed that the individual interviews and employee surveys initiated a thought process about what to change in the processes of the organisation:

„Toll war die persönliche Betreuung durch dich; dass wir immer einen persönlichen Ansprechpartner hatten; [...]; dass man immer wieder nochmal informiert wird, wenn man viel Input hat [...]. Dann, dass du die Denkprozesse angestoßen hast im ganzen Betrieb. Das hat mit der Mitarbeiterbefragung zu tun [...] und auch mit den persönlichen Gesprächen im Führungskreis. Dass du uns alle befragt hast in einzelnen Positionen, [...] das hat insgesamt bei allen etwas bewirkt. [...] Der ganze Betrieb hat sich gedreht. Das war sehr gut.“ (Lyck 2018)

He stated to have learned to notice improvement potentials that the team is unable to see during their work routine, as they are often stuck in very detailed problems. Moreover, he learned that, as the managing director, he needs to think more on a global organisational level:

„Ich habe [...] gelernt, dass wir hier auch Scheuklappen haben und dass wir (uns) in unserem Denken ‚das haben wir immer so gemacht‘ [...] ganz schwerlich bewegen [...]. Man ist dann so gefangen in diesem ‚klein-klein‘ und das führt dazu, dass man den Blick für das Grobe verliert und dazu hast du uns jetzt eben ein bisschen die Augen geöffnet. Das habe ich gelernt: Man darf nicht stehen bleiben; man muss wirklich in alle Richtungen denken [...]. Das habe ich mir auch für die Zukunft mitgenommen. Dieser Prozess ist noch nicht beendet. Das muss weitergehen.“ (Lyck 2018)

Mr. Lyck stated that there was nothing he did not appreciate about the process:

„[...] Du hast weder meine Zeit geraubt, noch die Zeit meiner Mitarbeiter. [...] Das Ganze war durchaus im Ansatz erfolgreich und ich kann nichts negativ sagen. Kein falscher Denkansatz, du hast niemanden vor den Kopf gestoßen. Alles gut.“ (Lyck 2018)

However, he mentioned that he would have wished for a stronger follow-up control of the improvement actions to enhance a faster and better implementation of the corrective actions defined:

„[...] Da hätte ich mir [...] gewünscht, dass du ein bisschen aktiver geworden wärst und auch mal erkannt hättest ich bin [...] nicht so engagiert dabei [...]. Mal ein bisschen

ruckeln, damit wir die Prozesse, die wir angestoßen haben, auch zu Ende bringen. Wir haben vieles angefangen, aber nicht zum Abschluss gebracht.“ (Lyck 2018)

Finally, to complete the consulting process, Mr. Lyck expressed his concern about the lack of a marketing concept to follow up with the actions.

„[...] Jetzt müsste eigentlich Marketing kommen. Wenn wir jetzt [...] sagen: Wir sind ‘das und das’ und [...] wir stehen für ‘das und das’. Das muss dann nach außen transportiert werden. Das fehlt jetzt noch. Das ist (etwas), das wir offen gelassen haben. Sei es über Internet oder sei es über Printmedien. Das wir auch mal in die Zeitung kommen zum Beispiel. [...]“ (Lyck 2018)

In addition to the five-finger-feedback, he was asked on the different consulting methods applied in the process. In detail, whether he would recommend the applied methods for the SME environment or if he evaluates them as unsuitable. Summarising, he recommended the management team interviews, the process analysis, the customer and the employee survey as well as the improvement meeting process as effective methods. Regarding the process observation, he stated that he did not directly feel the effect: “Das war ja auch eher für dich wichtig, um die Prozesse zu verstehen und die nächsten Schritte vorzubereiten.”(Lyck 2018) He did not perceive the indicator system as important. However, Mr. Lyck stated that he personally dislikes measuring but that for other SMEs the sustainability balanced scorecard might be a helpful tool. He considered the sustainability master plan too complex and too general. He would prefer to have the objectives broken down into smaller, more achievable activities.

To conclude, he highlighted that the organisation would not have achieved this level of corporate sustainability without applying the consulting approach:

„Wirklich eine gute Sache. Wir wären alleine nie so weit gekommen und hätten alleine auch nicht diesen Ansatz gehabt.“ (Lyck 2018)

6 Discussion and Outlook

The purpose of the present thesis was to analyse, how a sustainability-consulting concept should be designed to make it applicable for SMEs. Therefore, a literature review on different management frameworks was performed, followed by a benchmark analysis of the bakery *Märkisches Landbrot*. The developed consulting process then was implemented at the medium-sized bakery *Bäckerei Lyck* within a period of six months.

The literature based analysis of general management frameworks that find their application in sustainability consulting showed that a dogmatic implementation is not suitable.

Firstly, the requirements for an EMS certification, such as ISO 4001:2015 or EMAS, are evaluated as too bureaucratic and time consuming. Even though the EMAS offers a useful approach for environmental management and improvement processes, SMEs mostly shy away from rigorous audits. Furthermore, the environmental dimension is at the focus for EMSs. However, for SMEs, an integrative approach is proven to be important: Due to few management resources, those often cannot be sacrificed for an isolated sustainability management. Sustainability aspects instead should to be merged with traditional management perspectives, such as finances or customers.

Secondly, the lean management philosophy proved to be generally applicable. However, sustainability aspects need to be integrated into this mainly efficiency orientated management framework.

The EFQM excellence model, as third analysed management system, provides a useful approach for the integration of sustainability and traditional management concepts. The model as is however, is too complex for the application in an SME environment and focuses too much on the achievement of a certain level for the different excellence categories.

Despite their weaknesses for an application in an SME environment, the general principles of the presented management frameworks were observed as essential for an effective consulting process. These are: process orientation, measurability, continuous improvement, people involvement and transparency. Their application can be considered as mostly successful. The principle of measurability, however, still showed a weak implementation, as the developed measuring system was not fully accepted by the managing director. Moreover, not every corrective action was measured in terms of its savings potential. Transparency of the corrective actions towards the employees is initiated with the standardized meeting process. In the eyes of the managing director, however, guidelines for the communication of environmental and social efforts towards the public are still missing.

The benchmark interview with the managing director of the bakery *Märkisches Landbrot* showed clearly that small steps are necessary to create a sustainability management concept attractive for SMEs and that an adaptation of the activities to the organisation's environment is crucial. The best practice catalogue developed for *Märkisches Landbrot* was helpful for the workshop moderation and the process observations, where improvement ideas needed to be developed.

The methods chosen for the eight-stage consulting process have their roots in the previously presented management frameworks. Their implementation can be considered as mostly successful:

The management team interviews, as first method, helped to build a trustful relationship with all key figures of the organisation. Kai Lyck states that for example the production team leader now is much more proactive in proposing solutions and takes his role as leader more seriously. In addition to that, the team interviews provided a good overview of the sustainability challenges to be confronted within the organisation.

The process observations, as second step in the process, were helpful for the preparation of the subsequent consulting activities. Also, the process observations

appeared to increase the acceptance of the consultant, since the employees could see that there is a real interest in the functioning of their processes. However, the results of the observations should be harnessed stronger to demonstrate to the management team that there are some aspects that need to be changed immediately to improve organisation's sustainability.

The process analysis, the third consulting method applied, strongly involved the production team in thinking of sustainability potentials and elaborating own ideas for improvement. Thereby, the acceptance of the defined actions could be guaranteed. Some quick wins, such as the change from one-litre milk packages to big containers were implemented immediately. However, the implementation of the majority of the actions defined is still on going and need to be followed up on.

The customer survey, as fourth step in the process, can be considered as a successful stakeholder involvement activity as almost 350 customers participated within one week. This indicates a high customer interest in the participation in changes towards more environmentally friendly processes at *Bäckerei Lyck*. One important learning from the survey was that the customers accept less product variety shortly before closing, if, thereby, less food waste is produced. This helped to reinforce the implementation of the actions defined to reduce overproduction.

The fifth step in the process, the materiality analysis, was useful to gain a big picture of which sustainability aspects are relevant for the organisation, including the employees as a key internal stakeholder group, next to the customers. The employee survey, as part of the materiality analysis, enabled the involvement of all employees in the consulting process. However, the participation was rather low and only few participants contributed to the improvement proposals. A more effective method of involving all the employees, therefore, needs to be considered. Despite that, the results showed that most of the aspects relevant for the managing team, also were considered as important by the employees. This was helpful in the development of a master plan accepted by the whole organisation.

The master plan, as sixth consulting tool, covered all relevant sustainability aspects by defining corresponding corrective actions. A conflict could be observed between limited time resources and useful workshop output. Due to time limits, the corrective actions were not precisely enough defined. Thereby, the outcome of the workshop was not sufficiently helpful for the organisation.

The seventh step, the sustainability balanced scorecard, was prepared mostly without the participation of the analysed organisation. Although the indicators were linked to the strategy of the organisation and the results were agreed upon with the managing director, they most probably will not be used as management support subsequently to the consulting process. As measurement systems are, nevertheless, important for the detection of process deviations, such as increased energy or material consumption, the methodical approach needs to be reconsidered.

The last consulting step, the continuous improvement process in the form of structured meetings and according improvement plans was well accepted by the analysed organisation, as it was co-developed with the management team. It can be considered as the most important tool for long-term improvement towards more sustainability within the organisation. The meeting process, however, was only established so far. As stated by the management director, here, further consulting support might be necessary. Due to limits in time, an additional consulting support for the efficient implementation of the meetings was not possible.

In conclusion, the consulting process developed within this thesis has been proven to be applicable to SMEs. However, some changes in the application of the methods are necessary to cause a bigger impact both regarding the organisational processes and regarding sustainability.

Moreover, this process should be considered as initiation for the development of corporate sustainability. Corrective actions with substantial environmental impact, such as the construction of a heat recovery plant for the ovens, were so far not accepted by the organisation. Therefore, an additional consulting phase in the form of

a regular support on-site, for example for the efficient and effective performance of continuous improvement processes, could be developed. Also, trainings of all employees in sustainability topics might be integrated in the process to achieve a stronger anchoring of corporate sustainability in the organisation. Lastly, also indirect processes, namely supplier and customer processes, would need to be addressed in a next step to holistically improve the corporate sustainability of the company.

