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Global Strategy Deployment

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Abstract

Die zunehmende Komplexität im unternehmerischen Umfeld und die Notwendigkeit zur kontinuierlichen Anpassung von Unternehmen an neue Situationen stellen eine Herausforderung für Unternehmen und das strategische Management von Unternehmen da. Auf der einen Seite muss schnell reagiert werden, auf der anderen Seite soll Kontinuität im Unternehmen gewährleistet sein. Daraus resultiert die Notwendigkeit laufender Veränderung und Verbesserung in Unternehmen, so auch in der global ausgerichteten Unternehmensgruppe voestalpine Böhler Welding Group GmbH, wo durch eine globale Reorganisation eine Anpassung und Optimierung des Strategieumsetzungsprozesses, welcher seit mehreren Jahren durch die Methode Strategy Deployment unterstützt wird, erforderlich wurde.

Das Ziel dieser Masterarbeit ist es, einen Ansatz für eine erfolgreiche Strategieumsetzung in einem Unternehmen nach einem Veränderungsprozess und einer globalen Neuausrichtung aufzuzeigen. Um die gewünschten Ergebnisse zu erzielen wird in dieser Masterarbeit die Forschungsmethode „Action Research" angewandt. Im Rahmen der Masterarbeit wurde insbesondere der aktuelle Strategy Deployment Prozess innerhalb von voestalpine Böhler Welding Group GmbH analysiert, evaluiert und es wurden Verbesserungsmaßnahmen identifiziert. Diese wurden bereits im Rahmen der Masterarbeit im Unternehmen implementiert und Rückschlüsse auf die Theorie konnten gezogen werden. Basierend auf dem theoretischen Hintergrund und den praktischen Erkenntnissen wird gezeigt, welche Aspekte berücksichtigt werden müssen, um eine erfolgreiche Strategieumsetzung mithilfe von Strategy Deployment in einem globalen Unternehmen nach einer strukturellen Veränderung zu gewährleisten.

Als wesentliche Erkenntnis aus der vorliegenden Masterarbeit kann festgehalten werden, dass Strategy Deployment auch nach einer globalen Neuausrichtung und Reorganisation geeignet ist, um die Strategieformulierung, -umsetzung und -kontrolle in einem in Schlüsselfunktionen zentralisiert organisierten Unternehmen zu unterstützen. Durch Strategy Deployment wird insbesondere die strukturierte, durchgängige und zielgerichtete Strategieumsetzung zur Erreichung übergeordneter strategischer Ziele gewährleistet. Außerdem geht aus dieser Masterarbeit hervor, dass die Anpassung und Entwicklung eines klar strukturierten Prozessablaufes über das Geschäftsjahr ein Schwerpunkt zur Sicherstellung einer erfolgreichen Strategieumsetzung mit Strategy Deployment nach der Neuausrichtung und Reorganisation eines Unternehmens ist.

Abstract

The increasing complexity and dynamic of the entrepreneurial environment and the necessity of continuous adaptation of organizations to new situations cause challenges for organizations and their strategic management. On the one hand it is required to response quickly on changes, but on the other hand continuity within the organization is important as well. The result is the necessity of continuous improvement and adaptation. This applies to the global organization voestalpine Böhler Welding Group GmbH, where a global reorganization required the adaptation and optimization of the strategy implementation process, which has been supported though strategy deployment for years.

The goal of this thesis is to propose an approach for strategy implementation within an organization after a change process and organizational realignment. To achieve the desired results, the method of action research is used. In particular, in the course of this thesis, the current strategy deployment process within voestalpine Böhler Welding Group GmbH was analyzed and evaluated, and potentials for improvements were identified. The developed improvement measures have already been implemented in the scope of this thesis. Based on the theoretical findings and insights gained from the practical part, it is demonstrated, which aspects need to be considered in order to ensure a successful strategy implementation through strategy deployment in an organization after a global reorganization.

As a key insight from this thesis it can be noted, that strategy deployment provides the required means to ensure successful strategy- formulation, -implementation and -control after a global reorganization from a decentralized to a key-functional centralized group. Strategy deployment enables in particular a systematic and structural strategy implementation and the achievement of significant breakthroughs. A key topic for successful strategy implementation though strategy deployment after a global reorganization is the adaptation and development of a clearly structured strategy deployment process over the business year.

Contents

Figures

Abbreviations

AIP	Annual Improvement Priority
BCG	Boston Consulting Group
BSC	Balanced Score Card
BY	Business Year
CEO	Chief Executive Officer
KPI	Key Performance Indicator
MbO	Management by Objectives
MPM	Multi-Project Management
PDCA	Plan-Do-Check-Act
PM	Project Management
SD	Strategy Deployment
SMART	Specific, Measurable, Achievable, Relevant, Time bound
vaBW	voestalpine Böhler Welding Group GmbH

1. Introduction

1.1. Background and Problem Definition

Global organizations are acting in an short-lived and fast changing environment. Changes, for example in technology, politics or economy, require a continuous adaptation to the new situation. Only if an organization is able to react adequately and timely to such changes, long-term success can be ensured. Furthermore, it is important that strategic plans are well executed, that the whole organization is aligned and all employees are supporting the common overall strategic objectives. In respect to that, the starting points of this research are problems and challenges identified in practice, related to strategy implementation within global operating organizations. The most important challenge for organizations in future is not so much the formulation of a consistent long-term strategy but rather the systematically execution of a strategy (Seeger, 2005, p. 22).

The problem that is relevant for this thesis, was identified at voestalpine Böhler Welding Group GmbH (vaBW), a business unit of voestalpine AG, which is dedicated to grow, and where an enhanced global strategy caused the necessity of a global reorganization from a decentralized to a global key-functional centralized group. A reasonable organizational structure is a prerequisite of performance (Drucker, 1974, p. 407). In this case, the key-functional centralized organization structure is reasonable, as the new organization leads to bundled competencies of employees within one functional area and the efficient use of resources. In addition all relevant departments report functionally to the same functional management, which enables fast decision lines, short reporting structures, clear roles and responsibilities, well-defined interfaces and communication structures. The new situation entails the opportunity for improvement and development of the whole organization and its employees.

One result of this organizational change is that strategy implementation needs to be adapted to perform strategy execution on a global scale. vaBW implemented strategy deployment (SD) as an approach for strategy implementation in 2009. In the beginning, strategy deployment was only implemented in selected sections of vaBW. As it proved to be successful, it was expanded on most areas of the organization. This approach was designed for the previous, decentralized structure. The challenge which arises, is to still guarantee a successful strategy implementation throughout the whole group despite the new situation. It is therefore required to modify and optimize the strategy implementation approach.

Apart from the practical part, which is the optimization of strategy implementation, this thesis covers the theoretical aspects of strategy and strategy execution. Based on these aspects the research question can be formulated as follows:

What needs to be considered in an organization to ensure strategy execution after a global reorganization from a decentralized to a global key-functional centralized group?

1.2. Research Objective

The overall objective of this thesis is to develop an approach for the modification of the strategy implementation process within an organization after a change process and organizational realignment.
To achieve this overall objective, the difference between strategic management and operative management should be investigated, the process of strategic management shall be analyzed and different strategy implementation methods shall be compared. During this comparison of strategy implementation methods, the emphasis is on the requirements which ensure a successful strategy implementation after a change process and organizational realignment from a decentralized to a key-functional centralized organization and the evaluation of the appropriate method.
In addition to that, the method of SD applied at the case partner vaBW shall be analyzed, problems should be identified, and based on a previous literature research regarding SD, optimization measures shall be developed, verified and implemented. In course of the development of optimization measures, SD-specific software solutions which support the SD approach need to be investigated and assessed.

1.3. Procedure and Method

In many cases, the application of theoretical scientific findings for practical situations is challenging due to exaggerated theoretic approximations and high scientific wording (Probst & Raub, 1995, p. 5). To overcome this problem, the qualitative approach of action research is conducted in this thesis.
Probst and Raub (1995, p. 9-11) summarized the characteristics of action research as follows:

- Action research is interdisciplinary.
- Action research is problem-orientated and connects theory and practice.
- Action research is action-orientated, which means that specific solutions for specific problems are elaborated.

- Action research is a cyclic process with a planning phase, an analysis phase and an implementation phase.

- Action research requires participation of practitioners.

The main advantage of action research is that interests from a practical perspective as well as from a theoretical research perspective are combined with the target to find solutions which are specific and feasible but also based on well-founded theoretical aspects (Elden & Chisholm, 1993, p. 5). In this case, the problems identified in practice at the case partner vaBW and the necessity of elaborating feasible and practicable solutions for the corresponding problems justify the conducted method of action research. In line with the approach of action research, based on theoretical insights from the literature research, the practical application of strategy deployment is analyzed, and improvement measures are developed and implemented. In return, insights gained from the case study are utilized to refine corresponding theoretical perspectives.

At this point it can be noted that perspectives on a topic, such as for example classifications, fragmentations of process steps or relevance of specific insights, can differ among observers and always have to be viewed in the particular context. Everybody constructs their own reality (Watzlawick, 1993, p. 10-16). This thesis is therefore based on the perspective of radical constructivism. Radical constructivism builds on the assumption that knowledge does not meet an objective reality, but it rather exists as a construction resulting of someone's own experiences (von Glasersfeld, 1999, p. 17-38).

To obtain a common interpretation of the content and to clarify the field of investigation beside the action research approach and the radical constructivism perspective, this thesis is also based on the system theory. The system theory is important due to the fact that the optimal strategy implementation approach differs depending on the organization's background as for example the branch, the organization's size, the organizational structure, the business culture and management principle. To deal with a strategy implementation process without consideration of the organization (system) in which the strategy implementation process is applied, is not expedient. The system-theoretical perspective includes the observation of the corresponding system. Therefore, the system theory is a suitable approach for this thesis.

A system is defined as superior entirety of elements which are related to each other (Ulrich & Probst, 2001, p. 5). This means that the subject of investigation is clearly defined and delimited to the environment. Figure 1 shows the system "voestalpine AG" with the sub-system "vaBW", which can be understood as the subject of investigation for this thesis.

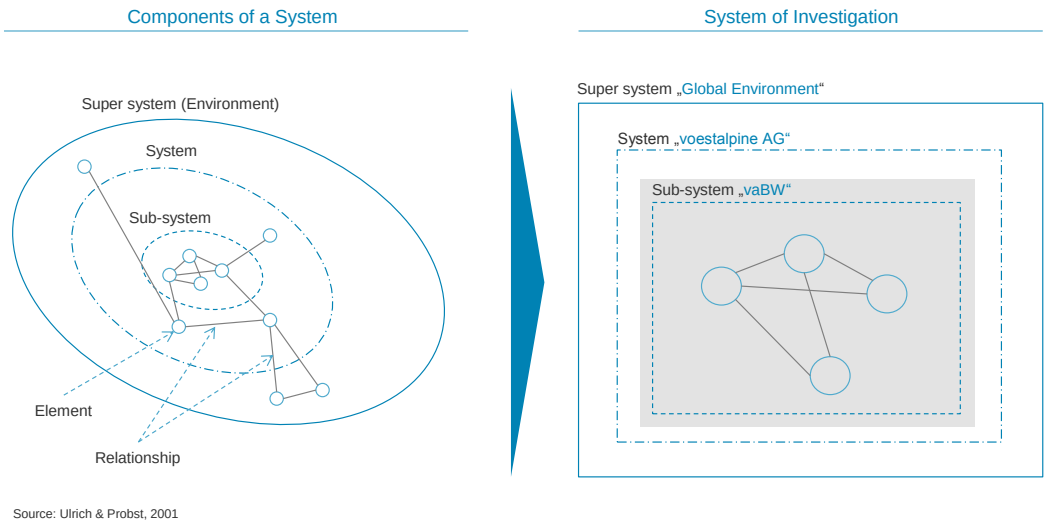


Figure 1.: Delimitation of the System of Investigation (personal design)

1.4. Structure of this Thesis

To reach the defined targets and to finally answer the research question, this thesis is structured as shown in figure 2.

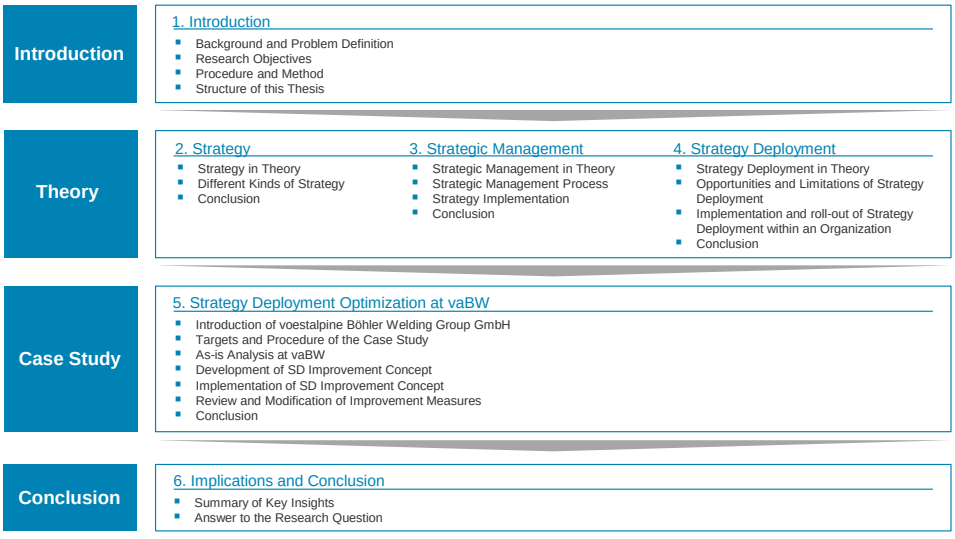


Figure 2.: Structure of the Thesis (personal design)

As first chapter, **the introduction** covers the research background and problem definition, the research objective as well as the research conception and the structure of the thesis.
In the **theory part**, the important topics for further understanding of the research and case study are analyzed and explained. Therefore, the second chapter covers the theoretical aspects of strategy. The key topics of this chapter are the definition of strategy, the importance of strategic flexibility and the characterization of different types of strategy. In the third chapter, the theoretical approach of strategic management is elaborated. Apart from the historical evolution of strategic management and the theoretical strategic management process in particular, strategy execution with different supporting methods is analyzed. The fourth chapter goes more into detail regarding the strategy execution method strategy deployment and its particular characteristics, strengths and weaknesses. Based on the insights from the theoretical part, the second part focuses on practical aspects of strategy implementation, in particular strategy implementation supported through the method of strategy deployment.
The **case study** includes a short introduction of the case partner vaBW, the detailed procedure conducted within the case study, the findings and conducted measures for optimization to guarantee a successful strategy implementation.
In **the conclusion**, the research question is answered and the theoretical and practical key insights are summarized.

2. Strategy

This chapter covers the theoretical aspects of strategy. Main topics are the definition of strategy, the importance of strategic flexibility as well as the categorization and assignment of different kinds of strategies. The key insights from this chapter are summarized in chapter 2.3.

2.1. Strategy in Theory

In literature sources, the term "strategy" has numerous definitions and descriptions. The roots of strategy are in the field of military, but in the course of the years it has been more and more applied to business. A selection of different definitions is shown in figure 3.