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Annex

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Annex I: Linkage of sustainability dimensions *people*, *planet* and *profit* with DNK criteria and GRI G4 Reporting Indicators

| Transparency | n/a (general aim of DNK and GRI) | | | | | | |
|------------------------|--|--------------------------------------|--|---------------|---------------------|--|--|
| Stakeholder Engagement | Kriterium 9: Beteiligung von Anspruchgruppen | Stakeholder Engagement | Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns | G4-27 | | | |
| Innovation | Kriterium 10: Innovations- und Produktmanagement | Customer Health and Safety | PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES FOR WHICH HEALTH AND SAFETY IMPACTS ARE ASSESSED FOR IMPROVEMENT | G4-PR1 | | | |
| | | Products and Services | EXTENT OF IMPACT MITIGATION OF ENVIRONMENTAL IMPACTS OF PRODUCTS AND SERVICES | G4-EN27 | | | |
| PEOPLE | | DNK criteria | GRI Integrated Reporting Aspect | PLANET | DNK criteria | GRI Integrated Reporting Aspect | GRI G4 Indicator |
| Diversity | Kriterium 15: Chancengerechtigkeit | Employment | TOTAL NUMBER AND RATES OF NEW EMPLOYEE HIRES AND EMPLOYEE TURNOVER BY AGE GROUP, GENDER AND REGION | G4-LA3 | Material input | Materials | MATERIALS USED BY WEIGHT OR VOLUME |
| | | Diversity & Equal opportunities | COMPOSITION OF GOVERNANCE BODIES AND BREAKDOWN OF EMPLOYEES PER EMPLOYEE CATEGORY ACCORDING TO GENDER, AGE GROUP, MINORITY GROUP MEMBERSHIP, AND OTHER INDICATORS OF DIVERSITY | G4-LA22 | | Materials | PERCENTAGE OF MATERIALS USED THAT ARE RECYCLED INPUT MATERIALS |
| Health & Safety | Kriterium 14: Arbeitnehmerrechte | Occupational Health & Safety | PERCENTAGE OF TOTAL WORKFORCE REPRESENTED IN FORMAL JOINT MANAGEMENT–WORKER HEALTH AND SAFETY COMMITTEES THAT HELP MONITOR AND ADVISE ON OCCUPATIONAL HEALTH AND SAFETY PROGRAMS | G4-LAS | Energy consumption | Energy | ENERGY CONSUMPTION WITHIN THE ORGANIZATION |
| | | Occupational Health & Safety | TYPE OF INJURY AND RATES OF INJURY, OCCUPATIONAL DISEASES, LOST DAYS, AND ABSENTEISM, AND TOTAL NUMBER OF WORK-RELATED FATALITIES, BY REGION AND INDUSTRY | G4-LAB | | Energy | ENERGY CONSUMPTION OUTSIDE OF THE ORGANIZATION |
| | | Occupational Health & Safety | HEALTH AND SAFETY TOPICS COVERED IN FORMAL AGREEMENTS WITH TRADE UNIONS | G4-LAB | Water consumption | Water | WATER SOURCES SIGNIFICANTLY AFFECTED BY WITHDRAWAL OF WATER |
| | | Customer Health and Safety | PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES FOR WHICH HEALTH AND SAFETY IMPACTS ARE ASSESSED FOR IMPROVEMENT | G4-PR1 | | Biodiversity | OPERATIONAL SITES OWNED, LEASED, MANAGED IN, OR ADJACENT TO, PROTECTED AREAS AND AREA OF HIGH BIODIVERSITY VALUE OUTSIDE PROTECTED AREAS |
| Employee development | Kriterium 16: Qualifizierung | Training & Education | AVERAGE HOURS OF TRAINING PER YEAR PER EMPLOYEE BY GENDER, AND BY EMPLOYEE CATEGORY | G4-LA9 | | Biodiversity | DESCRIPTION OF SIGNIFICANT IMPACTS OF ACTIVITIES, PRODUCTS, OR SERVICES ON BIODIVERSITY IN PROTECTED AREAS AND AREAS OF HIGH BIODIVERSITY VALUE OUTSIDE PROTECTED AREAS |
| | | Training & Education | PROGRAMS FOR SKILLS MANAGEMENT AND LIFELONG LEARNING THAT SUPPORT THE CONTINUED EMPLOYABILITY OF EMPLOYEES AND ASSIST THEM IN MANAGING CAREER ENDS | G4-LA10 | | Biodiversity | HABITATS PROTECTED OR RESTORED |
| Equal possibilities | Kriterium 15: Chancengerechtigkeit | Equal Remuneration for Women and Men | RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN BY EMPLOYEE CATEGORY, BY SIGNIFICANT LOCATION OF OPERATION | G4-LA33 | | Emissions | DIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 1) |
| | | Diversity & Equal opportunities | COMPOSITION OF GOVERNANCE BODIES AND BREAKDOWN OF EMPLOYEES PER EMPLOYEE CATEGORY ACCORDING TO GENDER, AGE GROUP, MINORITY GROUP MEMBERSHIP, AND OTHER INDICATORS OF DIVERSITY | G4-LA32 | | Emissions | INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 2) |
| Community support | Kriterium 18: Gemeinwesen | Local communities | PERCENTAGE OF OPERATIONS WITH IMPLEMENTED LOCAL COMMUNITY ENGAGEMENT, IMPACT ASSESSMENTS, AND DEVELOPMENT PROGRAMS | G4-SO1 | GHG emissions | Emissions | OTHER INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 3) |
| | | Local communities | OPERATIONS WITH SIGNIFICANT ACTUAL AND POTENTIAL NEGATIVE IMPACTS ON LOCAL COMMUNITIES | G4-SO2 | | Emissions | GREENHOUSE GAS (GHG) EMISSIONS INTENSITY |
| Compliance | Kriterium 20: Gesetzes- und richtlinienkonformes Verhalten | Anti-corruption | TOTAL NUMBER AND PERCENTAGE OF OPERATIONS ASSESSED FOR RISKS RELATED TO CORRUPTION AND THE SIGNIFICANT RISKS IDENTIFIED | G4-SO3 | | Emissions | REDUCTION OF GREENHOUSE GAS (GHG) EMISSIONS |
| | | Anti-corruption | COMMUNICATIONS REGARDING ANTI-CORRUPTION POLICIES AND PROCEDURES | G4-SO4 | | Emissions | EMISSIONS OF OZONE-DEPLETING SUBSTANCES (ODS) |
| | | Anti-competitive Behavior | TOTAL NUMBER OF LEGAL ACTIONS FOR ANTI-COMPETITIVE BEHAVIOR, ANTI-TRUST, AND MONOPOLY PRACTICES AND THEIR OUTCOMES | G4-SO9 | | Emissions | NOX, SOX, AND OTHER SIGNIFICANT AIR EMISSIONS |
| | | Ethics and Integrity | Describes the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics | G4-56 | | Effluents and Waste | TOTAL WATER DISCHARGE BY QUALITY AND DESTINATION |
| Human Rights | | Investment | TOTAL NUMBER AND PERCENTAGE OF SIGNIFICANT INVESTMENT AGREEMENTS AND CONTRACTS THAT INCLUDE HUMAN RIGHTS CLAUSES OR THAT UNDERWENT HUMAN RIGHTS SCREENING | G4-HR1 | | Effluents and Waste | TOTAL WEIGHT OF WASTE BY TYPE AND DISPOSAL METHOD |
| | | Assessment | TOTAL NUMBER AND PERCENTAGE OF OPERATIONS THAT HAVE BEEN SUBJECT TO HUMAN RIGHTS REVIEWS OR IMPACT ASSESSMENTS | G4-HR9 | Waste | Effluents and Waste | TOTAL NUMBER AND VOLUME OF SIGNIFICANT SPILLS |
| | Kriterium 17: Menschenrechte Kriterium 14: Arbeitnehmerrechte | Supplier Human Rights Assessment | SIGNIFICANT ACTUAL AND POTENTIAL NEGATIVE HUMAN RIGHTS IMPACTS IN THE SUPPLY CHAIN AND ACTIONS TAKEN | G4-HR10 | | Effluents and Waste | WEIGHT OF TRANSPORTED, IMPORTED, EXPORTED, OR TREATED WASTE SHIPPED HAZARDOUS UNDER THE TREATY OF THE MARSHAL LAW CONVENTION2 ANNEX I, II, III, AND VII, AND PERCENTAGE OF TRANSPORTED WASTE SHIPPED INTERNATIONALLY |
| | | Supplier Human Rights Assessment | SIGNIFICANT ACTUAL AND POTENTIAL NEGATIVE HUMAN RIGHTS IMPACTS IN THE SUPPLY CHAIN AND ACTIONS TAKEN | G4-HR11 | | Effluents and Waste | IDENTITY, SIZE, PROTECTED STATUS, AND BIODIVERSITY VALUE OF WATER BODIES AND RELATED HABITATS SIGNIFICANTLY AFFECTED BY THE ORGANIZATION'S DISCHARGES OF WATER AND RUNOFF |
| | | Non-discrimination | TOTAL NUMBER OF INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN | G4-HR3 | Product impact | Products and Services | EXTENT OF IMPACT MITIGATION OF ENVIRONMENTAL IMPACTS OF PRODUCTS AND SERVICES |
| | | | | | | Products and Services | PERCENTAGE OF PRODUCTS SOLD AND THEIR PACKAGING MATERIALS THAT ARE RECLAIMED BY CATEGORY |
| | | | | | | Transport | SIGNIFICANT ENVIRONMENTAL IMPACTS OF TRANSPORTING PRODUCTS AND OTHER GOODS AND MATERIALS FOR THE ORGANIZATION'S OPERATIONS, AND TRANSPORTING MEMBERS OF THE WORKFORCE |
| | | | | | | Transport | PROPORTION OF SPENDING ON LOCAL SUPPLIERS AT SIGNIFICANT LOCATIONS OF OPERATION |
| | | | | | | | G4-EC9 |