Author	Approach/Definition	Interpretation
I. Ansoff, 1984	Strategy as a plan gives the direction which an organization should take.	In Ansoff´s view, strategy is the result of rational and formalized decisions to ensure an organization´s long-term success. Strategy is a framework for development of strategic projects. Strategy is action-orientated.
A. Gälweiler, 1987	Strategy means orientation of decisions and actions towards the achievement of specific overall objectives and to not lose focus through non-sustainable short-term benefits.	Gälweiler argues that strategy has to be long-term orientated and that short-term advantages should not be achieved at the expenses of realistic long-term objectives. All resources need to be employed efficiently and balanced.
H. Mintzberg, 1994	Strategy is more than planned actions. It is more a pattern of decisions and actions in an organization, no matter whether they were planned or not.	A successful strategy is rarely just the result of conscious planning. It is more a mixture of unpredictable events (emergent strategy) and planned actions (deliberate strategy). In this concept, flexibility and creativity are important in order to be successful.
G. Hamel & C. K. Prahalad, 1994	Strategy is primary a way of thinking which is based on imagination and vision.	Hamel & Prahalad represent the idea that it is not primarily necessary that targets match resources, but rather to formulate challenging targets. They call this approach the “strategic intent”, which means that strategy is all about ambitions of an organization.
M. Porter, 1996	Strategy is the creation of a unique and valuable position, involving a different set of activities.	According to Porter, strategy is all about competitive position. From his point of view, three possible market strategies for creating unique customer value do exist. Cost leadership, differentiation, which means to be unique within a branch, and the focus on a market niche.

Figure 3.: Definitions of Strategy (personal design)

Today's managers have to deal with increasing complexity and dynamics of the competitive environment (Schmid, 2005, p. 1). This means that in such a short-lived and unpredictable environment, organizations must be flexible. Only if an organization is able to react adequately and in an appropriate time on technological, political and economical changes, long term success can be ensured. Jack Welch described strategy as follows: "... strategy is a living, breathing, totally dynamic *game*. It's fun - and fast. And it's alive." (Welch, 2005, p. 165).
In the author's perspective, Mintzberg's approach regarding deliberate and emergent strategy can be seen as a key perspective to modern strategy. Figure 4 shows the relationship between deliberate, unrealized and emergent strategy according to Mintzberg.

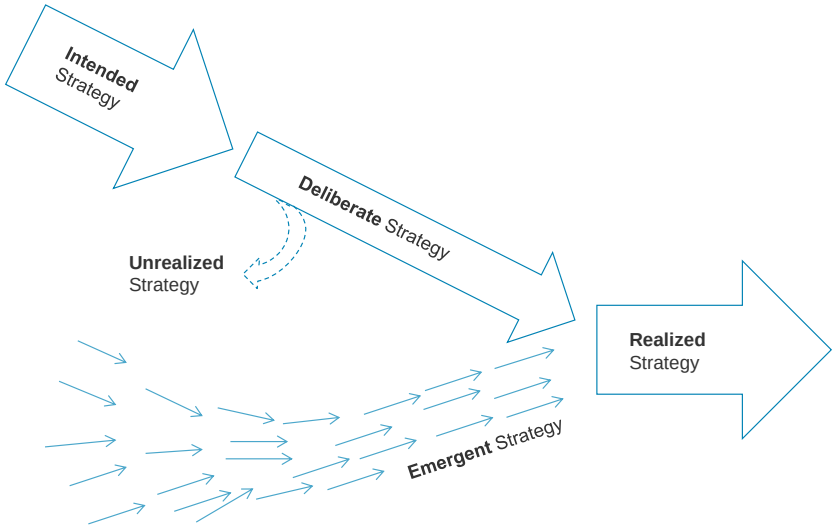


Figure 4.: Forms of Strategy (according to Mintzberg, 1994, p. 24)

In practice only a fraction of the indented strategy is actually realized (deliberate strategy). Reasons for unrealized strategy can be for example a lack of resources, poor strategy implementation or changes in the environment, which requires an adaptation of the strategic direction. Emergent strategy is the one that is not planned, but still a realized part of strategy. Emergent strategy results from a pattern of unconscious decisions and actions. (Mintzberg, 1994, p. 23-25)

A clear definition of strategy is essential for the following chapters as a common point of reference. This is the reason why the definition is given at this point of the thesis, even though the definition was actually formulated at the end of the research, as a result of the insights gained in course of the conducted literature research and the insights gained from the case study. This proceeding is in line with the applied method of action research and underlines the advantages of interaction between theory and practice in course of action research. This thesis refers to the following definition of

strategy:

Strategy is seen as the combination of decisions and actions related to an organization's long-term direction, in an uncertain, transient and competitive environment, to achieve specific long-term objectives associated with the aim of ensuring sustainable growth, based on planned actions and emergent incidents, where non-sustainable short term benefits must not distract from the pursued direction.

2.2. Different Kinds of Strategies

The allocation of a strategy depends mainly on the organizational structure. Is the business of an organization related to one product, or product group, then in most cases, the corporate level is followed by a functional structure on the next level. In case of an organization which has a wide range of products and product groups, the level underneath the corporate level is usually divided into business units and the business units are again divided into functional areas as shown in figure 5. Strategy can be categorized (cf. figure 5) through their scope of application within organizational levels. (Hungenberg, 2014, p. 15-17)

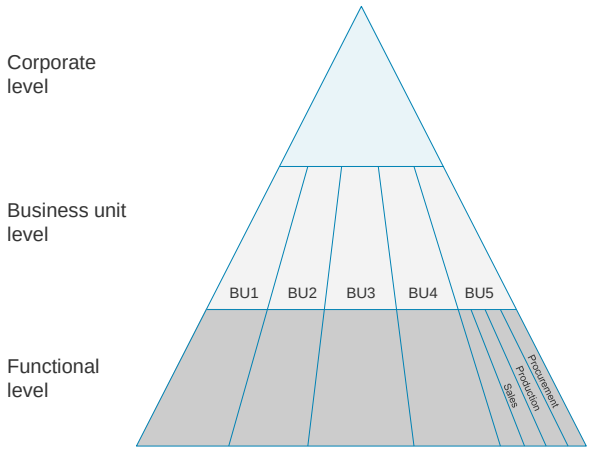


Figure 5.: Levels of Strategy (according to Welge & Al-Laham, 2008, p. 459)[1]

In order to the importance of these terms, corporate strategy, business unit strategy and functional strategy are described in detail.
Corporate strategy deals primarily with designing a business portfolio and the allocation of

[1] Own translation

resources to single business areas within the portfolio. The degree of diversification of an organization is constituted on this level. Thus the determination of the organizational structure and system is also part of the corporate level to ensure a holistic and efficient management. (Hungenberg, 2014, p. 16)

Business unit strategy brings together outward and inward perspectives to uncover, which combination of decisions and activities regarding customers, markets, investments etc. maximizes the created value. The outward perspective focuses on defining future scenarios and profit pools, assessment of competitor strategies, identification of leading-edge customer priorities, exploration of potent new business models and determination of the strategy which is required to win. The inward perspective mainly focuses on identification and enhancement of the organization's sources of competitive advantages. (Boston Consulting Group, 2015)

These activities support the goal of a business unit strategy to offer a product which is competitive in price and performance (Hamel & Prahalad, 1989, p. 74).

Functional area strategy is deducted from superior level strategies. The subject of a functional strategy is the strategic direction of single business functions. All functions within an organization are included (e.g. procurement, sales and production). The goal is to utilize existing achievement potentials. (Dillerup & Stoi, 2013, p. 182)

Apart from the organizational level, strategies can be classified through their strategic content and emphasis. Different types of strategy are categorized and summarized in figure 6.

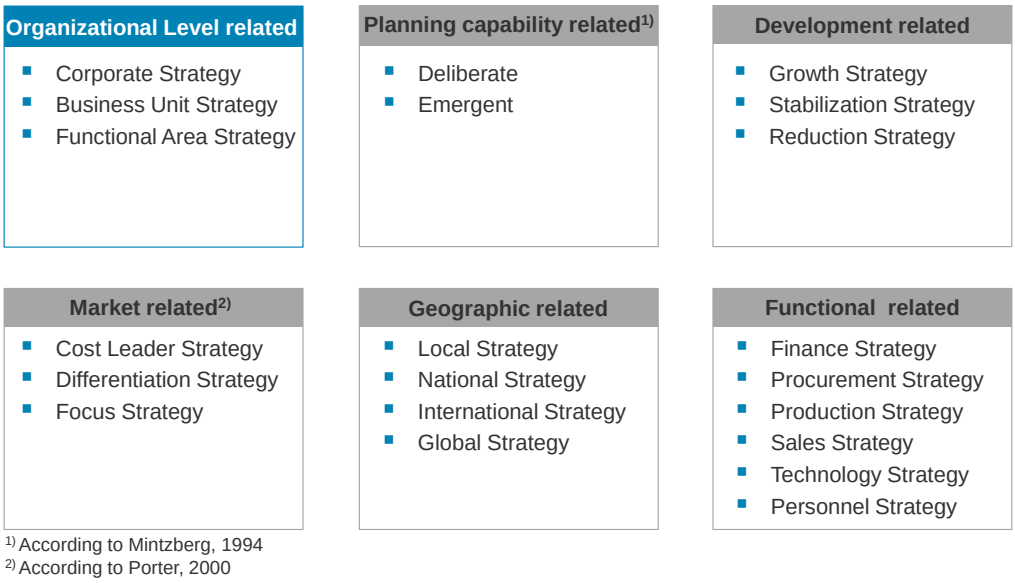


Figure 6.: Types of Strategy (based on Bea & Haas, 2015, p. 179)[2]

In the remainder of this thesis, strategy is classified according to the organizational level (corporate

[2]Own translation

strategy, business unit strategy and functional area strategy).
Regarding the category related to planning capability and the difference between deliberated and emergent strategy, the author refers to chapter 2.1.
Another way of categorizing strategy is to assign strategy according to a development-related perspective. Many organizations aim to grow as this leads to positive trends for example by utilization of economies of scale, an improved influence on the market, more flexibility and enhanced access to the capital market. (Macharzina, 2010, p. 266) Organizational growth is achieved through different ways. In general, there is a differentiation between internal and external growth. An internal growth strategy is for example accomplished through in-house development, and external growth strategies are for example accomplished through acquisitions or strategic alliances. (Welge & Al-Laham, 2008, p. 590) According to Bea and Haas (2015, p. 181 adapted from Ansoff, 1966, p. 132) corporate growth is supported through four different tactics: market penetration, product development, market development and diversification.[3] Stabilization strategy serves holding the current position. As a result stabilization strategy is often used as intermediate strategy for example, in case, that an organization is missing required information for the decision whether to choose a growth or reduction strategy. In most cases, a reduction strategy is only selected, when reactive behaviour is required as reaction to strategic threats. (Bea & Haas, 2015, p. 191-193)
According to Porter market-related strategies are all about creating competitive advantages. He differentiates three types of market related strategies: Cost leadership strategy (offer products with the best price), differentiation strategy (offer different products than the competitors do) and focus strategy (focus on a specific customer segment).[4] (Porter, 2000, p. 37-45)
The geographic-related category is divided into local strategy (place- or regionally bound), national strategy (nation wide orientated), international strategy (applicable across national boundaries) and global strategy (applicable worldwide). (Bea & Haas, 2015, p. 184)
Functional-related strategies are mainly focused on the utilization of achievement potentials within different functions (e.g. procurement, sales and production). (Bea & Haas, 2015, p. 201)

2.3. Conclusion

It is important to be aware that strategy can be understood in different ways. Several definitions exist (cf. chapter 2.1).
Today's competitive environment is short-lived, and fast changes in technology, politics and economy require a high degree of flexibility and creativity. For that reason only organizations which are able to adapt to new things (markets, laws, technologies etc.) will be successful in a long-term perspective. This means that an organization's strategy has to fulfil the requirement of flexibility, but the strategy should also be long-term orientated and not characterized by decisions

[3] For more details to growth strategy according to Ansoff, the author refers to Ansoff, 1966 and Bea & Haas, 2015
[4] For more details to market-related strategies, the author refers to Porter, 2000

in favour of short-term advantages and challenges. In addition to that, it is important that the whole organization throughout all levels, supports the same, overall strategy.
The author of this thesis considers Mintzberg and his definition of planned and unplanned strategy, which can be associated with strategic flexibility, as decisive.
The strategy definition for this thesis is a result of the literature research and the insights gained from the case study conducted at vaBW (cf. chapter 2.1)
The allocation of strategy depends on the organizations structure and the field of application. The three main categories related to the organizational level are corporate strategy, business unit strategy and functional area strategy. In this thesis, a categorization according to organizational level is applied, as this categorization is seen as the general and superior classification, which is only related to the organizational level.

3. Strategic Management

This chapter covers different aspects of strategic management. Apart form the historical evolution of strategic management and the investigation of the integrated management model with its three levels of management (normative, strategic and operative), this chapter is focuses on the process of strategic management, the importance of successful strategy implementation and different methods which support the strategy implementation process (strategy deployment, balanced score card, project management). The key insights from this chapter are summarized in chapter 3.4.

3.1. Strategic Management in Theory

The challenges concerning strategy have changed over the years. As a result, the strategy planning approach has continuously been developed and adapted in accordance to the corresponding situations.
The evolution of strategic management can be divided into 5 phases as shown in figure 7.

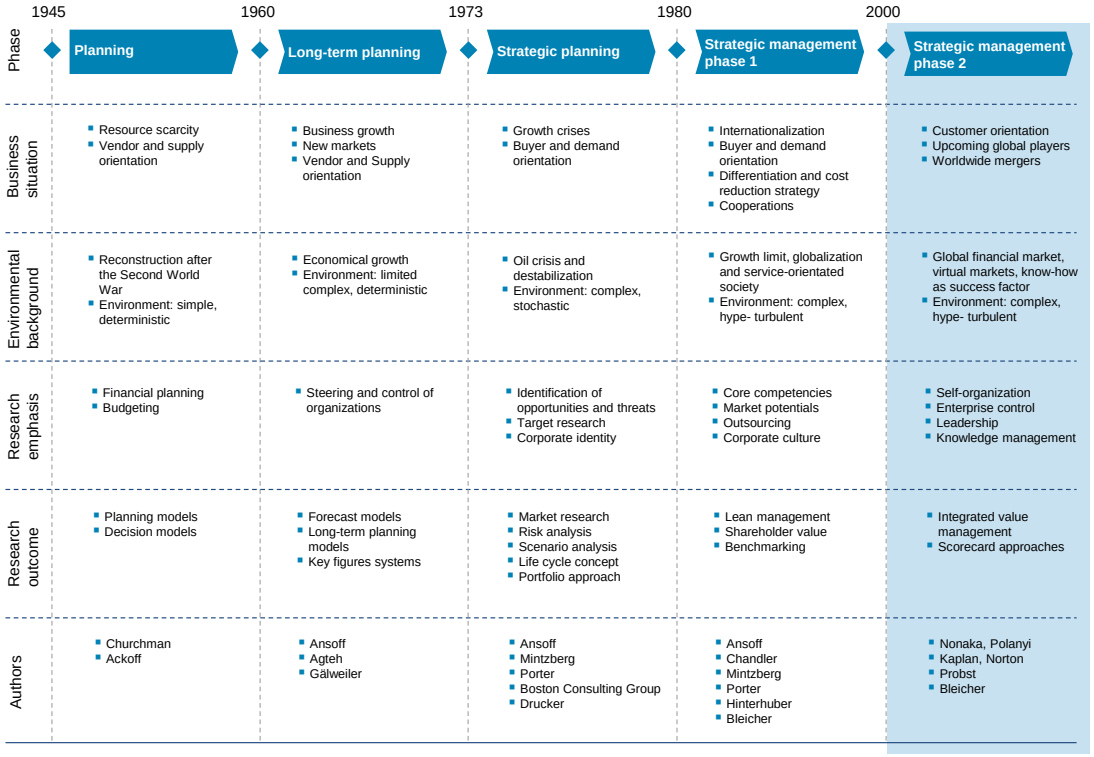


Figure 7.: From Planning to Strategic Management (according to Bea & Haas, 2015, p. 15-16)[1]

In the first phase (1945-1960), the economic environment was simple and organizations had their planning efforts mainly on financial planning. In the second phase (1960-1973), the environment was still limited, but the economy experienced a great growth. One result of this economic growth was that the planning effort shifted more and more from short-term financial planning to long-term planning. In the third phase (1973-1980), the oil crisis had an important influence on organizations, which started to put more effort on risk analysis, market research and scenario analysis. In the first phase of strategic management (1980-2000), the increasing globalization had a huge influence on organizations behaviour. In this complex environment, differentiation and cost reduction strategies became important. In the current phase of strategic management, the environment is characterized through a global finance market, where know-how and customer orientation became the key to success. Scorecard approaches are widespread through organizations in different branches all over the world. (Bea & Haas, 2015, p. 12-16)

During the evolution of strategic management, the approach of integrated management came more and more into focus. This concept is going to be discussed in more detail, as it is important for the

[1] Own translation

further understanding of strategic management. The **integrated management model** distinguishes between the normative, strategic and operative management levels, as shown in figure 8, where each level has its specific focus.