Annex II: Best practice catalogue for *Märkisches Landbrot*

| PROCESSES | |
|--------------------------|--|
| Transparency | <ul style="list-style-type: none"> annual audits through EMAS, including report environmental balance sheet establishment of environmental goals concerning environmental, social and economic aspects establishment of numerous electricity and water counters annual publication of GWÖ and GRI report publication of teaching book about how to calculate the Product Carbon Footprint publication of all results, reports and indicators online |
| Innovation | <ul style="list-style-type: none"> regular team meetings (Quality, Sales, Production, Drivers) to gather problems and ideas and to review the status of existing projects cooperation with universities to do scientific research and to gather improvement ideas (e.g. development of Product Carbon Footprint for every product) exchange with other bakeries through invitation of other bakers to participate in their production public tours in production site are used to collect feedback and ideas |
| Involvement of suppliers | <ul style="list-style-type: none"> Runder Tisch Getreide (round table with farmers) to jointly establish trade conditions annual farmer visits by managing director and quality responsible |
| Involvement of employees | <ul style="list-style-type: none"> making investment decisions involving all employees affected all employees have the possibility to autonomous orders for smaller maintenance issues shift schedule published via intranet, decisions on shift planning involving baker annual employee survey about satisfaction regarding personal development, salaries, communication, team work, the company in general and the activities ecological proposal system (part of EMAS) with possibilities of bonus payment (evaluation of ideas by criteria ecology, feasibility, costs, implementation) |
| involvement of customers | <ul style="list-style-type: none"> reclamation process to give structured feedback on product quality proposals on new product ideas are covered by the bread of the month: if positive evaluation, inclusion in product catalogue possibility for consumers to calculate the carbon footprint of their purchase online regular public tours through production site |
| PEOPLE | |
| Diversity | <ul style="list-style-type: none"> free German courses for people with migratory background job description always for both female and male |
| Health & Safety | <ul style="list-style-type: none"> free working shoes given to employees if wanted height-adjustable tables for office employees free back pain prevention courses established maximum weight for flour sacks (35kg) system to suck up flour dust in various spots in the production area for better air quality baking tins with teflon layer for almost every product to reduce physical exertion free demeter food for all employees in the recreation areas |
| Employee development | <ul style="list-style-type: none"> annual personal development interviews with each employee rotation of activities among baker team participation of office employees in production and in delivery once a year management trainings in soft skills by external trainer training schedule for all employees |
| Equal possibilities | <ul style="list-style-type: none"> offered company apartments at biking distance from the company renunciation of temporary work employees code of conduct against discrimination active works council possibility of part-time employment for all employees possibility of work at home for office employees possibility of non-paid leave flat hierarchical structure |
| Community support | <ul style="list-style-type: none"> bread price reduction for kindergartens and homes for senior citizens "museum bakery" with regular tours for interested people donations for social projects in the immediate surroundings of the production site, projects that support ecological agriculture and educational projects in Nepal and Africa delivery of overproduced breads to several social projects (Tafel etc.) free bread offer to support social events in case of death of the company owner, the company will be transformed into a foundation |
| Compliance | <ul style="list-style-type: none"> annual audits by EMAS support by external consultants for quality and hygiene online publication of protocols of round tables with farmers training of employees in quality, hygiene etc. |
| Human Rights | <ul style="list-style-type: none"> inclusion of human rights in supplier and investment decisions annual anonymous voting by farmers to confirm <i>Märkisches Landbrot</i> to be "fair" |

| PLANET | |
|--------------------|---|
| Material input | <ul style="list-style-type: none"> solely use of biological food resources (mainly demeter, without pesticides, genetically manipulated species, hybrid cereal species) IT purchasing decisions taking into account eco-labels (Blauer Engel, TCO, energystar) usage of cleaning products with eco-label recycling paper for office work recycling toilet paper |
| Energy consumption | <ul style="list-style-type: none"> full insulation of the whole building installation of thermo-fuel ovens with heat recovery plants installation of photovoltaic conversion plants 100% ecological electricity installation of dishwasher for bread pallets usage of LEDs instead of energy-saving bulbs installation of motion sensors installation of air filter to use hot air in production areas for warehouse heating |
| Water consumption | <ul style="list-style-type: none"> installation of a company-owned well: higher energy-efficiency due to short water transport, better water quality (reduction of metal-ions, medicine remains) installation of rain water recovery plant for bathrooms and garden watering |
| Biodiversity | <ul style="list-style-type: none"> promotion of traditional cereal species through cooperation with farmers solely use of ecological cereals: decrease of species loss on agricultural sites promotion of open source seeds greenery of roof tops |
| GHG emissions | <ul style="list-style-type: none"> emission-reduced transport: bike for managing director, installation of a solar electricity station, e-quad, e-motorbike CO₂ neutral production through compensation via reforestation projects measurement of all relevant direct and indirect greenhouse gas emissions (CO₂, methane, nitrous oxide) on basis of production volume installation of gas heating for ovens |
| Waste | <ul style="list-style-type: none"> installation of silos for flour instead of sacks usage of reusable big-bags for cereals recycling of organic remnants for fodder production distribution of overproduced breads to schools, kindergarten and several donation projects (Tafel) recycling of overproduced breads by adding them to the dough for new breads |
| Product impact | <ul style="list-style-type: none"> pre-cleaning of cereals to improve quality continuous product quality by daily bread screening |
| Transport | <ul style="list-style-type: none"> cooperation with other bakeries and pastry producers to share delivery cars establishment of cereal procurement priorities regarding regional production promotion of car-sharing among employees establishment of a regional sales structure |
| PROFIT | |
| Capital Structure | <ul style="list-style-type: none"> money transfer via GLS bank high equity capital (50% minimum): independency on banks, high liquidity, ability to invest interest rate of 6% on equity capital for the company owner elimination of bank liabilities and shift liquidity support to stakeholders anthroposophical oriented business: cooperative pricing decisions (cereal round table): prices guarantee continued existence of every part within the value chain |
| Revenue & Costs | <ul style="list-style-type: none"> fair prices for everybody through orientation to the lower bottom line comparing of other ecological bread products donations and sponsoring of at least 5% of earnings after income and taxes prevention of a operating cash flow of more than 15% by investments or wage adaptation online publication of product pricing strategy |
| Profit | <ul style="list-style-type: none"> possibility for employees or suppliers to take out a loan with low or without interest rates distribution of annual bonus in case of positive business results |
| Market presence | <ul style="list-style-type: none"> adaption of minimum salary for logistic service provider to own salary structure acceptance of only one sub-company by logistic service provider employee salaries bound by tariffs of the bakery sector and the tariffs of trade sector (higher salaries than usual in bakery sector) establishment minimum salary for all employees: 10€/h distribution of annual extra payment (13th salary) holidays above average: 30 days reduction of working hours: 38 h per week |

Annex III: Question guide for expert interview

(1) Umweltmanagementsysteme

- Welche Vor- und Nachteile sehen Sie in einer EMAS bzw. ISO Zertifizierung?
- Welche Hindernisse erwarten einen als kleines bzw. mittelständiges Unternehmen bei einer Zertifizierung zu EMAS oder ISO?
- Würden Sie anderen Bäckereien empfehlen, einen Zertifizierungsprozess zu durchlaufen?

(2) Involvierung Stakeholder

- Wie viele Mitarbeiter sind bei Ihnen in die nachhaltige Ausrichtung der Bäckerei eingebunden?
- Wie involvieren Sie Ihre Kunden in Ihre Entscheidungen?

(3) Kontinuierlicher Verbesserungsprozess

- Was meinen Sie, wenn Sie sagen, Sie arbeiten mit den Grundsätzen einer „Lernenden Organisation“? Wie gehen Sie mit Fehlern um, die passieren?
- Können Sie mir genauer beschreiben, wie der Korrektur- und Maßnahmenplan (KMP) aussieht und wie sie damit arbeiten?
- Wie binden Sie Ihre Mitarbeiter in den kontinuierlichen Verbesserungsprozess ein?
- Wie garantieren Sie, dass Ideen tatsächlich umgesetzt werden?
- Auf Ihrer Webseite steht, dass Sie die Qualitätsphilosophie des TQEM verfolgen. Wie wird das methodisch in der Praxis umgesetzt?
- Kennen Sie das EFQM Excellence Model? Arbeiten Sie damit?
- Welche Methoden haben Sie in der Anfangsphase genutzt, um den Produktionsprozess nachhaltig zu gestalten?
- Welche Erfahrungen haben Sie jeweils damit gemacht?
- Arbeiten Sie täglich mit bestimmten Kennzahlen?
- Wie sieht das Kennzahlensystem aus?
- Welche TOP-Aktionen würden Sie anderen Bäckereien vorschlagen, um nachhaltiger zu wirtschaften?

Annex IV: Results of DILO observations at *Bäckerei Lyck*

DILO-Beobachtung Bäckerei Lyck Hauptfiliale (26.07.2017 02:00 bis 7:00 Uhr) und RESTEZ! Koldingstraße (03.08.2017 06:00 bis 11:00 Uhr)