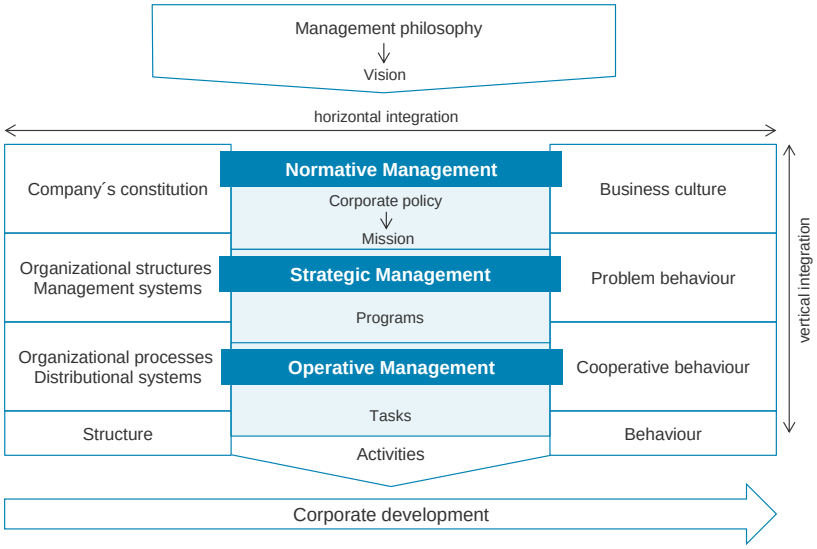


Figure 8.: Relationship between Normative, Strategic and Operative Management (according to Bleicher, 1991, p. 56)[2]

Normative management mainly focuses on the organization's constitution and business culture. At this level, potentials for success should be created to ensure the organizations long-term viability (Müller, 2015, p. 45).
Strategic management is focused more on how to utilize and maintain potentials for success and which resources have to be applied and where. It is about defining the right tasks and the right strategic program to achieve long-term success. According to Bleicher (1991, p. 54) strategic management refers to development and use of potentials for success and how resources need to be applied in order to create the best possible outcome for the organization.
Operative management is short-term orientated. The purpose of the operative management is the efficient utilization of opportunities for success (Dillerup & Stoi, 2013, p. 41). It is about assigning the strategic program.

To explain the difference between strategic and operative management, literature frequently refers to the terms **effectiveness** and **efficiency**. According to Drucker (1963, p. 54), effectiveness is about doing the right things (strategic management) and, in contrast to that, efficiency is about doing the things right (operative management).

[2]Own translation

As it is important for the following chapters figure, 9 summarizes major differences between strategic and operative management. Essential for an organization's success is a smooth transition from strategic management to operative management (Lombriser & Abplanalp, 2010, p. 38)

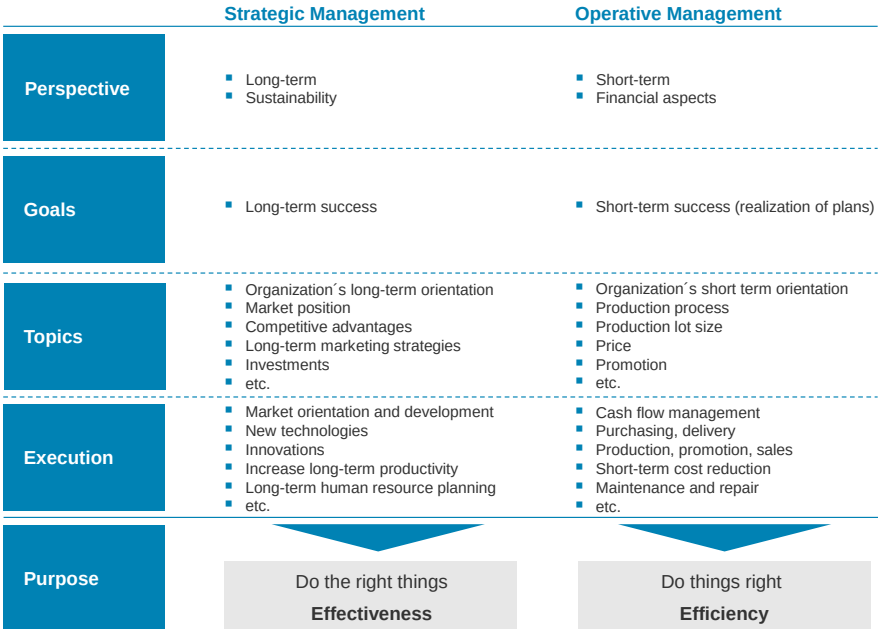


Figure 9.: Operative vs. Strategic Management (based on Lombriser & Abplanalp, 2010, p. 38)[3]

3.2. Strategic Management Process

Based on many approaches that can be identified in literature, Welge and Al-Lahm developed a process model for strategic management which divides the process into 5 phases, where the fifth phase, strategy control, is actually not delimited from the other phases since strategy control is a continuously ongoing process through all other phases. Figure 10 shows the 5 phases based on Welge and Al-Laham (2008, p. 459) with the specific tasks, inputs, outputs and methods which can be used to complete each phase.

[3] Own translation

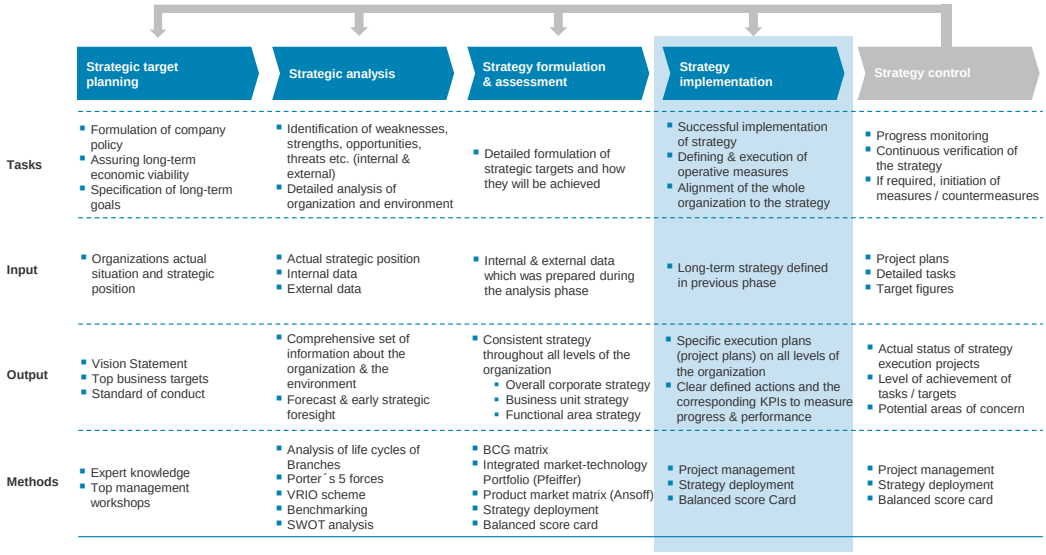


Figure 10.: Strategic Management Process (based on Welge & Al-Laham, 2008, p. 459)[4]

The **strategic target planning** phase is focused on defining the organization's general strategic direction.

The **strategic analysis** phase is focused on analyzing the organization and the environment. The objective is to create a comprehensive picture of the organization and the environment by using different methods for different fields of application. Subjects such as the market situation, competitors, the organization's capabilities, internal strengths and weaknesses are evaluated.

The **strategy formulation and assessment** phase focuses on formulating detailed strategic targets. This is done by using methods and data which was prepared in the previous phases.

The **strategy implementation** phase is one of the most challenging and important phases. Charan and Colvin (1999) estimated that in 70 % of the cases where CEOs fail, the problem is not bad strategy, but rather bad execution. This confirms, that in most cases high effort is put in strategic planning, but not enough on strategy implementation and execution.

Successful implementation contains aspects of leadership, organizational structure, company culture and management methods. Essential for a successful implementation of strategy and, furthermore, on a successful execution of strategic projects, is that it is performed by all employees on all levels throughout the organization. Required resources need to be provided by the management. Specific methods can support strategy implementation. A comparison of methods can be found in chapter 3.3.

According to Lombriser and Abplanalp (2010, p. 53), **strategy control** must be a permanent control and guidance process carried out on three levels:

[4]Own translation

- Premises control: Are the assumptions, on which the strategy is based, still valid?
- Implementation control: How far has the strategy been implemented? Where are difficulties? Where do additional measures need to be initiated?
- Efficiency control: Are all objectives fulfilled with the implementation of the current strategy? Is the current strategy still the best strategy?

Due to the importance of strategy implementation for this thesis, chapter 3.3 focuses on this particular phase, especially the methods which can be used in this phase, are investigated more detailed.

3.3. Strategy Implementation

"The best plan is only a plan, that is, good intentions, unless it degenerates into work" (Drucker, 1974, p. 128). This means that the best strategy is worthless as long as it is not systematically executed, continuously controlled (premisses, execution and results) and adapted if required. To ensure a successful strategy execution, different methods can be applied. Each method has its specific priorities, strengths and weaknesses. Thus, the applied method needs to be selected carefully and under consideration of the organization's specific situation.
After a global realignment, as described in chapter 1.1, radical changes, significant breakthroughs and improvements are required. In addition, it is important to define precise objectives to have full commitment of the top management, to ensure alignment and participation of all employees and to guarantee adequate communication within the organization. (Kudernatsch, 2013, p. 237; Vahs & Weiand, 2010, p. 8-9)

Methods for strategy implementation commonly proposed in literature are (Bea & Haas, 2015, p. 226-228; Hungenberg, 2014, p. 308-309; Kudernatsch, 2013, p.18):

1. Project management (PM) / Multi-project management (MPM)
2. Balanced score card (BSC)
3. Strategy deployment (SD)

These methods can be used individually or parallel. All of them are related to the management principle of management by objectives (MbO). (Kudernatsch, 2013, p. 127-129; Zielasek, 1995, p. 207; Tennant & Roberts, 2001, p. 288)
MbO was described for the first time by Peter Drucker, in 1954, but it is still a valid and commonly used method to link strategy to the personal targets of employees (Lombriser & Abplanalp, 2010,

p. 355). The success of MbO is founded on a combination of individual freedom for employees and the precise specification of targets. Motivation, creativity and self-responsibility of each single employee is supported through MbO. The target achievement is frequently directly linked to a performance-related remuneration. In order to that targets have to be formulated clearly regarding their content, extend and time horizon. It is also important that the achievement of the targets can be evaluated straightforwardly. (Dillerup & Stoi, 2013, p. 652)

The risk of constructing a high degree of individualism is seen as a disadvantage of MbO, where the alignment between individuals from different disciplines and departments is missing due to everybody just being focused on achieving their own goals. Since the targets are usually agreed on a yearly base, also the risk that an organization is not able to react fast and flexible enough on changes, needs to be considered. (Kudernatsch, 2013, p. 23-24)

Weighting the pros and cons, the author sees MbO as a reasonable principle to lead an organization and to manage strategy implementation.

Project Management / Multi-Project Management

A method commonly used for strategy implementation is project management (for simple strategies) and multi project management (for complex strategies), where the main advantages (e.g. systematic execution of complex activities, clear assignment of tasks, flexibility and transparency) of these methods are seen within an dynamic environment. Multi-project management allows dividing a complex strategy into manageable parts, namely the single projects. (Bea & Haas, 2015, p. 226-228) Project management is a method with clear transparency, where all participants (project team) know exactly what their tasks are.
According to Dillerup and Stoi (2013, p. 520 adapted from Madauss, 2006, p. 9) a project can be defined as an unique, time-bound and complex intention, where several employees from different organizational units and departments are required for the realization. In accordance to that, projects are characterized through:

- Uniqueness: The task is not a recurring routine work.
- Time-bound: A project has a specific start and an end.
- Complexity: Projects are characterized through a high number of elements which have to be taken into consideration.
- Interdisciplinary: A project requires participation of people and resources form different disciplines.

In addition, several optional characteristics for projects are used in literature, such as: target

orientation (projects are aimed at achieving the defined targets), conflict (project organization vs. regular line organization), economic risk (use of resources for a unique task implicates the risk of economic losses), life cycle (projects consists of different phases between a specific start and end date) and interdependence (interdependences between participants within the project have to be considered). (Dillerup & Stoi, 2013, p. 520).
A project is divided into different project phases. In literature, various different approaches for dividing into specific project phases exist, but in general the content is almost the same, only the level of detail is different (Dillerup & Stoi, 2013, p. 530).
According to Patzak and Rattay (1998, p. 10), the project phases are divided as shown in figure 11.

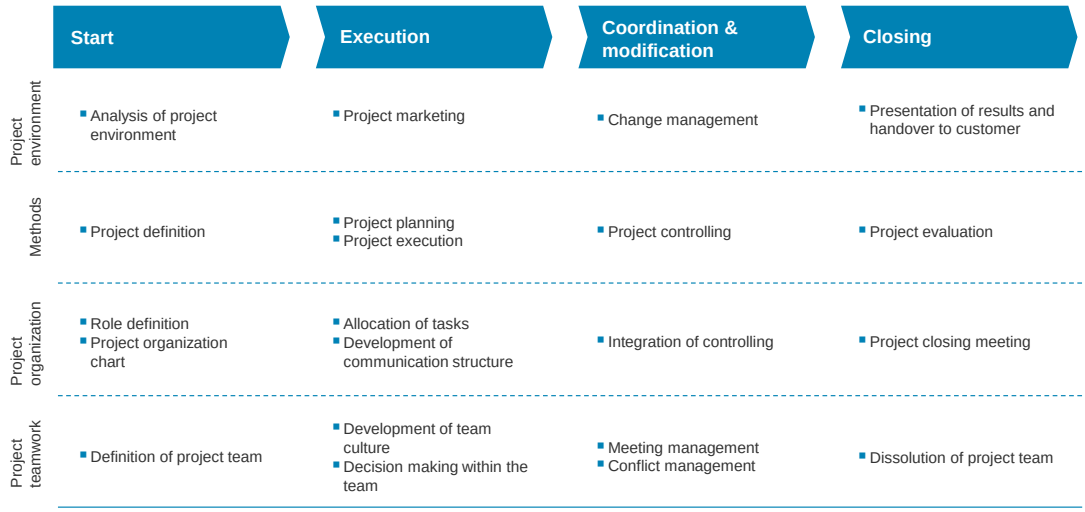


Figure 11.: Phases of Project Management (according to Patzak & Rattay, 1998, p. 10)[5]

In the **starting phase**, the required conditions for the following execution phase are created. In this phase the detailed definition of the project is important (e.g. time schedule, targets and procedure), as well as the composition of the project team.
In the **project execution phase**, the actual tasks to achieve the intended results are conducted. Key issues within this phase are planning activities, allocation of tasks and decision making. The execution phase is often divided into several sub-phases.
In the **coordination and modification phase**, the focus is on controlling and evaluation of intermediate results. Usually, the coordination and modification phase is conducted between two sub-execution phases. The execution phase and the coordination and modification phases build a closed control loop. For a successful project completion, this loop is repeated as long as it is required to achieve the desired targets.