| NACHHALTIGKEITSASPEKT | Nr. | BEOBSCHAUUNG | IDEE |
|--|-----|---|---|
| Einbindung Kunden | 1 | Beschaffung Kundenkennung nur in Restez-Filiale | Produktionsprozess, um auch dort in allen Filialen anbieten |
| | 2 | Kunden wissen nicht, warum bestimmte Produkte nicht immer angeboten werden (Bsp. Nussbrot) | Social Media nutzen, um über Angebotsänderungen zu informieren |
| | 3 | Marketing Handwerksbackstube wird nicht nach außen hin gezeigt | Kinderbildung durch Führungen |
| | 4 | Verkauf hoher Krankheitsstand | In regelmäßigen Teamrunden besprechen, warum hoher Krankenstand, Förderung Einbindung der Mitarbeiter in Entscheidungen |
| | 5 | Verkauf Fehlende Aushilfen für Wochenenden | Inklusion von Geflüchteten fördern (ZBWS, Verteiler Kulturgrenzenlos) |
| | 6 | Produktion Rutschgefahr Treppen & Boden Backstube | Boden anrauen |
| Arbeitssicherheit & Gesundheit am Arbeitsplatz | 7 | Produktion Enzyme frz. Mehlmisschlägen (Xylanase: Aufspaltung pflanzlicher Zellwände, gentechnische Herstellung): auf Mehlmisschlägen verzichten | |
| | 8 | Beschaffung gesundheitsgefährdende Putzmittel: Verschmutzung der Böden | ökologische Reinigungsmittel |
| | 9 | Produktion Lagerung der fertigen Ware: Verbrennungsgefahr | Optimierung Lagerung frischer Produkte |
| | 10 | Produktion Schwierigkeit, hinter Teigmaschinen sauber zu machen | Erstellung Standardzyklus |
| | 11 | Produktion Baguette-Tücher werden nicht regelmäßig gewaschen: Hygienekrisiko | |
| | 12 | Produktion Mehlsacke öffnen: Risiko, dass etwas hineinfällt: Hygienekrisiko | "Mehlsitation" mit Deckel |
| | 13 | Produktion leere Körbe Platz fehlt: Unfallgefahr | Aussonieren, Aufraumen, Standardisieren |
| | 14 | Verkauf Materialien stehen im Weg (z.B. Sachen, die Fahnen mitbringen): Unfallgefahr | Ortskenntnis erforderlich |
| | 15 | Verkauf Materialien stehen im Weg (z.B. Sachen, die Fahnen mitbringen): Unfallgefahr | standardisierte Abstellstellen |
| | 16 | Produktion Teigmischer: Mehl wird zuerst in Sack gefüllt, dann der Sack per Hand in Teigwanne gehoben | Teigmaschine näher am Sack "Schlauch" anbringen |
| Einbindung Mitarbeiter | 17 | Management Uhrabspannung nicht gut kommuniziert | regelmäßige Teammeetings, standardisierte Aushänge (auch online) |
| | 18 | Management Probleme während Schicht (z.B. Fehder für Teigablmashine) werden nicht besprochen | tägliche Schichtbesprechung |
| Persönliche Entwicklung | 19 | Verkauf Fehlende Information für Verkaufsteiler über Abrechnung von Material und Personal | Schulung Verkaufsteiler in betriebswirtschaftlichen Kennzahlen |
| | 20 | Management es finden keine Personalgespräche statt | regelmäßige Personalgespräche mit Geschäftsführer |
| | 21 | Produktion Inhaltsstoffe werden nicht transparent dargestellt | Produktionsprozess erläutern, transparente Schriftung |
| | 22 | Management fehlendes Wissen zu Möglichkeiten von Nachhaltigkeit im eigenen Betrieb | Austausch mit Bäckereien (z.B. Märkte des Landes) |
| Vielzahl der Mitarbeiter | 23 | Verkauf Filialen werden nicht kontrolliert, nicht involviert in Entscheidungen | Etablierung von regelmäßigen Filialbesuchen durch Geschäftsleiter, Aufbau von Teamleiter-Struktur in jeder Filiale |
| Produkt-Impact | 24 | Management Personalmangel Backstube / fehlende Lehrlinien | Aufnahme von Geflüchteten durch Geschäftsleiter, Aufbau von Teamleiter-Struktur in jeder Filiale |
| | 25 | Beschaffung keine biologischen, noch regionale Zutaten für Backwaren | Verwendung von regionalen Produkten für Grundnahrungsmittel (Mehl, Eier, Milch) |
| | 26 | Produktion fehlender Kompostmüll | Müllstationen vervollständigen |
| | 27 | Beschaffung Macarons mit viel Extraverpackung | Nutzung der Verpackung zur Dekoration, Absprache mit Lieferanten |
| Abfall | 28 | Beschaffung Abfallprodukte werden für bauliche Sandwiche etc.), besonders viel Verpackung (Papier + Plastik) | Abfallprodukte für bauliche Sandwiche etc.), besonders viel Verpackung (Papier + Plastik) |
| | 29 | Verkauf überproduzierte Produkte werden weggeschmissen | too good to go, Foodsharing |
| | 30 | Beschaffung Milch aus 11 TetraPaks (20-25l in Restez-Filiale pro Woche) | Milch regional und in großen Mengen beziehen (z.B. Landmolk wie bei Knuust) |
| | 31 | Verkauf Gläser von Marmelade, Honig und Getränken nur einmalig genutzt | Mehrfachverwendung, z.B. für Smoothies |
| | 32 | Beschaffung Verpackung der Zutaten: z.B. Plastikkannister für Malextrakt | Lieferantenkontrolle, Pfandsysteme, Ersatzzutaten |
| | 33 | Beschaffung Einweg-Plastikflaschen | Einweg-Plastikflaschen & Wasser aus der Region |
| | 34 | Entsorgung hochwertige Mehlsäcke werden weggeschmissen | Mehlsäcke als Recyclingmaterial verkaufen |
| Energie | 35 | Produktion Rohstoffe werden nicht in Betracht gezogen | Bewusstsein für ökologische Rohstoffe |
| | 36 | Produktion Energie der Ofen wird nicht genutzt, sondern nach draußen geblasen | Installation Wärmenutzungswannenanlagen |
| | 37 | Gebäude Licht im Lagerraum (Keller) ist dauerhaft an | Bewegungsmelder installieren |
| | 38 | Gebäude Glasbausteine werden Winter feucht | Optimierung Isolierung |
| Materialeinzug | 39 | Beschaffung teure Marmelade aus Frankreich verkauft sich nicht | selbstgemachte Marmelade aus regionalen Früchten anbieten |
| | 40 | Beschaffung Einweg-Pappbecher sind mit Farbe bedruckt | Becher mit einfaches Stempeldruck, Becher aus Recyclingmaterialien: https://www.bioeinweggeschirr.de/Bio-Kaffebecher-200-ml-80-nachhaltig |
| | 41 | Verkauf Hoher Verbrauch an Einweg-Pappbechern | Kunden fragen, ob Becher dazu passen |
| | 42 | Verkauf Plastikbecher für Einweg-Getränke wird oft standardmäßig dazu gegeben | Anreiseystem für eigene Brotdose statt Einwegtütje, süße & "trockene" Produkte zusammen legen |
| | 43 | Verkauf hoher Verbrauch an Papierutensilien | Nutzung von Recyclingpapier |
| | 44 | Beschaffung Toilettenpapier und Handtücher aus frischen Zellstofffasern | Kennzeichnen in jeder Filiale |
| | 45 | Verkauf Anzahl der Retouren sind unbekannt | Einrichtung von Pfandsystem von Mehrwegalternativen |
| | 46 | Beschaffung Törtenerverpackung für Verkauf an Kunden aus hochwertigem Pappkarton | Preise angeleichen: Aufschlag für to-go Getränke |
| Transport | 47 | Verkauf coffee-to-go ist billiger als kaffee zum Inhaus-Verzehr | coffee-to-go ist billiger als kaffee zum Inhaus-Verzehr |
| | 48 | Produktion Verpackung von Teigwaren | Wiederbeschaffung optimieren, Mindestbestellmengen für Nachbestellung festlegen |
| | 49 | Verkauf tempo-Durchgangsware für Abholen von "Lädchen": am Nachmittag: dadurch mehr Retouren von Tagesware | Bestellprozess an Produktion unklar, Überschreitungen von Bestellungen |
| | 50 | Produktion Bestellmengen sind nicht auf Preisen angepasst: Handarbeit bzw. Retouren | Bestellprozess auf 30er Schritte aufzubauen |
| | 51 | Verkauf große Produktveifalt: Retouren | automatisch auf 30er Schritte aufzubauen |
| | 52 | Beschaffung Brochettes (Teigmischung) teuer und Transport aus Frankreich | Sommer- & Winterprodukte, Kommunikation nach außen |
| | 53 | Produktion Kuchen mit Gelatine | Brötchen selber machen |
| | 54 | Beschaffung deli France Altbrotzeit | Verwendung natürlicher Inhaltsstoffe (Agar Agar) |
| | 55 | Produktion produktionsintensive: Plastikverpackung, Geschmack "verfälschung", Energie-intensive Herstellung | Verzichten auf Artikel |
| | 56 | Verkauf häufig werden wenige Mengen in die Filialen transportiert (z.B. 3 Brote) | Verwendung natürlicher Inhaltsstoffe |
| Effizienz | 57 | Verkauf Kassensystem funktioniert nicht | Wortartenstellungen optimieren, Mindestbestellmengen für Nachbestellung festlegen |
| | 58 | Bestellprozess an Produktion unklar, Überschreitungen von Bestellungen | gemeinsamer Workshop zur Optimierung des Bestellsystems |
| | 59 | Produktion Rezeptur nicht ordentlich hinterlegt | Workshop: Bestellsystem vereinfachen |
| | 60 | Produktion Brötchen werden mit Hand gewogen bei 15 statt 30 Stück | Neugestaltung Aufbewahrung Rezepte |
| | 61 | Produktion Weiterverarbeitung der Teige kommt nicht hinterher: Wartezeiten/blaus | Lose auf 30 Stück anpassen, kleinere Losplatten kaufen |
| | 62 | Produktion Produktion: Brötchen werden mit Hand gewogen | Standardmäßig den Teigmacher als Springer einsetzen |
| | 63 | Produktion Sauberung Maschine zum Teig plätzen mit Handfeger: uneffizient, Risiko Ablagerungen | Schichten am Wochenende streichen, auf Freitag verlegen |
| | 64 | Produktion kleine & große Bleche gemeinsam im Wagen | Handfeger |
| | 65 | Logistik Fehlende Zutaten (z.B. Thymian) von Fahrer | Aussonieren, Standardisieren |
| | 66 | Verkauf Wege Verkäuferin | Checkliste über Tablet (aktivierbar über Tablet von verschiedenen Filialen aus) |
| | 67 | Produktion Teigmengen werden per Hand abgewogen, Fehlerrisiko | Kühlschränke und Frühstück tauschen |
| | 68 | Produktion keine Standards/Ordering im Lagermanagement gelöst: Rote Verfallsdatum | automatischer Rechner |
| | 69 | Produktion z.B. 5 Minuten Zeit, Teigmaschine kaputt (Kabel / Membran) | Bestellablaufplanung: 55 Maschinenpark |
| Effizienz, Materialeinsatz | 70 | Produktion Croissants werden in Konditorei gebacken (30min extra-Aufwand, Risiko des Verbrennens) | Industriemaschinen erstellen und Verantwortlichkeiten festlegen |
| | 71 | Produktion Behälter für Zutaten und Teige nicht beschriftet: Fehlerrisiko, keine Rotierung der Mitarbeiter möglich | Verantwortlichkeiten für Croissants festlegen |
| | 72 | Produktion Brochettes ("manchmal" ohne Hefe und Salz | Beschreibung optimieren |
| | 73 | Produktion Teigabfolge nicht standardisiert: Fehlerrisiko, keine Rotierung der Mitarbeiter möglich | Checkliste über Tablet |
| Effizient, Persönliche Weiterentwicklung | 74 | Produktion keine Standards im Layout: Rotation Bäcker nicht möglich | Workshop: Optimierung Visualisierung Teigabfolge (z.B. Tablet, Kärtchen) |
| | 75 | Produktion Lebensmittel vergessen einmal pro Woche, Zutaten aufzutunten | Checkliste für Lehrer |
| | 76 | Produktion Teller sind nicht abwaschbar | Erinnerungsschild, Keller als Spülraum nutzen? |
| | 77 | Produktion elektronische Mühlewaage geht schnell kaputt | Ursachenanalyse, fanglebige Waage |
| | 78 | Produktion Maschinen werden solange genutzt "bis sie kaputt sind" (z.B. aktuell Aufbackofen Sternstraße) ohne | Instandhaltungsaktivitäten |
| Fehlermanagement | 79 | Marketing Fehlende Wirkung nach außen | Social Media, online Marketing, Werbung in Lehrerzeitung, Uni-Klinik > Frühstück auf Weg zur Arbeit, Mittagstisch |
| | 80 | Produktion Frühstück nicht rentabel | Preise Frühstück anheben |
| | 81 | Verkauf Frühstück nicht sichtbar für Kunden | als Sommeraktion platzieren, Karte entsprechend gestalten |
| Gewinne | 82 | Verkauf Milchgetränke unter herkömmlichen Preisen | anpassen Preise Milchgetränke, Verwendung von Bio-Milch oder Landmilch |