[5]Own translation

In the **closing phase**, the project is going to be finished. The project is evaluated and the results are documented.[6]

Multi-project management is used to manage several projects at the same time and to find the right project portfolio. Also, part of multi-project management are the identification, evaluation, prioritization and selection of single projects (Stephan, 2014, p. 41-42). Strategic programs are usually coordinated through multi-project management, where the single projects, which are embedded in the project portfolio, are managed through a separate project management.
Figure 12 shows the relationship between PM and MPM.

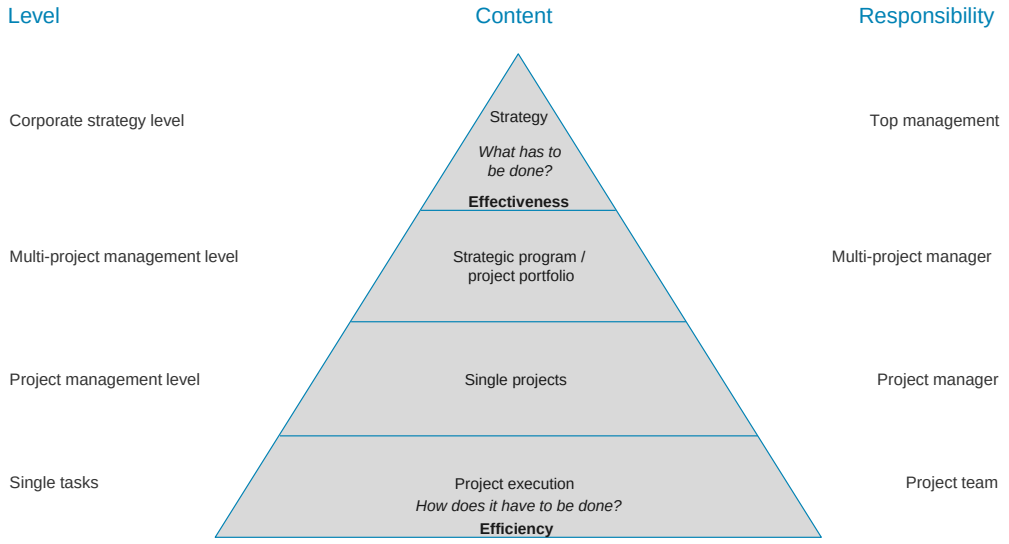


Figure 12.: Relationship Strategy, Multi-Project Management and Project Management (based on Dillerup & Stoi, 2013, p. 547)[7]

Having strategic projects and programs in mind, both fulfil the characteristics of a project. Based on that, the author sees project management and multi-project management as adequate methods for strategy execution.

Balanced Score Card

The balanced score card (BSC) is a useful method for strategy execution, but also for strategy assessment and formulation (Hungenberg, 2014, p. 314). Today, the BSC is the most popular and

[6] For more details according to project management the author refers to Patzak and Ratty, 1998
[7] Own translation

most commonly used method for strategy execution (Lombriser & Abplanalp, 2010, p. 356).
The BSC was developed at the beginning of the nineties by Kaplan and Norton to overcome the short-term, mainly financially governed strategy assessment and formulation approaches which dominated at that time (Hungenberg, 2014, p. 308-309).
A BSC according to Kaplan & Norton (1996, p. 76), is based on four perspectives (financial, internal business process, learning & growth and customer) as shown in figure 13.

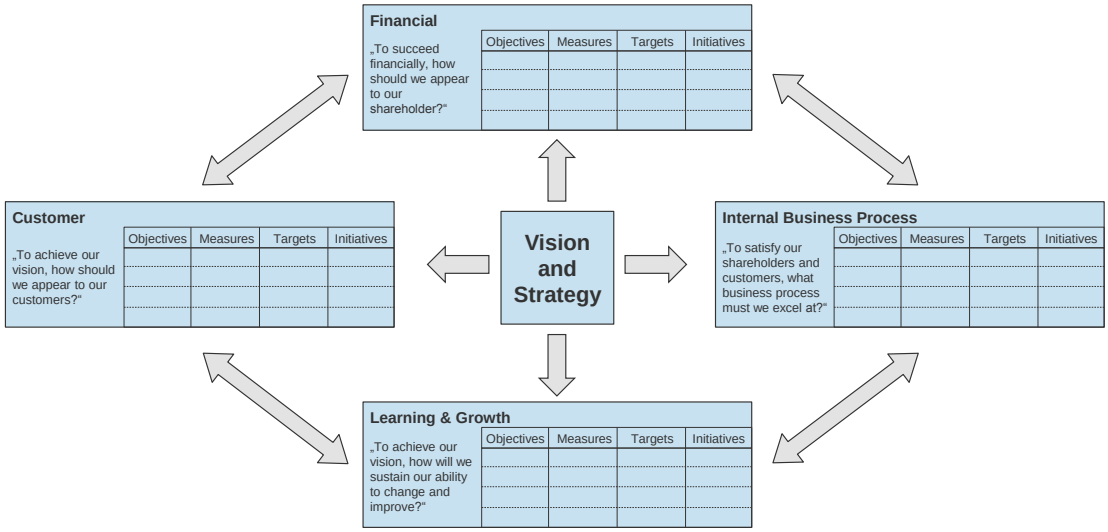


Figure 13.: Balanced Score Card (according to Kaplan & Norton, 1996, p. 76)

Each of the four perspectives are weighted equally to ensure a successful long term strategy formulation and execution (Dillerup & Stoi, 2013, p. 384).

- **Financial perspective:** is the representation of the financial results which are achieved through a consequent execution of the defined strategy.
- **Customer perspective:** deals with the question of how the products or services meet the needs and expectations of the customers.
- **Internal business process:** defines processes which have a major impact on meeting the customer needs. The processes are important to reach the financial and customer perspective's objectives.
- **Learn and growth perspective:** indicates, if the organization is able to increase performance and to be innovative. The employees are at the center of attention.

Within the BSC approach, objectives, which are related to the overall strategy, are defined for each of the four perspectives. In a further step, reasonable measures to the corresponding objectives are determined. This is important in order to enable the evaluation of achievements. Correspondingly, targets which are to be achieved are defined for each objective. To achieve the determined objectives, strategic initiatives are defined. The definition of these initiatives includes for example time schedules, required resources and persons who are responsible for the execution of the initiatives. The systematic breakdown of the overall strategy into sub-goals, the link between reasonable measures and targets and the derivation of corresponding initiatives supports a successful strategy execution. (Dillerup & Stoi, 2013, p. 385-387)
A key issue of the BSC is to link the long-term strategic targets with feasible operative tasks (Schreyögg & Koch, 2010, p. 125).
Moreover, the BSC is not just a collection of financial and non-financial targets and tasks, it is rather a framework for actions to overcome strategic and operative communication, coordination and orientation barriers (Barthelemy et al., 2011, p. 28).

Even if the method of BSC has many advantages, there are still some problems in practice. In many cases, the BSC is not integrated well enough into the daily business. The amount of objectives is too high, what leads to a lack of resources for execution, and furthermore to the loss of focus on the key objectives. In addition to that, the alignment on the horizontal level through the organization is not always guaranteed. (Kudernatsch, 2013, p. 126)

In the author's perspective, the BSC is a useful method for steering strategy, but successful strategy implementation is only ensured in combination with other methods (e.g. project management).

Strategy Deployment

Strategy deployment (SD) is a method which is used for strategy formulation, assessment, execution and controlling. It was originally developed in Japan. From Japanese organizations it was first distributed to American organizations and now it is becoming more and more popular in European organizations as well. In literature, it is also referred to it as hoshin kanri or policy deployment. (Kudernatsch, 2013, p. 16-17; Tennant & Roberts, 2001, p. 289-290)
SD has its strengths, whenever it is necessary to achieve major changes and breakthroughs. The required resources are ideally deployed to achieve a few major breakthrough objectives. Based on the organization's long-term strategic plans, SD translates the overall objectives into single tasks which have to be completed within the corresponding functions and on different levels through the organization. An important part of SD is the alignment throughout the whole organization in horizontal as well as in vertical direction. (Kudernatsch, 2013, p. 18)
SD provides a focus on corporate direction by setting a few strategic priorities for each year. These strategic priorities are aligned through the organization. Strategic targets and corresponding tasks are integrated into daily management. Additionally, SD provides a structured monitoring

and review process to track the progress of the defined tasks and to enable the determination of countermeasures in case of deviations. (Tennant & Roberts, 2001, p. 289)
The principle and key facts about SD are summarized in figure 14.

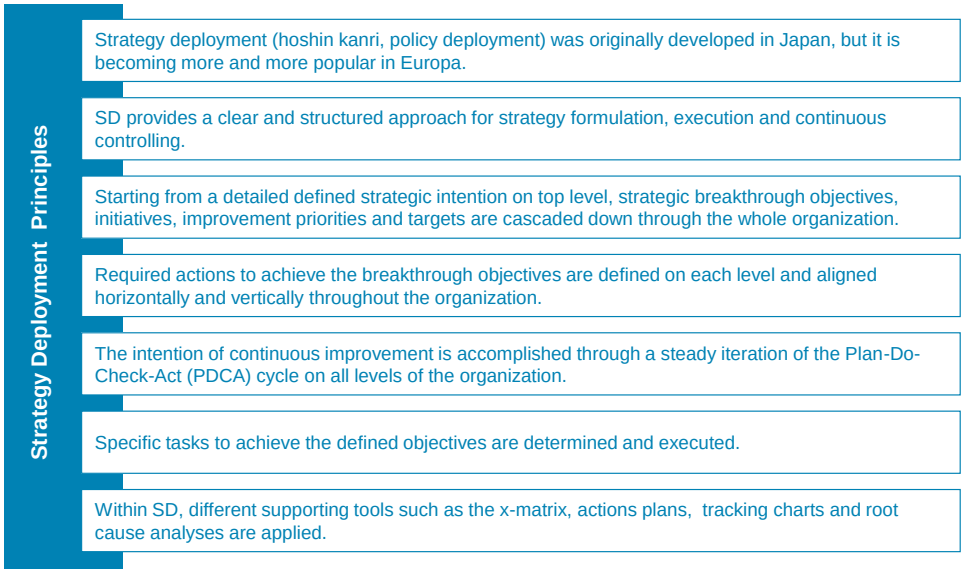


Figure 14.: SD at a Glance (based on Kudernatsch, 2013, p. 16-57)

The successful implementation of SD into a whole organization requires five to ten years. Especially in European organizations, where the business culture is different from the Japanese and American culture, a long implementation period is required. The reason for that is that for the success of SD, managers commitment and understanding of SD is essential. In many cases, managers of European organizations are not familiar with the approach of SD. To overcome that problem, it is important to support and train managers accordingly, which requires time. (Kudernatsch, 2013, p. 131-132)

In the author's view, SD is a powerful method to ensure a structured and systematic strategy execution within an organization, in particular where the corporate strategy requires radical changes and significant breakthroughs. Due to the fact that the author considers SD a powerful and highly promising method for strategy implementation and for gaining required insights to answer the research question defined in chapter 1.1, SD is investigated in detail in chapter 4.

Comparison of PM / MPM, BSC and SD

Due to the fact that PM / MPM is completely different in the methodology from BSC and SD, and that PM / MPM cannot be used for strategy assessment and formulation, the methods cannot be

directly compared in detail. In practice, PM / MPM is often used in combination with BSC or SD to make use of the particular advantages and to compensate the disadvantages. The author sees PM / MPM as a tool, respective framework, to ensure the systematic execution of strategy-related activities to achieve defined targets in a structured way, depending on the size and complexity of these activities. Figure 15 summarizes characteristics of PM / MPM, BSC and SD.

	PM / MPM	BSC	SD
Classification	▪ Strategy execution method	▪ Strategy execution method	▪ Strategy execution method
Field of application	▪ Systematic implementation of strategic projects ▪ Support of strategy control ▪ Support of strategy execution in combination with other methods	▪ Strategy assessment and formulation ▪ Strategy implementation ▪ Strategy control	▪ Strategy assessment and formulation ▪ Strategy implementation ▪ Strategy control
Advantages	▪ Systematical execution of a set of complex activities ▪ High transparency (all participants know exactly what their tasks are) ▪ Flexibility	▪ Possibility for strategy assessment, formulation, execution and control ▪ Balanced weighting of the four perspectives (financial, internal business process, learning & growth and customer)	▪ Possibility for strategy assessment, formulation, execution and control ▪ Principle of PDCA cycle ▪ Through focus, achievement of significant breakthroughs ▪ Systematic definition of specific tasks ▪ Participation and alignment of employees
Disadvantages	▪ Too comprehensive for simple activities ▪ No strategy assessment and formulation ▪ Limited strategy control ▪ Difficult to align the whole organization ▪ Lack of alignment and communication within the organization	▪ Lack of integration of strategic tasks into daily business ▪ Too many objectives at the same time (lack of focus on significant breakthrough objectives) ▪ Systematical definition and execution of specific tasks is not guaranteed ▪ In many cases lack of participation & alignment	▪ Long implementation period
Importance for strategy execution	▪ On project level for systematic execution of strategic activities	▪ High	▪ Very high
Recommen-dation	▪ Use it as support for systematic execution of complex strategic activities	▪ Use it in combination with other methods (e.g. PM)	▪ Valid method for strategy execution ▪ Use it, if required, in combination with other methods (e.g. PM)

Figure 15.: Characteristics of PM / MPM, BSC, SD (personal design)

Due to the several advantages of SD, especially regarding the requirements which arise after realignment of an organization (achievement of radical changes & significant breakthroughs, alignment and participation of employees, adequate communication within the organization, flexibility etc.), this topic is treated further in this thesis.

3.4. Conclusion

Nowadays, the model of integrated management is strongly in focus. The integrated management model distinguishes between a normative, a strategic and an operative level. The normative level is mainly focused on the organization's constitution and business culture. For the context of this thesis the difference between the strategic management level and the operative management level is particularly important. Strategic management is long term orientated. It is about defining the right tasks, the appropriate strategic program and allocating resources in a way that long-term success

can be ensured. Operative management is short-term orientated. It is focused on the realization of strategic programs and the efficient use of potentials for success.

The process of strategic management is divided into different phases, where the strategy implementation phase is a challenging, but also important phase, which should receive high attention. The best strategy is worthless unless it is systematically executed, continuously controlled and adapted if required. Due to the importance of successful strategy implementation, this thesis is focused on that particular phase.

Commonly used methods to support strategy execution are for example, project management / multi-project management, balanced score card or strategy deployment. These methods can be used individually or parallel. All of them are related to the management principle of management by objectives. Figure 16 shows the relationship between the phases of strategic management and the supporting methods.

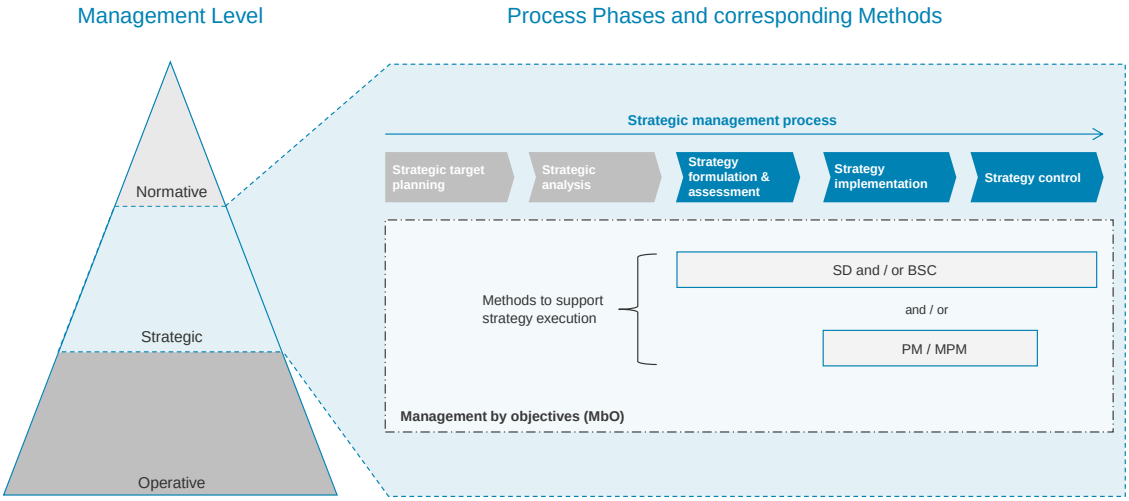


Figure 16.: Relationship Management Level, Management Process and Strategy Implementation Methods (personal design)

Each method has its specific advantages and disadvantages. To overcome the disadvantages, it is recommended to use methods in parallel. The right choice regarding the applied method (or combination of methods) depends on the context and cannot be defined as a general valid answer.

Comparing the different methods, the author sees SD as a powerful method for strategy implementation, especially in terms to the achievement of significant breakthroughs, flexibility as well as

alignment and communication within an organization. SD is an appropriate method to implement a strategy after realignment of an organization and to follow an ambitions strategy such as the organization's intention to grow. If it is required, for example in case of complex strategic activities, PM shall be be used in addition to SD to ensure a systematic and structured execution.

4. Strategy Deployment

This chapter is focused on SD as supporting method for strategy implementation. The key topics are the theoretical background regarding SD, opportunities and limitations of SD and the aspects which need to be considered for implementation and roll-out of SD within an organization. The key insights from this chapter are summarized in chapter 4.4.

4.1. Strategy Deployment in Theory

For the understanding of this method it is helpful to have the original Japanese term for SD in mind: "hoshin kanri". The translation of that term consists of four parts: "Ho" means "direction" and "shin" means "needle"; together it is interpreted as "compass needle". "Kan" means "control" and "ri" means "logic", which together is interpreted as "management control". Thus, hoshin kanri means control of the organization's strategic direction. The term strategy deployment arose when hoshin kanri was transferred to America and Europe. It is a different wording, however, the principle stays the same. (Kudernatsch, 2013, p. 16-17) The idea of SD is to break down the strategic intentions and breakthrough objectives through all levels of the organization and to make strategic targets a part of daily business. All employees are aligned and know their own contribution to achieve the overall strategic objectives. Figure 17 illustrates how SD can optimize the situation in an organization. (Tennant & Roberts, 2001, p. 289-290)

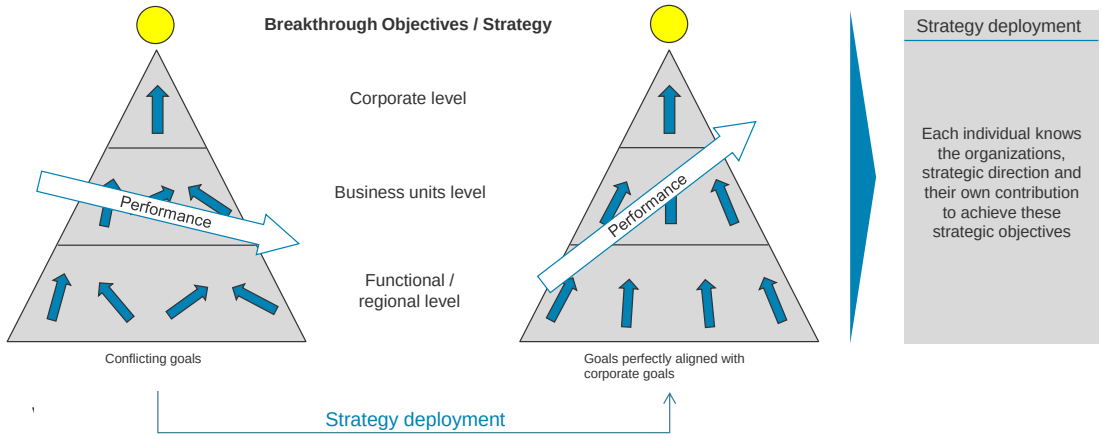


Figure 17.: Situation in Organizations with Strategy Deployment (based on Hutchins, 2008, p. 8)

The approach of SD is based on the continuous iteration of the Plan-Do-Check-Act (PDCA) cycle on different levels of the organization, whereas each of the phases has its own specific focus, tasks and applied methods (Kudernatsch, 2013, p. 30). Figure 18 shows the four phases and how the steady iteration of these phases leads to continuous improvement. The result will be the achievement of the strategic breakthrough objectives and thus a successful strategy execution.

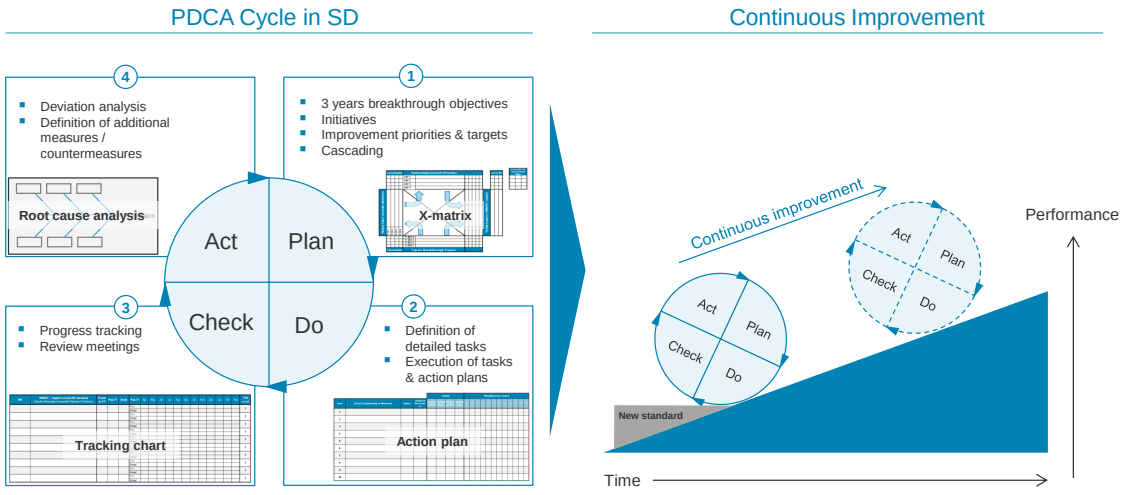


Figure 18.: The PDCA Cycle as mean to Continuous Improvement (personal design)

Plan Phase

In the plan phase, starting from a detailed defined strategic intention on top level, strategic breakthrough objectives, initiatives, improvement priorities and targets are developed and later cascaded down to the next levels.
The number of breakthrough objectives should be between three and five and they should guarantee major changes and breakthroughs. More breakthrough objectives would lead to a lack of resources and loss of focus. The top level breakthrough objectives are based on the general strategic intention, defined by the top management, and have a time horizon from three to five years. In literature, the breakthrough objectives are sometimes categorized into quality-related objectives, cost related-objectives, delivery-related objectives and education-related objectives (they can be assigned to BSC's customer, financial, internal business process as well as learn & growth perspectives). In many cases, the breakthrough objectives are defined as "stretched targets", which means that targets are intentionally defined exaggerated ambitions. This approach ensures to achieve the best possible outcome regarding the specific targets. (Kudernatsch, 2013, p. 35-38)

Based on the three to five breakthrough objectives, the yearly strategic initiatives are developed. Each yearly initiative leads to at least one annual improvement priority (AIP).
To measure the success, it is also important to define key performance indicators (KPIs) or SMART-targets (specific, measurable, achievable, relevant, time-bound). Measures are defined on a yearly base.
The type of measures which are assigned to one or more AIPs, varies according to the type of objective, which shall be reviewed. The key question for defining these KPIs and SMART-targets is to evaluate, whether a specific activity was successful or not. Essentially, the definition of the right measures for monitoring is a secondary decision process that runs parallel to the objectives, initiatives and AIPs definition process. (Colletti, 2013, p. 24)

For documentation of these objectives, initiatives, AIPs and targets, the x-matrix is used (Kudernatsch, 2013, p. 35-38). In literature, different variations of this x-matrix are described, however, the general content and approach is the same. Besides a clear and structured documentation of the objectives, initiatives, AIPs and targets, the x-matrix includes the documentation of how different objectives, initiatives, improvement priorities and targets correlate. Furthermore, a section is included, where functions, disciplines or people, that are responsible for execution of the defined improvement priorities, are determined. An example of an x-matrix is shown in figure 19. (Kudernatsch, 2013, p. 50)

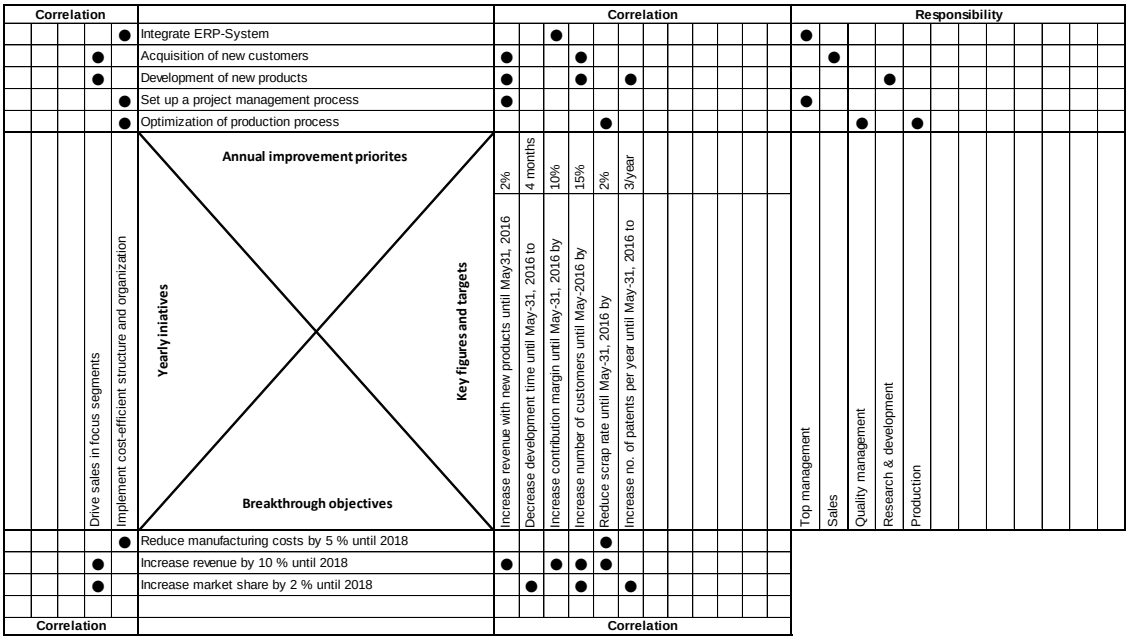


Figure 19.: X-Matrix on Top Level (based on Kudernatsch, 2013, p. 25)[1]

In the x-matrix shown in figure 19, examples for breakthrough objectives, strategic initiatives, AIPs and targets are included. "Increase revenue by 10 % until 2018" is one example for a breakthrough objective. The strategic initiative that is related to this breakthrough objective is "drive sales in focus segments", which correlates with the two AIPs "acquisition of new customers" and "development of new customers". One of the defined measurements for "acquisition of new customers" is "total number of customers" where the corresponding SMART-target is defined as "increase number of customers until May-2016 by 15 %". The sales function is responsible for completing the target "increase number of customers until May-2016 by 15 %".

The next step in the plan phase is the cascading down and alignment through the organization. Starting point for cascading down is the top level x-matrix. The next lower level x-matrix is developed into the so-called catchball process. This means that the content and objectives are not only defined as a top-down approach, but rather in a cooperation between leader and employee, which leads to a better commitment to the goals. This cascading down process continues until the lowest level x-matrix with all objectives, initiatives, AIPs and targets is defined. (Kudernatsch, 2013, p. 42-50)
The term catchball derived from a children's ball game, but instead of a ball, an idea is thrown around from person to person. For the development of appropriate objectives and their deployment through the levels of the organization, a continuous communication, achieved through the catchball process, is essential. Feedback in multi-directional horizons, what requires the organization's

[1] Own translation

commitment to employee involvement and continuous improvement, needs to be ensured. (Tennant & Roberts, 2001, p. 291-292)
Figure 20 shows the principle of the cascading down approach.

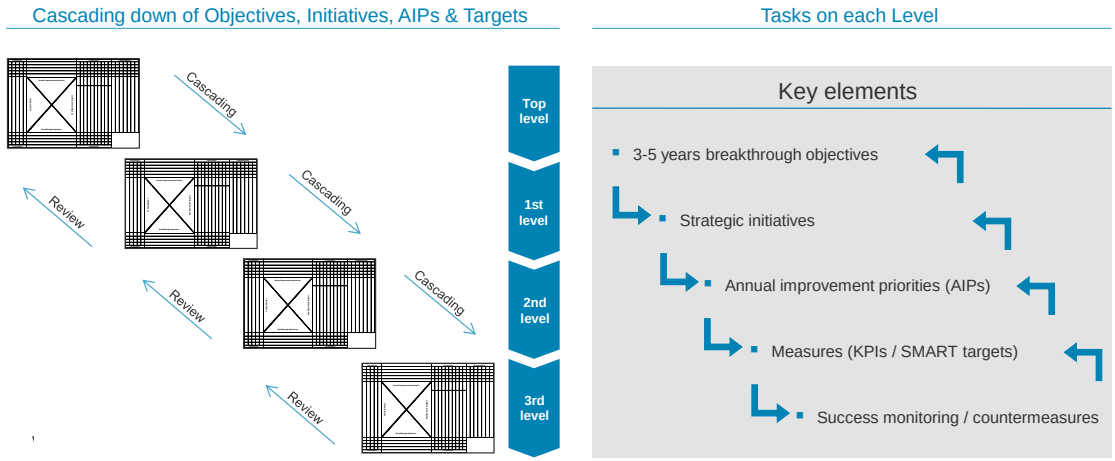


Figure 20.: Principle of the cascading down Approach (personal design)

Do Phase

In the do phase, the defined plans are executed. To achieve a good result, it is essential to integrate the targets and related actions into the daily business (Kudernatsch, 2013, p. 62).
Normally, the realization of plans is supported by the use of detailed action plans. The level of detail should be adjusted in accordance to the extent and complexity of the specific target. The action plans are the indispensable link from defined targets to detailed, feasible tasks. Development of these action plans is answering the question of what has to be done, when, by whom and to what extend in order to achieve the defined targets. (Kudernatsch, 2013, p. 46)
Furthermore, is important that managers and employees are able to realize these plans in an appropriate manner. This means that high effort for coaching managers and employees is required. The target is that employees are able to realize plans and to solve problems independently, which leads to an improvements in quality, reduces processing times and finally reduces costs for the organization. It is crucial for success that managers and employees have high knowledge regarding the PDCA cycle and how it is applied. Moreover, is important that for the realization of plans, required resources (budget, manpower, software etc.) are provided by the management. (Kudernatsch, 2013, p. 62)
The required tasks to achieve the defined targets should be executed by teams or individuals, depending on the complexity of the corresponding task. In case of teams, it is advisable to nominate one team leader. (Lee & Dale, 1998, p. 536)

Check Phase

In the check phase, the actual status and progress of improvement priorities, and targets are reviewed on all levels to make sure that everything is going into the right direction (Kudernatsch, 2013, p. 98).
Part of the check phase are periodic meetings, where the progress is monitored, problems are discussed and countermeasures are defined if required. The frequency of these review meetings can be defined individually, but usually the frequency is high on low levels (e.g. weekly) and low on top level (e.g. quarterly). Participants of these meetings are the person in charge of the achievement of the specific targets, employees from other business functions or disciplines to ensure the indispensable alignment in horizontal direction, the leadership team and, additionally, employees who are involved in executing defined actions or tracking the results if this is required. (Kudernatsch, 2013, p. 106-107)
Continuous review is a critical part of the SD process. It includes problem solving at all levels and maintaining visibility to manage plan modifications over time. To be able to respond to upcoming problems and issues in time, a systematic process has to be defined and conducted. The leadership team is responsible for maintaining and sustaining the review process over the year. (Colletti, 2013, p. 75-76)
In literature, it is often recommended to use standardized visualization methods for progress tracking. This has the advantage that everybody can see the actual performance fast and easily. The progress of key figures is usually monitored in tracking charts. (Kudernatsch, 2013, p. 98) Figure 21 shows an example of a tracking chart. In the tracking chart, the actual status of each target is updated and compared to the planned value on a monthly base.