Annex V: Results of process analysis at *Bäckerei Lyck*²⁸

Prozessanalyse Produktionsprozess Bäckerei Lyck Ellerbeker Weg 17.08.2017 (08:00 – 9:30 Uhr)

| | | POTENTIAL | IDEE | WIRKUNG | PRIO |
|--------------------|----|--|--|-----------------------------|------|
| ABFALL | 1 | Milch in 1L Kartons | größere Verbände regionaler Milchlieferant | Ablauf Ablauf | |
| | 2 | Kartons ungefaltet | Kartons klein drücken | Ablauf | |
| | 3 | Backpapier wird nur einmal verwendet | Standardisierte Mehrwegverwendung | Ablauf, Materialeinsatz | |
| ENERGIE | 4 | Ofen für 1 Blech in Funktion | kurzfristig: Konditorei, langfristig: Bestellsystem | Ablauf | |
| MATERIAL-EINSATZ | 5 | Elektrowaage geht häufig kaputt | langlebige Waage kaufen: mechanische Waage, Teigmacher fragen | Ablauf, Transport | |
| | 6 | überflüssige Teigmenge (Teige kommen aus Filialen zurück, teilw. Unbrauchbar da nicht abgebacken) | Bestellsystem, Kennzahlen, Schulung für Abbacken | Ablauf, Transport | |
| | 7 | Zustand Gärraum (Raum hat konstante 60-70° und 100% Luftfeuchtigkeit > nicht regulierbar; Boden weicht sich auf, Tür kaputt) | 1. Schulung: Warum muss Wasser abgelassen werden 2. Erinnerungsschild direkt am Gärraum 3. Erinnerungsschild zur Kontrolle | Ablauf, Energie | 1 |
| | 8 | mangelnde Wartung der Maschinen (z.B. Silo, Koma-Anlage, Wasseranlage, Ausrollmaschine) | einen Mitarbeiter 2 Tage / Woche abstellen für Instandhaltung/Reparatur | Ablauf | |
| | 9 | staubige Wände über Silo | Instandhaltungsplan Silo: Stefan | Ablauf | |
| | 10 | Koma-Anlage | Platine austauschen | Ablauf | |
| | 11 | Rollen von Wagen kaputt | Reparatur, Instandhaltungsplan (Ölen) | Ablauf | |
| | 12 | Retouren | Jahreszeiten-Produktion z.B. Nussbrot / Graf-Luckner | Ablauf | |
| | 13 | Retouren | "Strafzahlung" für Überproduktion à la francaise | Ablauf | 3 |
| | 14 | Reinigung mit schädlichem Waschmittel | ökologisch & effektive Alternativen (z.B. Sodasan o.ä.) | | |
| TRANSPORT | 15 | Fahrer fährt mehr als Standard für wenige Backwaren (teilw. 1 Brot) | Packzettel tagesaktuell | Ablauf | |
| | 16 | | Brote von Backstube "oben" nach unten verlegen | Ablauf | |
| | 17 | Handelsware muss in Filialen gefahren werden | direkte Lieferung von Handelsware in Filialen | | |
| ABLAUF | 18 | Wege zwischen Silo und Teigmaschine (doppelte Bewegung) | direkte Führung Mehl zu Teigmaschine (Rohr? Silo umhängen? Maschinen an Silo > Steckdosen ändern? Trichterarm ändern? Vorratswagen umstellen?) | Arbeitssicherheit | 3 |
| | 19 | Wege des Teiges zum Teigtisch | | | |
| | 20 | Zutaten werden per Hand ausgerechnet | Tablet für automatisches ausrechnen > Praktikant für Programmieren | Persönliche Entwicklung | |
| | 21 | Teige müssen aufgrund Wärme mit Eis "gefüttert" werden | Rezepte an Temperatur anpassen | Materialeinsatz | 3 |
| | 22 | Wochenende: Blockade im Ablauf durch Schwarzbrotherstellung | Schwarzbrotmenge für Samstag am Freitag vorbereiten | Gesundheit am Arbeitsplatz | |
| | 23 | Schubladen mit "unbekanntem" Inhalt, Unordnung in Regalen | Standardisierung Schubladen & Regale | Ressourcenverbrauch | 3 |
| | 25 | zu viele verschiedene Formen | Vereinfachung der Formen | Persönliche Entwicklung | |
| | 26 | Wege zum Ofen in Konditorei für Croissants (Risiko: verbrannte Croissants) | Croissants an Konditoren abgeben | Materialeinsatz | |
| | 27 | Brötchenanzahl unpassend auf Presse: müssen per Hand geformt werden | Brötchen auf 30 auf/abrunden | Kommunikation | 2 |
| | 28 | Reinigung der Wannenwagen obwohl nicht in Gebrauch | Eliminierung Wannenwagen | Materialeinsatz | |
| KOMMUNIKATION | 29 | Mehl wird mit Besen weggefegt (Ofen, Abrollmaschine, Tische) | Mehlsauger nutzen | Materialeinsatz | |
| | 30 | Mengen werden während laufender Schicht geändert | an Absprache halten, schnellere Reaktion | Ablauf, Ressourcenverbrauch | 2 |
| | 31 | Packzettel Fahrer und Backinformation stimmen nicht überein | aktuelle Information an Fahrer & Backstube | Transport | 2 |
| WISSENS-MANAGEMENT | 32 | nachträgliche Produktion | Standardisierung Kommunikation: ab welchen Zusatzmengen wird zusätzlich produziert? | Materialeinsatz, Ablauf | |
| | 33 | Teigbesonderheiten (neben Zutaten) für Neulinge nicht zugängig | | Ablauf | |
| | 34 | Teigabfolge unbekannt für Neulinge | Registerkärtchen | Ablauf | |
| | 35 | keine Möglichkeit, Erfahrungen zu sammeln | mehr Personal zum rotieren | Ablauf | 3 |

²⁸ The content of the table has not been changed in lexis or syntax as it is a collection of employee statements and agreed as such.

Annex VI: Customer survey questionnaire for *Bäckerei Lyck*



Seien Sie Teil der Veränderung und schenken Sie uns 3 Minuten Zeit!

1. Was schätzen Sie an Bäckerei Lyck?
(mehrere Antworten möglich)

- die Handwerksproduktion
- den Geschmack
- die Bedienung, die sich Zeit für mich nimmt
- die große Auswahl an Brötchen
- die große Auswahl an Brot
- die große Auswahl an Süßem
- die Nähe von zu Hause/der Arbeit
- den Preis
- die natürlichen Zutaten
- Anderes: _____

2. Wie wichtig ist Ihnen die Produktvielfalt bei Bäckerei Lyck?
(mehrere Antworten möglich)

- Ich gehe vor allem wegen der Produktvielfalt hier einkaufen.
- Ich wäre auch mit weniger Auswahl an Brot zufrieden.
- Ich wäre auch mit weniger Auswahl an Brötchen zufrieden.
- Ich wäre auch mit weniger Auswahl an Süßem zufrieden.

3. Kennen Sie Umweltschutzmaßnahmen von Bäckerei Lyck?

- ja
- nein

Wenn ja, welche?

4. Sind Ihnen Umweltschutzmaßnahmen wichtig?

- ja
- nein

5. Wie wichtig ist Ihnen eine große Vielfalt kurz vor Ladenschluss?

- Mir ist eine große Vielfalt kurz vor Ladenschluss wichtig.
- Weniger Angebot finde ich akzeptabel, wenn dann weniger weggeschmissen wird.

6. Wussten Sie, dass Sie bei Bäckerei Lyck Ihren eigenen Coffee-to-go Becher nutzen können?

- ja
- nein

7. Hätten Sie Interesse an einem Mehrwegbecher bei Bäckerei Lyck?

- ja
- nein

8. Wussten Sie, dass Sie bei Bäckerei Lyck mit Ihrem eigenen Brotbeutel einkaufen können?

- ja
- nein

9. Wie würde Ihnen ein Einkauf bei Bäckerei Lyck noch besser gefallen?

10. Gehen Sie regelmäßig bei Bäckerei Lyck einkaufen?

- ja
- nein

VIELEN DANK FÜR IHR VERTRAUEN
IHR LYCK-TEAM

Annex VII: Employee survey questionnaire for *Bäckerei Lyck*

Liebes Team von Bäckerei Lyck und Restez!

Ich freue mich, dass Sie sich 15 Minuten Zeit nehmen, um uns zu helfen, einen Schritt vorwärts in Sachen Nachhaltigkeit zu tun!

Mit dieser Umfrage möchte ich herausfinden, welche Bereiche der Kategorien **Mensch**, **Umwelt** und **Markt** Ihnen besonders wichtig sind und welche Ideen Sie haben, um uns zu verbessern! Die Umfrage ist selbstverständlich anonym.

Überall, wo die Kreise zu sehen sind, können Sie ankreuzen. Bei Freiflächen können Sie selbst etwas schreiben.

Ich bin gespannt auf die Ergebnisse und bedanke mich für Ihre Offenheit!