Tracking Chart															
No.	**Targets**	**KPI**	**2013**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1		Plan													
		Actual													
2		Plan													
		Actual													
3		Plan													
		Actual													
4		Plan													
		Actual													
5		Plan													
		Actual													
6		Plan													
		Actual													
7		Plan													
		Actual													
8		Plan													
		Actual													

Figure 21.: Tracking Chart (according to Kudernatsch, 2013, p. 47)[2]

Act Phase

In the act phase the achieved results and improvements should be secured. The new, improved status, for example through development of a new process, are to be standardized. The delimitation from the other phases is not always possible since the act phase is more a continuous process along all phases. It is important that this standardization process is conducted on all levels through the organization including the top management level. (Kudernatsch, 2013, p. 115)
In literature, deviation analysis and the definition of additional measures or countermeasures are often assigned to that phase, which comes hand in hand with the check phase.
After the act phase, the PDCA cycle starts again. In the SD process, the continuous repetition of the four phases according to the PDCA cycle is conducted to achieve continuous improvement within the organization.[3] (Kudernatsch, 2013, p. 115)

[2] Own translation
[3] For more details regarding SD process the author refers to Kudernatsch, 2013

4.2. Opportunities and Limitations of Strategy Deployment

Well-known organizations which gained benefits through the implementation of SD are, for example Toyota, which is also seen as one of the inventors of the currently known SD approach; Hewlett-Packard, which implemented SD in the early 1980s; Procter & Gamble which implemented SD in the late 1980s and General Electric, which became the number one respectively two in each of its business markets after implementing SD. (Colletti, 2013, p. xv-xvi)
SD provides a wide range of opportunities as method for strategy execution, especially where the intention is to achieve major breakthroughs. The vertical as well as horizontal alignment, the contribution of each employee to achieve the overall strategic objectives and the systematic allocation of resources to a few breakthrough objectives are strengths of SD. (Kudernatsch, 2013, p. 18)
Additionally, the author considers the continuous monitoring, the detailed definition of feasible tasks and the ability to react without delay on deviations from the targets important advantages of SD.

The limitations of SD, in particular in European and American organizations, are often seen in the different culture and management style compared to the Japanese organizations. It is therefore important that organizations commit on SD and train their employees in required techniques and methods to ensure a successful application of SD. (Kudernatsch, 2013, p. vi)
In many cases it is difficult to limit the objectives to a few important ones. A consensus between the different disciplines must be achieved. Another issue is the question of how to motivate and how intensively to involve employees in the development of the objectives. (Witcher & Butterworth, 2001, p. 672)
A successful implementation of SD in an organization requires five to ten years (Kudernatsch, 2013, p. 131). During the implementation period, a lot of training for employees and managers is necessary, which requires financial resources and time.

4.3. Implementation and roll-out of Strategy Deployment within an Organization

A successful initial implementation of SD in an organization and the following roll-out require a well-prepared and structured implementation and roll-out plan, a consequent execution of this plan as well as full commitment and support from the top management. The success depends on several different aspects. Ten key factors for a successful SD roll-out are (Kudernatsch, 2013, p. 130-135):

- **Coaching of employees** is important, so that everybody who is involved in the SD process knows what SD is about and how it is applied. The focus should be on coaching directly at the workplace, facing real problems.

- **Motivation for improvement** is essential for organizations. Due to continuous changes in technology and environment, it would be fatal to stay on one level and not to try to improve and further develop the organization. The task of the management is to motivate their employees to drive changes and actively participate in this process.

- **A clearly defined vision** is needed to give a reasonable overall strategic direction, where all arising actions are aligned to achieve the strategic overall intention.

- **Working step-by-step** means that SD cannot be implemented overnight. A well-planned sequence of activities needs to be conducted over years to achieve a good result. The implementation of SD should start in selected areas and be rolled out through the rest of the organization later, step-by-step.

- **Management training** is required where managers are not familiar with the approach of SD. The requirements for managers within the SD process are high. It has to be ensured that all managers are ready for the SD implementation before it starts.

- **The definition of the right breakthrough objectives** is important to concentrate all available resources on a few key objectives. Having too many or the wrong breakthrough objectives would lead to failure.

- **Aligned targets** ensure that the whole organization is working towards the same goal. In SD, the catchball process and the periodic review meetings ensure alignment in horizontal as well as in vertical direction. The commitment and thus the motivation to achieve specific targets is much better when these targets are defined in a group and not only top-down by the management.

- **The continuous application of the PDCA cycle** is seen as a core aspect of SD. The steady change between planning, execution and review guarantees that everybody is aware of the required actions at all times. Deviations from the targets are recognized immediately and required countermeasures can be defined in a timely manner.

- **Visualizing performance** means to use methods or tools to display the actual performance or problems. This leads to a better transparency and improved abilities for problem solving.

- **Periodic reviews** are indispensable in order to be able to react in time to problems and to stay flexible. In addition, the review meetings contribute to a better alignment in horizontal and vertical direction.

To manage all SD-related data, for example the x-matrices, action plans, tracking charts etc., a SD-specific software is offered by different providers. This software encourages the planning, execution, review and problem-solving process. Templates and tools are provided within the

software. Additionally it provides a common platform for all people who participate in the SD process which makes the whole process more transparent and the data easier to manage.
Using SD-specific software alone does not guarantee a successful SD implementation. It is important that the focus is not on the software, but rather on the people who are working within the SD process. (Kudernatsch, 2013, p. 254)

4.4. Conclusion

SD is a powerful method to ensure a structured and aligned approach to formulate, execute and control strategy within an organization. Also, the success of well-known organizations, which implemented SD, proves that it is a powerful method. Examples of organizations that gained significant benefits through implementation of SD are:

- Toyota, which is also seen as one of the inventors of the currently known SD approach.
- Hewlett-Packard, which successfully implemented SD in the early 1980s.
- Procter & Gamble, which successfully implemented SD in the late 1980s.
- General Electric, which became the number one respectively two in each of its business markets after implementing SD.

The method is based on the permanent repetition of the PDCA cycle, which leads to sustainable and continuous improvement.
A successful implementation of SD requires a long period of time (5-10 years). Several aspects need to be considered. Nevertheless, SD provides a wide range of opportunities. Advantages, such as the alignment in vertical and horizontal direction, the contribution of each employee to achieve a few overall strategic breakthrough objectives, the detailed definition of required tasks, the continuous monitoring and the resulting flexibility, justify, in the authors view, the high implementation effort.

Practical experience shows that realignment of an organization requires radical changes, significant breakthroughs and improvements. In addition to that, it is essential to define precise objectives, to ensure alignment within the organization, to achieve participation of all employees within the strategy implementation process and to guarantee adequate communication throughout the whole organization. SD provides the necessary means to achieve such breakthroughs.

In order to manage the SD-related data and the SD process in general, it could be helpful to use a SD-specific software. Such a software provides the necessary templates and tools to simplify the whole SD process.

5. Strategy Deployment Optimization at vaBW

An analysis and optimization of the strategy deployment approach was conducted at the case partner voestalpine Böhler Welding Group GmbH (vaBW) according to action research.
This case study is structured as shown in figure 22. The first part of the case study is an introduction of voestalpine Böhler Welding Group GmbH. After this introduction, the targets and procedure of the case study are presented. The following step is a detailed analysis of the current situation within vaBW. Based on the results of this as-is analysis an improvement concept is developed and implemented. After the implementation of the improvement concept, the results are reviewed and modifications are conducted, wherever required. In the last part of this case study the key improvement actions and gained insights are summarized.

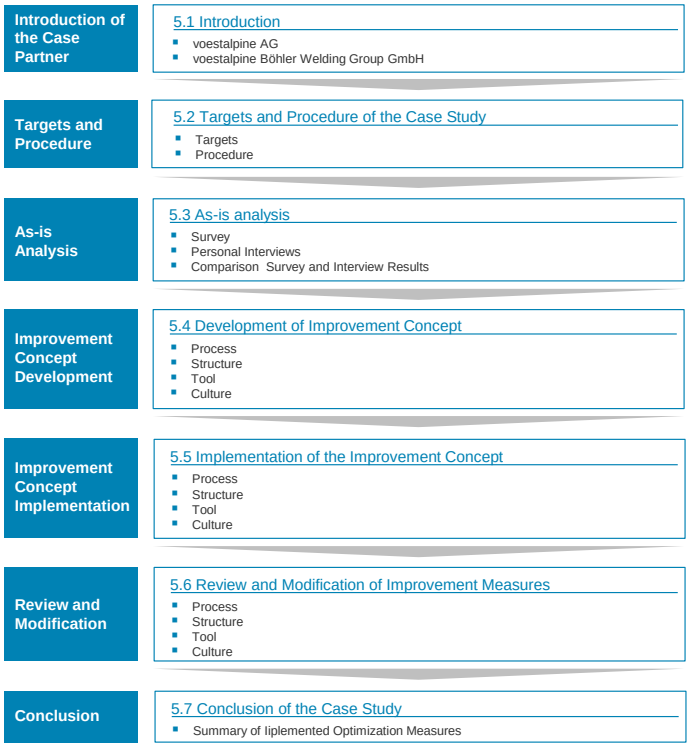


Figure 22.: Structure of the Case Study (personal design)

5.1. Introduction of voestalpine Böhler Welding Group GmbH

voestalpine Böhler Welding Group GmbH (vaBW) is a core business unit of voestalpine AG and is integrated in the Metal Engineering Division. The voestalpine AG is a world leader in the manufacturing, processing and developing of sophisticated steel products. voestalpine AG supplies technology-intensive sectors, such as the automotive, railway, aviation, and energy industries. voestalpine's products are manufactured in 500 different subsidiaries in more than 50 countries on all five continents and it is employing around 48,000 employees. voestalpine divides its businesses in 4 divisions: Steel, Special Steel, Metal Engineering and Metal Forming. In the business year 2014/15, voestalpine AG achieved a revenue of EUR 11.2 bn. (voestalpine AG, 2015)
vaBW is organized as one Customer Oriented Enterprise and operates 12 manufacturing plants and more than 30 sales branches around the globe to manufacture, distribute and sell a broad range of welding consumables. In the business year 2014/15, vaBW achieved a revenue of EUR 545.2 m. Figure 23 shows the global footprint and key facts regarding vaBW. (voestalpine Böhler Welding Group GmbH, 2015)

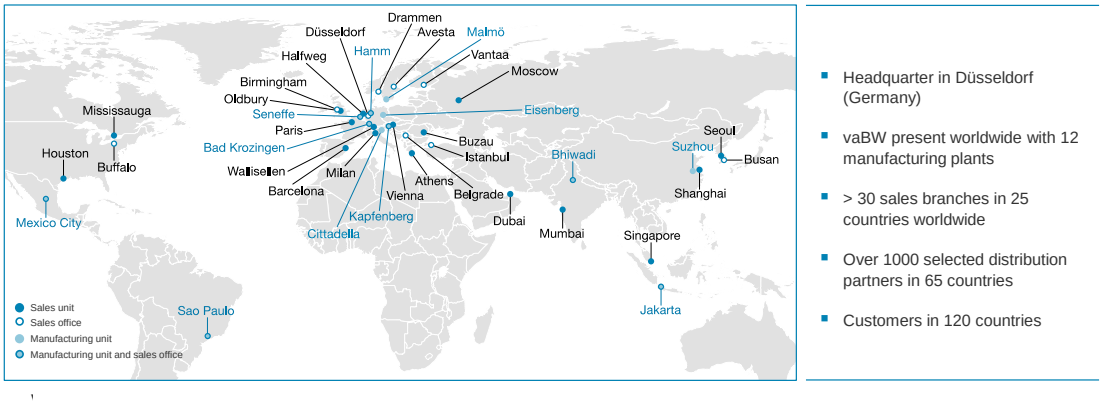


Figure 23.: vaBW Global Presence (according to voestalpine Böhler Welding Group GmBH, 2015)

For over 85 years, Böhler Welding - a fusion of the Böhler, T-PUT, Avesta, and UTP product brands in the voestalpine Böhler Welding brand family - has been earning a proud reputation as an innovative supplier of welding filler materials for joint welding, that can be used in any conventional welding process. Today, it is considered one of the leading global suppliers in the field of joint welding, focusing specifically on medium- and high-alloyed consumables.
The strategic intention of vaBW is to grow and to establish one strong global acting "Customer Oriented Enterprise" based on the strong European heritage. This required several structural and cultural changes within the organization. The defined and required initiatives and projects

to execute the strategy in a successful way are bundled in a Join C3P Strategy Execution and Efficiency program.
The performed structural and cultural changes within vaBW required an adaptation and optimization of the strategy implementation approach. vaBW is now organized as a key-functional centralized group. This means that the competencies of employees within one functional area are bundled, and all relevant departments report functionally to the same functional management. The leader of a global functional area is responsible for driving, steering and managing this function across regions, sales and manufacturing units as well as communicating strongly with other functional areas to ensure alignment. The functional organizational set-up with a global steering of functional areas leads to fast decision lines, short reporting structures, clear roles and responsibilities, well-defined interfaces and communication structures. Figure 24 shows vaBW's organizational structure with its functional areas (1st and 2nd reporting level).
vaBW implemented strategy deployment as an approach for strategy execution in 2009. This approach was designed for the previous, decentralized structure and therefore it cannot guarantee successful strategy execution within vaBW anymore. The challenge is, despite the new situation, to still drive strategy execution on a global scale. This challenge was the initial trigger for this thesis.

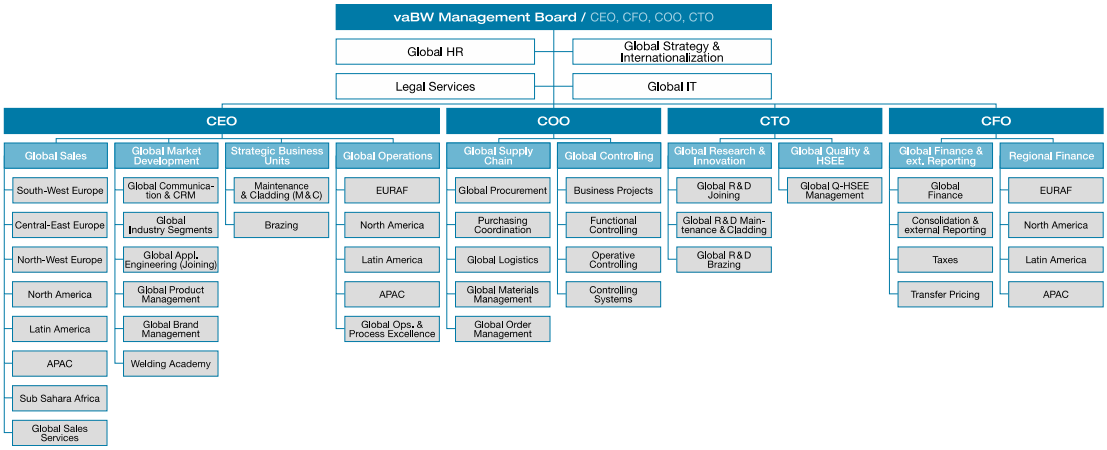


Figure 24.: vaBW Global Organization Chart (according to voestalpine Böhler Welding Group GmBH, 2015)

5.2. Targets and Procedure of the Case Study

The objective of the case study is to develop recommendations for optimization of the already implemented SD approach, to guarantee successful strategy implementation and to ensure full alignment between SD and the new organizational structure.
In addition, the recommendations shall be implemented. The insights gained from the practical

implementation are utilized to answer the research question, which has been formulated in the beginning.
The overall goal is divided into four sub-goals as shown in figure 25 to ensure a systematic and structured optimization process.