Liebe Grüße,
Anja

| MENSCH | | | | |
|--|------------------------------|-----------------------|---------------------------|--------------------------|
| | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
| VIELFALT DER MITARBEITER (Geschlecht, Alter, Internationalität, Menschen mit Behinderung) | | | | |
| In meinem Unternehmen wird die Vielfalt unter den Mitarbeitern gefordert. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass die Vielfalt unter den Mitarbeitern gefördert wird. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Beim Einstellungsspiel neuer Mitarbeiter entscheide ich stets mit. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, bei dem Einstellungsspiel neuer Mitarbeiter mitzudenken. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ARBEITSSICHERHEIT & GESUNDHEIT AM ARBEITSPLATZ | | | | |
| Risiken für Unfälle am Arbeitsplatz werden stets beseitigt. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gesundheit am Arbeitsplatz wird in meinem Unternehmen gefördert. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass Arbeitssicherheit gefördert wird. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass Gesundheit am Arbeitsplatz gefördert wird. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme für mehr Arbeitssicherheit und Gesundheit am Arbeitsplatz ist notwendig: | | | | |
| PERSÖNLICHE ENTWICKLUNG | | | | |
| An wie vielen Trainings durch den Arbeitgeber haben Sie in diesem Jahr teilgenommen? | Anzahl: | | | |
| Zu welchen Themen haben Sie sich in den letzten drei Jahren im Rahmen des Unternehmens weitergebildet? | | | | |
| Ich führe regelmäßig individuelle Entwicklungsgespräche mit meinem Chef durch. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, einen Fortbildungsplan zu haben. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, mich im Unternehmen weiter zu entwickeln. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CHANCEGLEICHHEIT | | | | |
| In meinem Unternehmen bekommen alle Mitarbeiter die gleichen Möglichkeiten. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass alle Mitarbeiter die gleichen Möglichkeiten bekommen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme für mehr Chancengleichheit ist notwendig: | | | | |
| GEMEINWESEN | | | | |
| Die Aktivitäten meines Unternehmens wirken sich immer positiv auf das gesellschaftliche Umfeld aus. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mein Unternehmen setzt sich aktiv für gesellschaftliche Themen ein. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass das gesellschaftliche Umfeld durch mein Unternehmen aktiv gefördert wird. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme zur Förderung des gesellschaftlichen Umfeldes ist notwendig: | | | | |
| VERORDNUNGEN UND RICHTLINIEN | | | | |
| Ich werde regelmäßig über die geltenden Verordnungen und gesetzlichen Richtlinien informiert. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Alle gesetzlichen Verordnungen und Richtlinien werden in meinem Unternehmen stets eingehalten. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist wichtig, dass ich über geltende Verordnungen und Richtlinien regelmäßig informiert werde. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme für stärkeres Einhalten von Verordnungen und Richtlinien ist notwendig: | | | | |

UMWELT

| MATERIALEINSATZ | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|--|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| In meinem Bereich werden Optimierungen zum Materialeinsatz regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich gibt es Verbesserungspotentiale im Materialeinsatz. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass der Materialeinsatz in meinem Unternehmen reduziert wird. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, um den Materialeinsatz in meinem Bereich zu reduzieren: | | | | |

| ENERGIE | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|---|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| In meinem Bereich werden Optimierungen zum Stromverbrauch regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich werden Optimierungen zur Heizenergie regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich gibt es Verbesserungspotentiale im Energieverbrauch. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass der Energieverbrauch in meinem Unternehmen reduziert werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, um den Energieverbrauch in meinem Bereich zu reduzieren: | | | | |

| WASSER | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|--|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| In meinem Bereich werden Optimierungen zum Wasserverbrauch regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich gibt es Verbesserungspotentiale im Wasserverbrauch. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass der Wasserverbrauch in meinem Unternehmen reduziert werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, um den Wasserverbrauch in meinem Bereich zu reduzieren: | | | | |

| BIODIVERSITÄT | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|--|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| Die Aktivitäten meines Unternehmens wirken sich positiv auf die biologische Vielfalt aus. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mein Unternehmen fördert aktiv die biologische Vielfalt. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass die biologische Vielfalt von meinem Unternehmen aktiv gefördert wird. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme zur Förderung der biologischen Vielfalt ist notwendig: | | | | |

| CO2 EMISSIONEN | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|--|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| In meinem Bereich wird die Reduktion von CO2-Emissionen regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich gibt es Verbesserungspotentiale bezüglich CO2-Emissionen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass die CO2-Emissionen in meinem Unternehmen reduziert werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, um die Klimaemissionen in meinem Bereich zu reduzieren: | | | | |

| ABFALL | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|--|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| Ich trenne stets Plastik, Papier & Pappe, Biomüll, Restmüll und Elektroschrott. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich wird die Reduktion von Abfall regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich gibt es Verbesserungspotentiale bezüglich Müll. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass das Müllaufkommen in meinem Unternehmen reduziert wird. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, um Müll in meinem Bereich zu reduzieren: | | | | |

| PRODUKTE | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|--|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| Unsere Produkte wirken sich in keiner Weise negativ auf die Umwelt aus. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mögliche negative Auswirkung unserer Produkte werden regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass sich die Produkte meines Unternehmens nur positiv auf die Umwelt auswirken. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, für bessere Produkte in Bezug auf Umweltfreundlichkeit: | | | | |

| TRANSPORTE | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|---|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| In meinem Bereich wird die Reduktion von Transporten regelmäßig besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In meinem Bereich gibt es Verbesserungspotentiale bezüglich der Transporte. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass Transporte in meinem Unternehmen reduziert werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, um Transporte in meinem Bereich zu reduzieren: | | | | |

MARKT

| GEHÄLTER | Ich stimme voll und ganz zu. | Ich stimme eher zu. | Ich stimme eher nicht zu. | Ich stimme gar nicht zu. |
|--|-------------------------------------|----------------------------|----------------------------------|---------------------------------|
| Meine Arbeit wird fair entlohnt. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, fair entlohnt zu werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

PROZESSE

| | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Meine Tätigkeiten sind alle standardisiert. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Die Prozesse in meinem Bereich werden regelmäßig verbessert. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ich weiß immer Bescheid, sobald Prozesse in meinem Bereich verändert werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, Prozesse stets zu verbessern. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Folgende Maßnahme ist notwendig, um Prozesse in meinem Bereich zu verbessern: | | | | |

FEHLERKULTUR

| | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| In meinem Bereich werden Fehler stets auf Ihre Ursachen analysiert. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fehler werden in meinem Unternehmen stets besprochen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass Fehler regelmäßig besprochen werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mir ist es wichtig, dass Fehler als Möglichkeit der Verbesserung von Prozessen genutzt werden. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

MITBESTIMMUNG

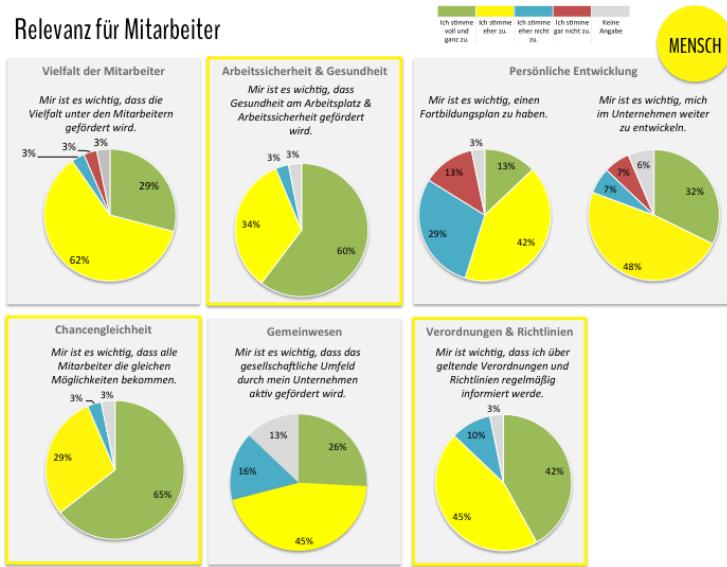
| | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Meine Ideen finden bei meinem Vorgesetzten immer Gehör. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|

ATTRAKTIVER ARBEITGEBER

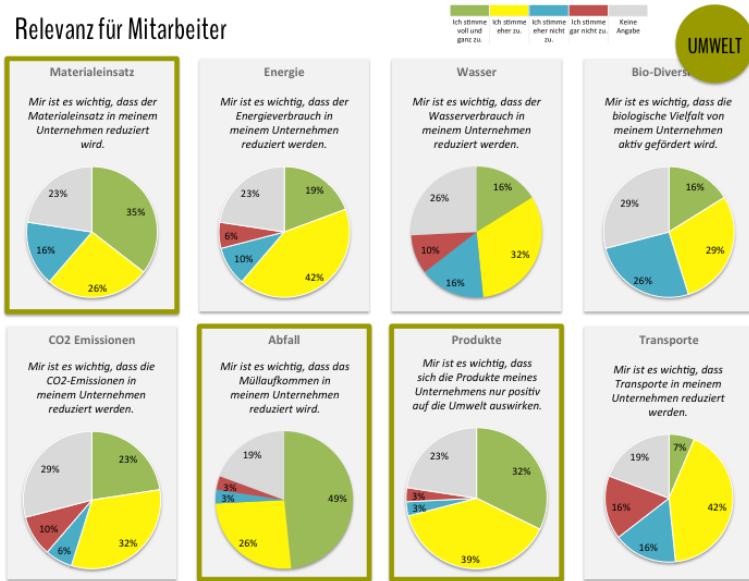
| |
|---|
| Folgende Maßnahme ist notwendig, um mein Unternehmen auch langfristig als attraktiven Arbeitgeber zu sehen: |
|---|

Annex VIII: Results of employee survey at Bäckerei Lyck

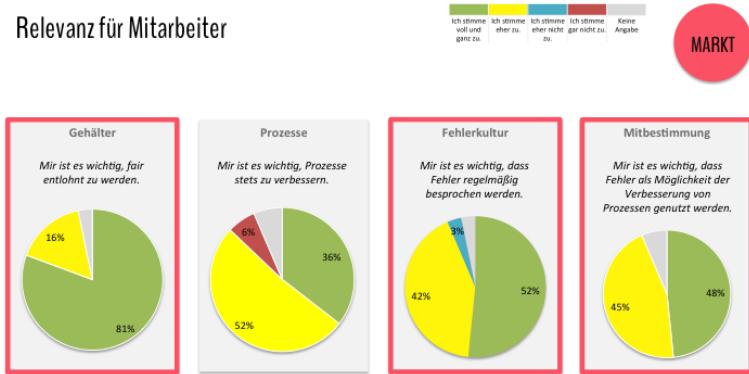
Relevanz für Mitarbeiter



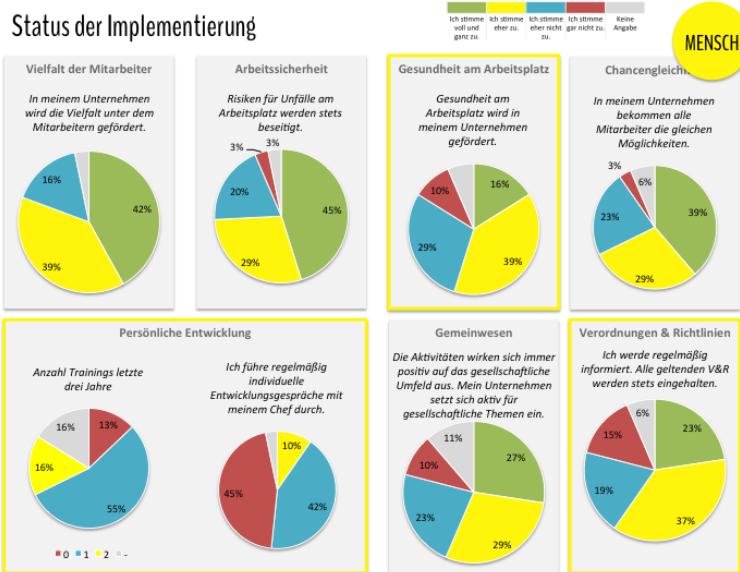
Relevanz für Mitarbeiter



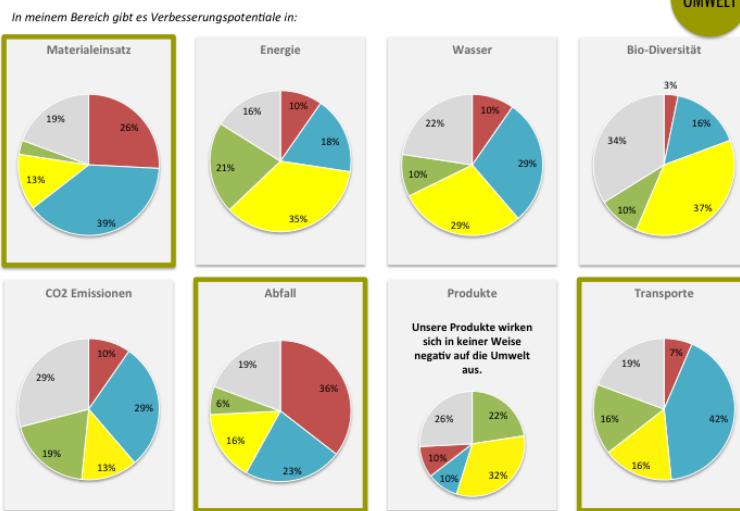
Relevanz für Mitarbeiter



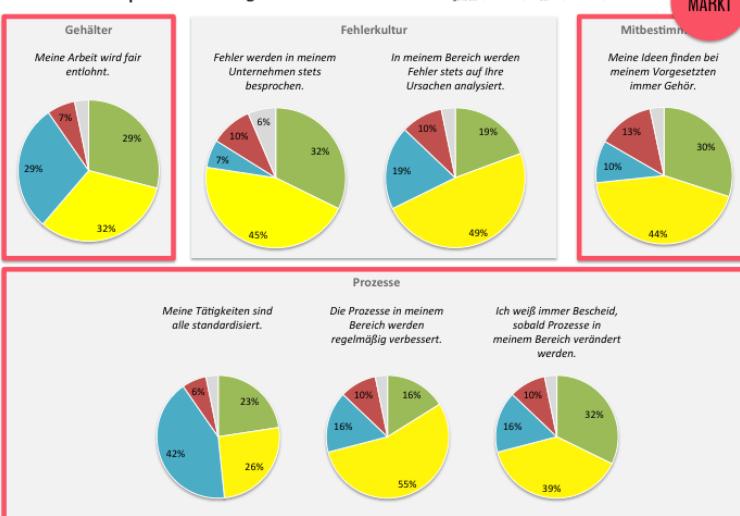
Status der Implementierung



Status der Implementierung



Status der Implementierung



Annex IX: Comments and improvement proposals of employee survey²⁹

| | |
|---|---|
| Vielfalt der Mitarbeiter | Chancengleichheit |
| <ul style="list-style-type: none"> Mein Rolle ist es nicht, aber neue Mitarbeiter sollten mindesten 2 Wochen lang mit dem Filialleiter arbeiten und lernen. Es ist die Verantwortlichkeit vom Filialleiter, die neuen Mitarbeiter zu trainieren. | <ul style="list-style-type: none"> Jeder Mitarbeiter ist essenziell für ein Unternehmen und sollte wie jeder andere behandelt werden, mit Respekt und Anerkennung. |
| Schulungen | Gemeinwesen |
| <ul style="list-style-type: none"> Konfliktmanagement wäre ein notwendiges Training und nicht nur für die Filialleiter | <ul style="list-style-type: none"> Tafel ist schön und gut, aber nur wenig kommt bei den Bedürftigen an > an Kinderheime spenden, Obdachlosenheime oder bei der Tafel kontrollieren, dass die Mitarbeiter nicht alles für sich beanspruchen > Aktionen in Kinder- und Alterseinrichtungen > Kundenbindung |
| Arbeitssicherheit & Gesundheit am Arbeitsplatz | Verordnungen & Richtlinien |
| <ul style="list-style-type: none"> Ein Verbandsbuch, damit Arbeitsunfälle (z.B. Verbrennungen, Schnittwunden) protokolliert werden können, für Spätfolgen Klimaanlage und Sommeroutfit, z.B. Poloshirts Handschuhe statt Tüten, angenehmere Kleidung Man kann nicht "krank" machen, wenn keine Leute da sind, die einspringen können. mehr Mitarbeiter | <ul style="list-style-type: none"> Schulungen im Bereich LM-Recht sollten durchgeführt werden. Allergene sindz.B. kennzeichnungspflichtig & wichtig Marzipan Beschilderung? Protokolle, Hygiene Ablaufdatum sind oft problematisch. Es fehlt eine offizielle Linie. |
| Materialeinsatz | Abfall |
| <ul style="list-style-type: none"> Belohnung für das Mitbringen des eigenen Thermobechers oder Thermobecher zum Verkauf anbieten & 10% Rabatt beim Kauf eines Heißgetränks, keine Plastiktüten generell viel Müll-Brottüten Mehrwegbecher | <ul style="list-style-type: none"> klare Anweisung & Aufteilung des Mülls Einführung / Forderung von Mehrwegverpackungen Vielleicht mehr für Mülltrennung sorgen Wir haben Plastik, Papier, Glas und Restmüll Kaffeebecher günstigeren Kaffee für Kunden mit Mehrwegbechern, auf den Tütenkonsum beim Einkauf hinweisen! Es gibt hier nur Restmüll und Plastikmüll, echt nicht genug. Täglich haben wir 1 70x110 Restmüll und 1-2 volle Plastikmüll (auch 70x110cm). Das ist viel zu viel. Unsere to-go Becher sind kostenlos. Viele Gäste nutzen sie, um auf unserer Terrasse zu sitzen, weil sie bei kaltem Wetter die Getränke länger warm halten. Ich finde es nicht in Ordnung und denke, dass so wie bei Castello z.B. 10 Cent pro Becher schon einen Unterschied machen würde. Über den Willhelmplatz zu laufen ist mir peinlich, da es so viele to-go-Becher gibt. Wir verkaufen und unterstützen Initiativen wie Brottüt, aber meiner Meinung nach lohnt es sich nicht so lange wir, als Restez, keine Umweltfreundlichen Änderungen machen. |
| Energie | Transporte |
| <ul style="list-style-type: none"> Stromzufuhr über Nacht komplett abschalten > kein Licht oder Kühlung notwendig Modernisierung der Ladenfassade Ofen zu lange an Dass der Ofen Licht anhaben muss, obwohl er aus ist. Installierung von einem Thermostat für die Heizung, LED Lampen nutzen, Bewegungsmelder unter anderem im TK Raum Ofen ist 80% der Zeit an. Wir müssen Brot um 17:00 Uhr backen und falls der Ofen aus ist, dauert es sehr lange ihr wieder warm zu haben. Die Frage des Stromverbrauchs oder Energieverschwendungen ist mir wichtig, weshalb das für mich ein Problem ist. Es sollte verboten sein, den Heizstrahler zu nutzen. Dafür gibt es Decken | <ul style="list-style-type: none"> keine Zentralisierung für Bestellungen bedeutet: 1 LKW pro Woche für Délifrance, 1 PKW täglich vom Hauptgeschäft, um die Konditorei zu bringen, 1 PKW täglich vom Hauptgeschäft um Abfälle und unverkauftes zu sammeln, 1 PKW pro Woche für Käselieferung, 1-2 PKW wöchentlich für Gemüse & Obst (und das ist nur für mein Restez) |
| Wasser | Produkte |
| <ul style="list-style-type: none"> Den Wasserhahn im Mitarbeiter WC reparieren Tropfenden Wasserhahn reparieren | <ul style="list-style-type: none"> Nachhaltigkeit, regional Nutzung nachhaltiger Produktionsmittel Weiß ich nicht genau, könnte ich mir teilweise vorstellen Wie verkaufen Brötchen. Wie sollen die denn negativ auf die Umwelt wirken? weniger Papier und Plastik |
| Biologische Vielfalt | |
| <ul style="list-style-type: none"> was ist denn biologische Vielfalt? Bio-Produkte nutzen oder Produkte (Eier..) aus der Region. Früchte und Obst aus der Jahreszeit nutzen. Unterstützung lokaler Ressourcen | |
| CO2-Emissionen | |
| <ul style="list-style-type: none"> E-Mobile zum Austragen der Waren, Energiesparende Öfen | |
| Prozesse | |
| <ul style="list-style-type: none"> Nachfrage bei Mitarbeitern, Innovationsgedanke Alles hier geht Mund zu Mund, von einem Mitarbeiter zu dem anderen. Keine offizielle Dokumente oder offizielle Regeln, keine Transparenz und deswegen keine Verantwortlichkeit. Ich weiß nur durch die Mitarbeiter Bescheid, wenn Prozesse in meinem Bereich verändert werden, aber nicht durch die Vorgesetzten. | <ul style="list-style-type: none"> Sonntagslohn erhöhung für die Aushilfen. kein Urlaubsentzug wegen Personalmangel Angenehmere Kleidung, die Jahreszeiten bedingt ist: im Sommer kurze, im Winter lange Sachen Es muss mehr miteinander kommuniziert werden! Regelmäßiges (alle 6 Monate) Mitarbeitergespräch / -evaluierung mehr Initiativen und Verantwortung für Umwelt & Soziales: Lebensmittelabfälle reduzieren / spenden, wieder-verwendbare Verpackungen fördern, Geführ auf Kaffeebecher oder Papierverpackung bessere Reinigungsmittelnutzen (mehr eco-friendly) |
| Attraktiver Arbeitgeber | |
| <ul style="list-style-type: none"> faire Entlohnung für alle, jedem Laden etwas gutes abgewinnen und den Mitarbeitern vermitteln und spüren lassen, Specials wie Weihnachtsfeiern, um den Teamzusammenhang zu stärken Absprache der Arbeitszeiten Bessere Bezahlung Als Aushilfe: die Flexibilität in der Dienstplanung zu erhalten (also, dass wir selbst entscheiden dürfen, wann und wie oft wir arbeiten), Die Selbstständigkeit (unter Anleitung) zu erhalten Sympathisches Umfeld beibehalten | |

²⁹ The statements have been copied without changes in lexis or syntax.