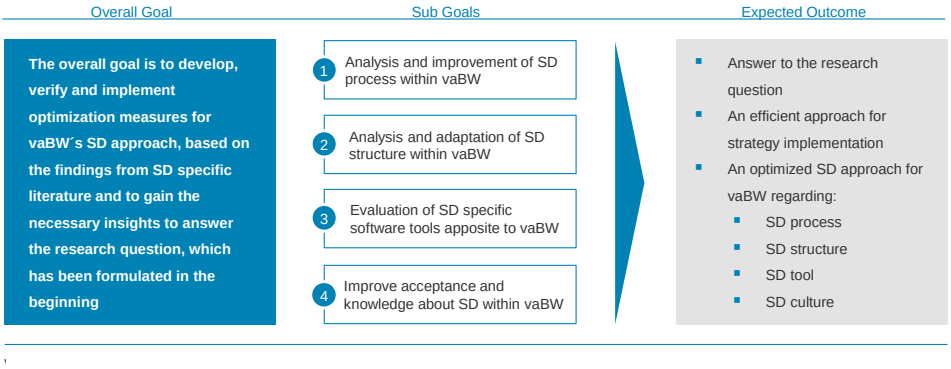


Figure 25.: Targets of the Case Study (personal design)

Procedure of the Case Study

The general procedure of this case study is divided into four major steps. These steps are inspired by the method of SD, assigned to the four phases of the PDCA cycle. Each step has its specific focus and is linked to the corresponding literature part.
Figure 26 shows the corresponding steps, how the steps are assigned to the PDCA cycle, the key content of each step and the corresponding chapters within the literature part.

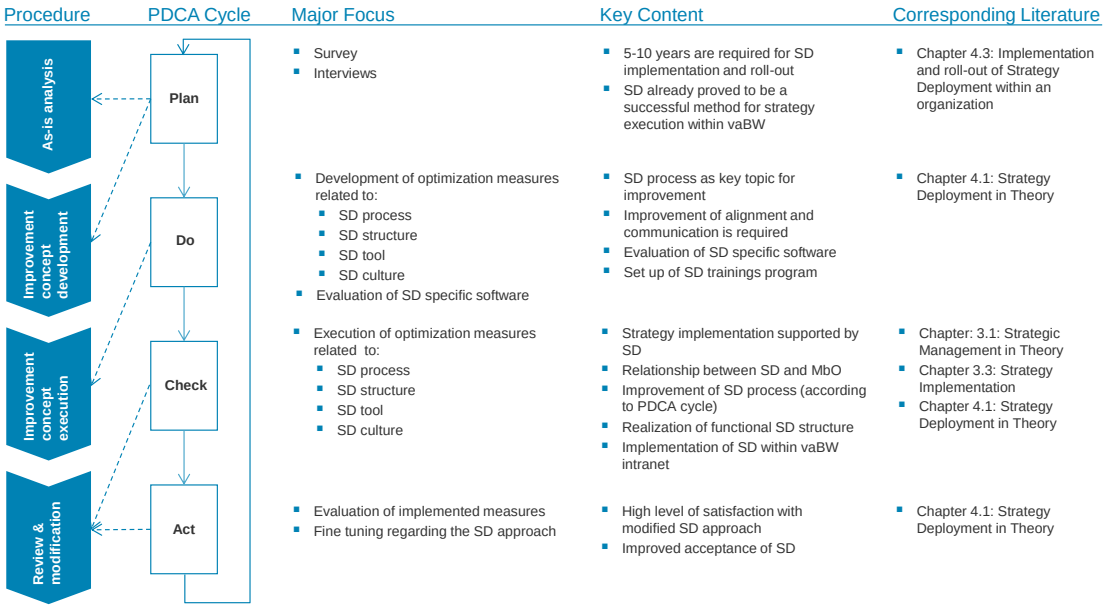


Figure 26.: Procedure of the Case Study (personal design)

The as-is analysis is the initial point for development of an improvement concept. The main methods conducted to evaluate the actual status were an online survey and personal interviews.
The improvement concept development is focused on the detailed elaboration of required optimization measures based on the findings from the as-is analysis.
The key content of the improvement concept implementation is the realization of the majority of the developed optimization measures. The decision, which measures were implemented, depended on the relevance and expected impact on the improvement level. The final determination of which measures were directly implemented was conducted in close cooperation with the vaBW top management to ensure commitment on the modified SD approach.
The review and modification part was conducted to evaluate the benefit gained from the implementation of the elaborated optimization measures. The target is to identify, which optimization measures were successful and to what extent. Moreover, possible needs for further improvements were analyzed. This part is important with regard to the action research approach to link the gained insights from the practical part to the findings from the literature part.

According to the system theory, strategy would refer to business unit strategy within the system voestalpine AG. However, as already delimited in chapter 1, the subject of investigation is the sub-system vaBW. Within this sub-system, the strategy can be treated as corporate strategy as shown in figure 27. It is out of question that the business unit strategy needs to be in line with the corporate strategic objectives.

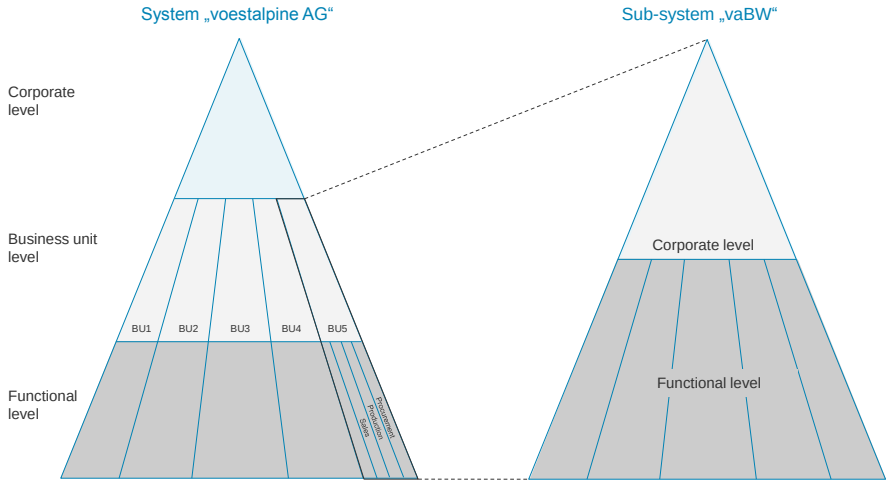


Figure 27.: Determination of Scope of Application for Strategy according to the System Theory (personal design)

5.3. As-is Analysis at vaBW

As the first step within the case study, the as-is analysis was conducted to uncover problems and potentials for improvements according to the SD approach within vaBW. The gained insights in this phase are the base for the future phases according to the procedure defined in chapter 5.2.
SD has already been in use for years within vaBW and it has proved to be successful. Over the years, adaptations and improvements in the SD structure and process were conducted. An overview about the evolution of SD within vaBW is shown in figure 28.

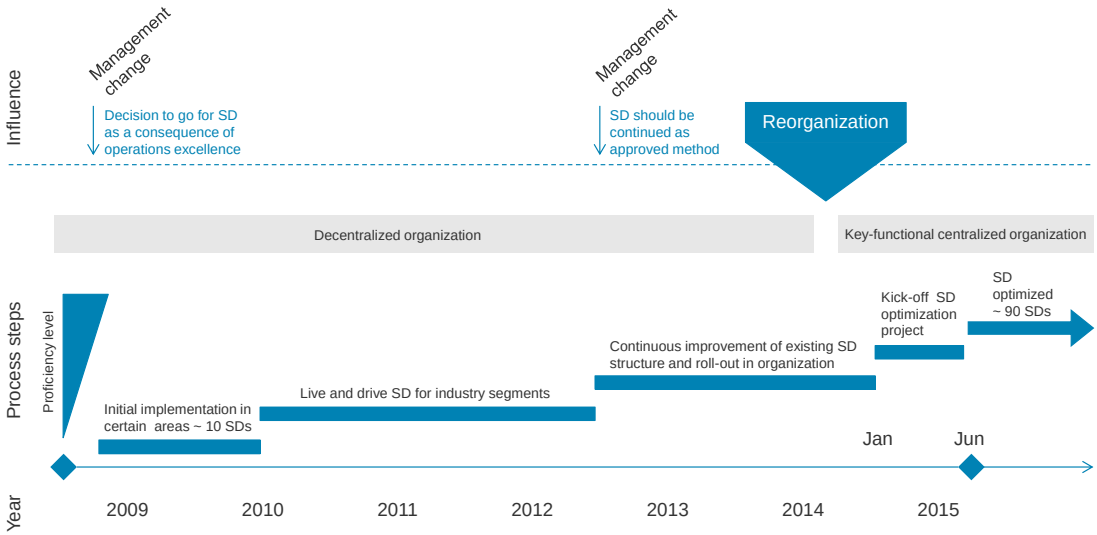


Figure 28.: Evolution of SD Development within vaBW (according to voestalpine Böhler Welding Group GmbH, 2015)

The initial implementation of SD within vaBW was conducted in 2009. At this time SD was only implemented in selected areas, which is in line with the findings from the literature (chapter 4.2). A roll-out of SD within several industry segments was conducted in 2010. Further improvement of the SD approach and roll-out through most areas of the organization was realized step-by-step in the years 2012 to 2014. The next milestone regarding SD within vaBW was the global reorganization conducted in 2014, which is also seen as the initial point for further optimization of the SD approach and consequently the initial point for this thesis. In the past, x-matrices and other elements used in course of the SD approach, were established as .xls files.
To evaluate the exact current status and proficiency level of SD, first an online survey and, second, personal interviews (workshops) were conducted. This as-is analysis was indispensable in order to identify the weaknesses and problems related to SD and to identify the potentials for improvement.

As-is Analysis: Online Survey

The survey was the first step conducted towards an improved SD approach within vaBW. Participants were employees and managers who have worked with SD in the past. The reasons why the author decided to conduct an online survey are:

- The participants, who are working in different locations all over the world, were reached

easily.

- The number of employees (population) affected by SD within vaBW is too high to conduct personal interviews with all of them.
- Through the survey, all affected employees were able to participate in the evaluation and, subsequently, in the SD improvement process (experiences, worries and ideas from all participants are considered in the improvement measures).
- The large sample of participants ensured a meaningful result.

The survey was conducted with the tool SurveyMonkey. To ensure a balanced and systematic evaluation and development of improvement measures, the 18 questions were segmented into the five following categories: general aspects, process related-aspects, structural aspects, tool-related aspects and cultural aspects. The category of general aspects is used to gain a rough overview regarding the general attitude towards SD as method for strategy implementation within vaBW. In the category of process-related aspects, the focus is on the planning, cascading down and review process. The category of structural aspects is focused on the question of which hierarchical levels SD shall be implemented and how the SD structure should be organized in general. Key topic of the tool-related category is the evaluation of the satisfaction level with the currently applied .xls templates. The category of cultural aspects is used to evaluate whether the understanding and acceptance of SD within vaBW is sufficient. In figure 29, the key facts regarding the survey background and design are summarized.

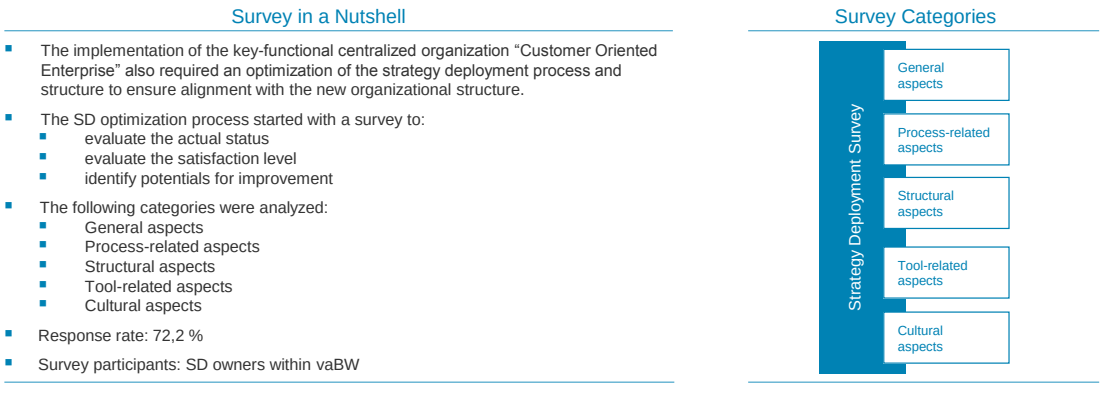


Figure 29.: Survey Background and Design (personal design)

The major outcome of the survey was that SD is in general well-accepted and seen as a valid method

for strategy implementation and, in particular, to stay focused on a few overall breakthrough objectives. However, some potentials for improvement were identified. The key issues for improvement were identified in the category of SD process, where a clear timeline for the cascading down process including a detailed meeting structure and the definition of a SD monitoring process are regarded the top improvement measures. Regarding the category of structural aspects, it was identified that the general satisfaction with the current SD structure is high, however, an adaptation according to the functional structure is required. Although the satisfaction with the provided .xls tool is high as well, the evaluation of an SD-specific software solution is seen as a potential for improvement. The evaluation of the category of cultural aspects showed that in some specific areas, additional SD trainings are seen as potential for improvement. Figure 30 shows the key findings and the developed top improvement measures based on these key findings.

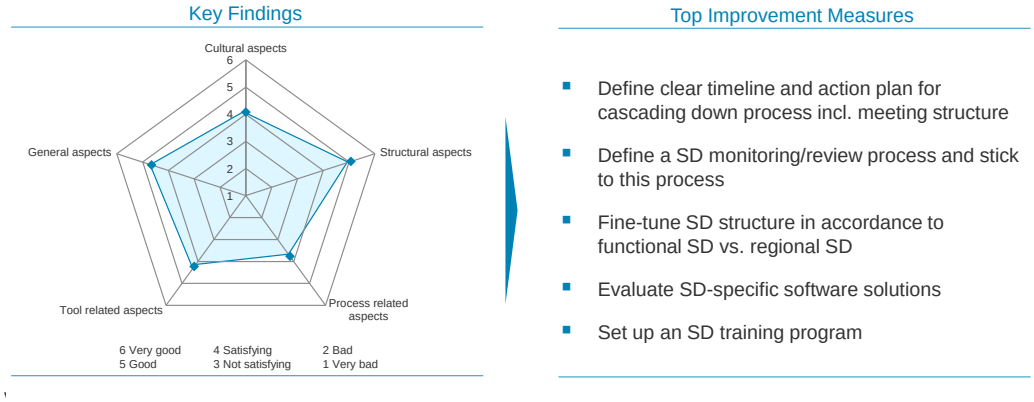


Figure 30.: Key Findings of the Survey (personal design)

As-is Analysis: Personal Interviews

The second method which was applied to evaluate the as-is status regarding the existing SD approach was the personal dialogue. Due to the fact that it is easier to discuss complex contents face-to-face short workshops were organized. The purpose here was to discuss problems, potentials for improvement and ideas in detail with leaders who have already used SD within their area of responsibility. The interview partners were members of vaBW's executive team, in particular the Senior Vice Presidents of Global Sales, Global Market Development, Global Supply Chain Management and the Vice President of Global Strategy & Internationalization. The interviews were divided into two parts. In the first part, the focus was on the gained experiences with SD in the previous years and identified problems according to the existing SD approach. In the second part, the focus was on the definition of improvement measures and development of the future SD

approach. The questions were assigned to the same categories as defined for the survey. Figure 31 shows the key facts regarding the interview background and structure.