Annex X: Sustainability master plan for *Bäckerei Lyck*

| Kategorie | Nr | Maßnahme |
|--|----|---|
| Arbeitssicherheit & Gesundheit am Arbeitsplatz | 1 | Alle neuen Mitarbeiter bekommen Trainings in allen Maschinen, die benutzt werden. Die Trainings werden dokumentiert |
| | 2 | Alle Maschinen werden nach einem Standard gewartet |
| | 3 | Alle Maschinen bekommen einen jährlichen E-Check |
| | 4 | Rückenprophylaxe |
| | 5 | Bewusstseinsschaffung Schuhwerk |
| | 6 | Personal-Trainer in der Backstube |
| | 7 | Massageangebot für alle Mitarbeiter |
| persönliche Weiterentwicklung im Unternehmen | 8 | Ausbilderscheine für den Verkauf |
| | 9 | BÄKO-Seminare / Seminare der Handwerkskammer anbieten |
| | 10 | 1x/Jahr: Entwicklungsgespräch mit allen Mitarbeitern |
| Verordnungen & Richtlinien | 11 | Integration in kontinuierlichen Verbesserungsprozess (MA sollen Vorschläge machen) |
| Energie | 12 | Bewegungsmelder, wo möglich (z.B. WC, Keller) |
| | 13 | Betriebsbegehung: Wo ist Handlungsbedarf? |
| Transporte | 14 | Routen der Fahrer analysieren |
| | 15 | Anaylse Möglichkeit Umstellung Elektroautos |
| Abfall (Lebensmittel, Verpackung etc.) | 16 | Nicht für "1 Brot" in eine Filiale fahren |
| | 17 | Wir verlangen von unseren Lieferanten, die Umverpackung zurück zu nehmen |
| | 18 | Analyse, welcher Lieferant Big Packs liefern kann |
| | 19 | 2% Rabatt bei Einkauf ohne Verpackung |
| | 20 | Zusammenschluss mit anderen Bäckern für Big Packs |
| Wasserverbrauch | 21 | Test Recyclingpapier für Hände & WC |
| | 22 | Regenwasser nutzen |
| Materialeinsatz für Produktion & Verkauf | 23 | Schulung Wasserverbrauch |
| | 24 | Retouren senken |
| | 25 | Mehl zusammenfahren & sieben |
| | 26 | Schulung "Ressourcenverbrauch" im Unternehmen |
| | 27 | Reinigungsmaterial optimieren |
| | 28 | Verkaufszahlen der Produkte beobachten & regelmäßig besprechen |
| | 29 | Pfandsystem für coffee-to-go: Becher für 2€ anbieten |
| | 30 | Brötchenzange statt Handschuhe im Verkauf |
| | 31 | VerkäuferInnen stellen ihr Team selber ein |
| Einbindung der Mitarbeiter in Entscheidungen | 32 | bei Neukäufen werden Mitarbeiter in Investitionsentscheidungen eingebunden |
| | 33 | Veränderungen in Prozessen & Produkten in Firma kommunizieren |
| Transparenz des Unternehmens nach außen | 34 | Regelmäßige Führungen durch Backstube (Person suchen) |
| | 35 | Instagram/Facebook für Produktmarketing nutzen |
| effiziente Prozesse | 36 | Innovationen in Prozessen durch Qualitätsrunden |
| Einbindung der Kunden in Entscheidungen | 37 | gezielte Fragen / Stimmzettel |
| | 38 | Analyse: Holzkörbe für Stammkunden |
| Gehälter | 39 | Bonussystem zu Jahresende etwickeln |

Annex XI: Indicator set for Bäckerei Lyck

| | Kategorie | Indikator | 2017 | Ziel 2018 | Maßnahme |
|-----------------------------------|---|--|------|-----------|----------|
| Kundenperspektive | Produktvielfalt | Kundenumschlag (Anzahl/Filiale) | | | |
| | | Kundenumsatz (Durchschnittsumsatz pro Einkauf) | | | |
| | | Kundentreue (% Stammkunden) | | | |
| | Produktqualität | Mitarbeiterabstimmungen über Aufnahme von neuem Produkt ins Sortiment (% der Produktneuheiten) | | | |
| | | Verspätete Lieferungen an die Filialen (% der Lieferungen) | | | |
| | Einzigartigkeit in Produkten | Abstimmungen über Geschmack neuer Produkte (% der Produktneuheiten) | | | |
| | | Nicht verkaufbare Produkte (% auf Gesamtproduktion) | | | |
| | | Standard für Wassereinsätze pro Produkt (% der Produkte) | | | |
| | Persönlichkeit / Handwerksproduktion | Natürliche Inhaltsstoffe (% der Gesamtproduktion) | | | |
| | | Einträge in Social-Media Kanälen über Produkte (Anzahl) | | | |
| | | Neue Produktkreationen (Anzahl) | | | |
| Prozessperspektive | Lokale Delikatesse | Persönlich betreute Kunden über Führungen durch Backstube (Anzahl) | | | |
| | | Durchführung Back-Events (Anzahl) | | | |
| | | Presseauftritte offline (Anzahl) | | | |
| | Umwelt- & Sozialverantwortlichkeit | Kommunikation von Aktivitäten offline / online (Anzahl) | | | |
| | | Kundenabstimmung über Aktivitäten für Umwelt- und Sozialengagement (Anzahl) | | | |
| | | Spenden übriger Lebensmittel an gemeinnützige Organisationen (% der Retourenanzahl) | | | |
| | Wasser- Energie- und Materialeffizienz | Nutzen von Alternativen für Einwegverpackungen (% der Einkäufe) | | | |
| | | Produktionskosten (€ auf Produktionsmenge) | | | |
| | | Energieverbrauch (kWh/Produktionsmenge) | | | |
| Lern- und Entwicklungsperspektive | Instandhaltung | Abfallvolumen für Papier, Plastik, Bio-Müll, Elektroschrott (kg auf Produktionsmenge) | | | |
| | | Spritzerbrauch (L auf Produktionsmenge) | | | |
| | | Wasserverbrauch (L auf Produktionsmenge) | | | |
| | Produktionsplanung | Materialeinsatz (Verkauf & Produktion) (kg bzw. Anzahl auf Produktionsmenge) >> müsste man herunterbrechen auf Schlüsselmaterialien (z.B. Mehl, Papiertüten, To-Go Becher) | | | |
| | | Instandhaltung | | | |
| | | Produktvielfalt (Anzahl Produkte) | | | |
| | Produktinnovationen | Retouren (Anzahl pro Produkt) | | | |
| | | Durchlaufzeit der Produkte (t pro Produkt) | | | |
| | | Einzigartigkeit (Anzahl der Produkte, die nicht auf dem (Kieler) Markt verbreitet sind) | | | |
| | Qualitätskontrolle | Budget für Neukreationen (€) | | | |
| | | Idee bis Markteinführung (t) | | | |
| | | Produktqualität (% Reklamationen auf Produktionsmenge) | | | |
| Nicht-Marktperspektive | Trainings | kontrollierte Produkte (% der Gesamtproduktion) | | | |
| | | festgelegte Qualitätsstandards (% der Produkte) | | | |
| | | Mitarbeitertreue (Durchschnittliche Dauer des Arbeitsverhältnisses) | | | |
| | Karrierepotentiale | Mitarbeiterzufriedenheit (Skala über Mitarbeiterbefragung) | | | |
| | | Wahrnehmene Trainings pro MA (Anzahl) | | | |
| | | Angebote für mehr Gesundheit und Sicherheit am Arbeitsplatz (%) | | | |
| | Technologien zur Unterstützung des Produktions- und Verkaufsprozesses | Trainingsinhalte, die von Mitarbeitern vorgeschlagen wurden (% der gegebenen Trainings) | | | |
| | | Training der Mitarbeiter zu Umweltthemen: Energie, Abfall, Transporte, Wasser, Materialeinsatz (% der angebotenen Trainings) | | | |
| | | Training der Mitarbeiter zu neuen Produkten (% der angebotenen Trainings) | | | |
| | Fehlerkultur | Training der Mitarbeiter zu Prozessen (% aller Prozesse) | | | |
| | | Durchführung jährlicher Entwicklungsgespräche mit allen MA (% der MA) | | | |
| | | Austausch mit anderen Bäckerbetrieben (% der beteiligten MA) | | | |
| Gesundheit & Arbeitssicherheit | Wissenstransfer | Tage, an denen Stationen rotiert wurden (Anzahl pro MA) | | | |
| | | Trainings, die von eigenen Mitarbeitern gegeben werden (%) | | | |
| | Hygiene | Investitionen unter Berücksichtigung der beteiligten MA (%) | | | |
| | Gesundheit & Arbeitssicherheit | Regelmäßigkeit von Besprechungsrunden in Verkauf und Produktion zur kontinuierlichen Verbesserung (%) | | | |
| | | Evaluierung und Umsetzung vorgeschlagener Verbesserungsideen (%) | | | |
| | Gesundheit & Arbeitssicherheit | Wechsel von körperlichen zu Managementaufgaben (%) | | | |
| | | Mehlstaub an den Arbeitsplätzen (?) | | | |

Declaration

Herewith, I declare that this thesis has been completed independently and unaided and that no other sources other than the ones given here have been used.

Furthermore, I declare that this work has never been submitted at any other time or anywhere else as a final thesis.

The submitted written version of this work is the same as the one electronically saved and submitted on CD.

I agree to my thesis being checked for plagiarism, stored digitally by the Department of Geography of Kiel University, and that a printed copy will be publicly available in the library of the Department of Geography. My rights as an author are unaffected by this approval. I can request a restriction note to the examination board at any time.

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Date, Signature