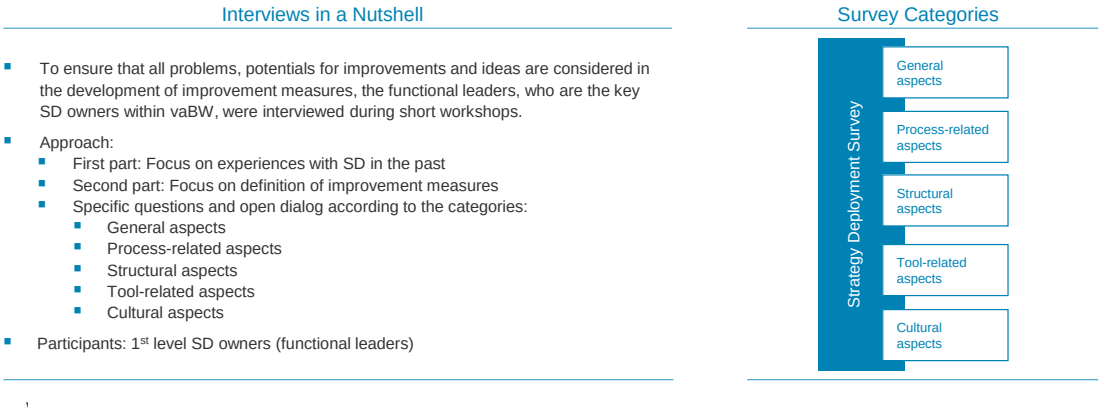


Figure 31.: Interview Background and Design (personal design)

The key insights from these interviews did not differ much from the insights of the survey. As main topic for improvement, the SD process including a clear timeline was identified. In addition, it it was discovered, that in some specific functions it is required to improve the knowledge and understanding regarding SD. The improvement of communication and alignment between the functions was also defined a potential for improvement.
The results of these interviews are summarized in figure 32.

Category	Identified Strengths	Potentials for Improvement	Required Optimization Measures
General aspects	▪ SD is seen as a useful and powerful approach and works well in general ▪ SD helps staying focused on the key objectives	▪ Better communication and more information about SDs within other functions ▪ Continuous follow-up and tracking required ▪ Follow „less is more" principle	▪ Improve internal communication ▪ Restrict amount of objectives to a reasonable number
Process-related aspects	▪ No strengths	▪ Cascading down process (incl. timeline) ▪ Review process needs to be defined and executed	▪ Define clear process and timeline for cascading down ▪ Define an SD monitoring process and stick do this process
Structural aspects	▪ SD owners are satisfied with the current structure	▪ Implement functional SD structure	▪ Fine-tune SD structure in accordance to functional SD vs. regional SD
Tool-related aspects	▪ SD owners are satisfied with the .xls template	▪ Easier solution to maintain SD	▪ Evaluate SD-specific software solutions
Cultural aspects	▪ SD is well-accepted within the organization ▪ Employees are motivated to participate in SD work	▪ Additional SD trainings to improve understanding and acceptance within specific functions	▪ Set up an SD training program

Figure 32.: Interview Results (personal design)

Comparison Survey and Interview Results

The identified key topics for improvement were almost the same with both methods, which confirms the validity of the gained insights. The SD process was seen as a category with high potential to improve. The categories structure and culture require minor modifications. Regarding the tool used to execute SD, the level of satisfaction with the .xls template was high, however implementing an SD-specific software is seen as a potential for improvement. In figure 33, the key insights gained from the survey and interviews are summarized and compared.

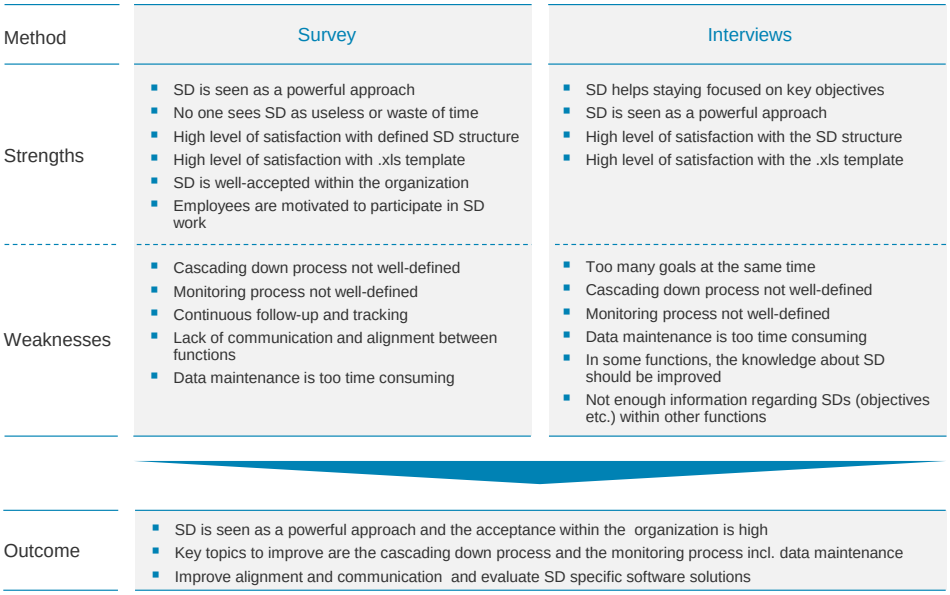


Figure 33.: Comparison Survey and Interview Results (personal design)

The next step is the development of an SD improvement concept for vaBW, which is based on the insights gained in the course of the as-is analysis.

5.4. Development of SD Improvement Concept

The development of a comprehensive SD improvement concept for vaBW, based on the insights from the as-is analysis, is assigned to the plan phase of the PDCA cycle (cf. figure 26). The purpose is to create a holistic and feasible improvement concept according to the defined goals (cf. chapter 5.2). This concept consists of aligned, specific measures and is structured according to the following four categories: process, structure, tool and culture. Together, these four aspects

ensure a well-conceived SD approach. The implementation of the improvement concept is realized in chapter 5.5.

Development of an Improvement Concept regarding the SD Process

During the as-is analysis, the SD process was clearly identified as the key topic for improvement. Thus, a completely new SD process for vaBW was developed as part of the improvement concept. This process ensures a systematic and structured execution of SD. The key component of this process is the application of the PDCA cycle, which is in line with the recommendations in pertinent literature (cf. chapter 4.1).
The concept for this process was verified by vaBW's top management and functional leaders and implemented in the organization. However, the improvement concept regarding the SD process within vaBW is not presented in detail at this point. For details regarding the SD process the author refers to chapter 5.5, Implementation of the Improvement Concept.

Development of an Improvement Concept regarding the SD Structure

As a result of the reorganization of vaBW from a decentralized to a key-functional centralized organization, the SD structure had to be adapted to the new organizational chart. Based on the organizational chart, four levels for SD were defined, starting with the "top level". SD was rolled out in seven functions as shown in figure 34, according to vaBW's organizational chart.

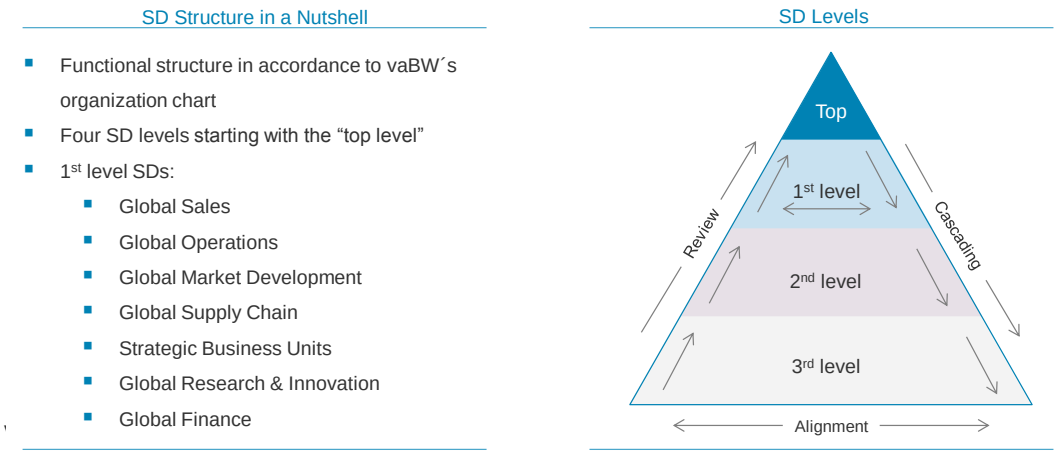


Figure 34.: Concept for SD Structure within vaBW (personal design)

Again, the concept of this structure was verified by vaBW's top management and functional leaders and implemented in the organization and will not be discussed in detail at this point. Further information regarding the SD structure can be found in chapter 5.5, Implementation of the Improvement Concept.

Development of an Improvement Concept regarding the SD Tool

Based on the findings from pertinent literature (cf. chapter 4.2) and regarding to increasing administrative effort to manage all SD-related data, the improvement concept includes the evaluation of an SD-specific software. This is also in line with the findings from the as-is analysis, where it was identified that a part of the individuals, who are working with SD, see a simplification of data maintenance, for example the monthly updates of KPIs and target achievements, as an important potential for improvement. As the SD approach has already proved to be a valid method for strategy execution within vaBW, and the approach has continuously been developed and rolled out, the premises for a successful software integration are given.
The procedure of the software evaluation started with the compilation of a portfolio of valid software solutions. This portfolio included sixteen different software solutions, which were the outcome of a literature and a web research. In the next step, evaluation criteria were defined in cooperation with vaBW's top management and selected employees, who are using SD. Seventeen criteria were defined and assigned to the three following categories: benefit gained through implementation of the software, effort for implementation of the software and costs for the software. Each criterion was weighted. For the assessment, it was distinguished between yes/no criteria, where the score was either 0 (no) or 7 (yes) and other criteria, where the score was between 1 (not sufficient) and 7 (outstanding/huge). Furthermore, additional advantages and disadvantages of each software were considered. The third step was a qualitative pre-selection to reduce the potential software solutions to a feasible number. Four solutions (Planbase Hoshin, Dploy, Qualica, Hoshin Online)made it to the final testing and assessment phase. In this last phase, the specific software solutions were tested and assessed according to the evaluation criteria defined in step two, by means of test accounts, WebEx demonstrations and workshops with the software provider. The result of this final phase is a ranking of the evaluated solutions. Figure 35 shows the background and procedure of the evaluation.

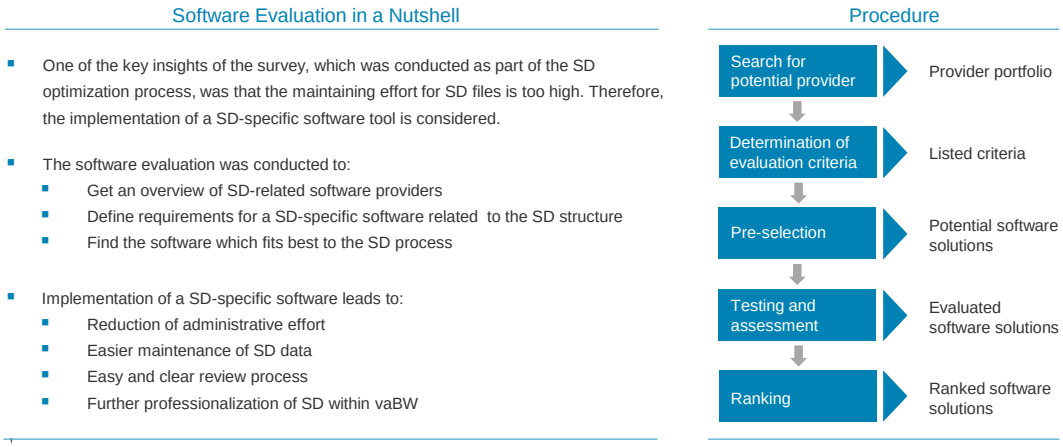


Figure 35.: Evaluation Background (personal design)

For the final ranking, the software solutions were compared according to the three aspects, benefit through the specific software, effort for a global roll-out, and costs per year (based on 150 users) for the software. In the diagram shown in figure 36, the bubble size represents the annual costs for the software including costs for maintenance and updates.[1]

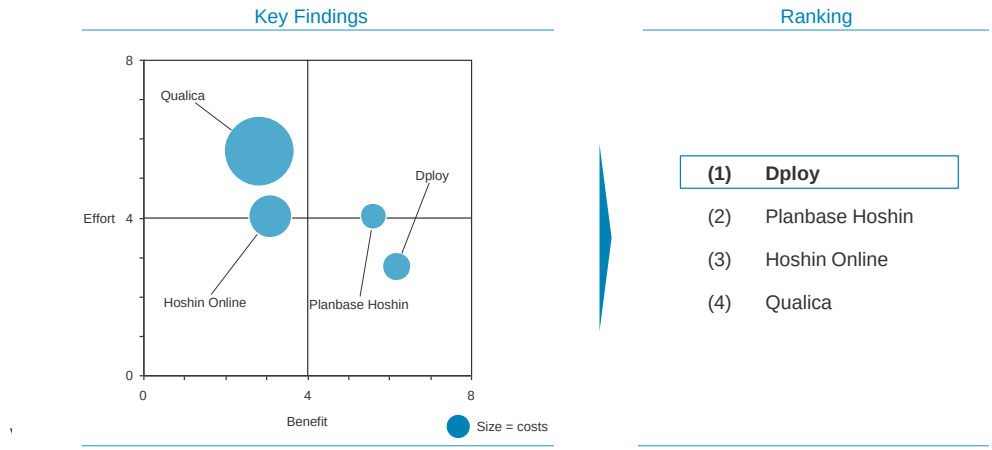


Figure 36.: Key Findings and Ranking of Software Solutions (personal design)

The best ratio between benefit and effort is achieved by Dploy. The annual costs for Dploy based on 150 user licences are 21,000.00 EUR. According to the ranking, the author recommends to

[1] The detailed evaluation criteria and corresponding results are provided in appendix A.1. Software Evaluation

choose Dploy in case that vaBW decides to use an SD-specific software.

Development of an Improvement Concept regarding the SD Culture

According to the findings in the course of the as-is analysis, the improvement of understanding of SD within the organization is seen as a potential for improvement. Based on that, the author recommends additional SD trainings for employees. These SD trainings would also lead to improved communication and alignment within the organization, which is essential for a successful execution of SD (cf. chapter 4.1).

5.5. Implementation of the SD Improvement Concept

Most of the optimization measures that have been defined during the improvement concept development phase were implemented in vaBW. The emphasis was on the implementation of a new, modified SD process. This SD process ensures a successful strategy execution within vaBW. The implementation of the improvement concept is assigned to the do phase according to PDCA (cf. figure 26). The implementation of the SD improvement concept is structured according to these four categories: process, structure, tool and culture.

Implementation of the Improvement Concept regarding the SD Process

The yearly SD process is embedded in the yearly strategic management process within vaBW. This process starts with the yearly strategic planning phase in June on top management level. Within this process, the overall strategic long-term direction is reviewed and adapted if required. In addition to the long-term strategic program, yearly priorities for vaBW are defined. Based on the outcome of the strategic planning phase, the more detailed budget planning is conducted. The major focus in the budget planning phase is on the definition of detailed mid-term target figures. These figures are among the major inputs for the yearly SD set-up process.

The SD set-up process starts in January and ends in March. This ensures that the planning is completed before a new business year (BY) starts. A BY within vaBW lasts from 1st of April to 31st of March. SD execution and monitoring is a continuous process throughout the year. In the beginning of each BY, the SD performance of the previous BY is evaluated. Figure 37 shows the rough time sequence and interaction between the strategic planning process, budget planning and SD.

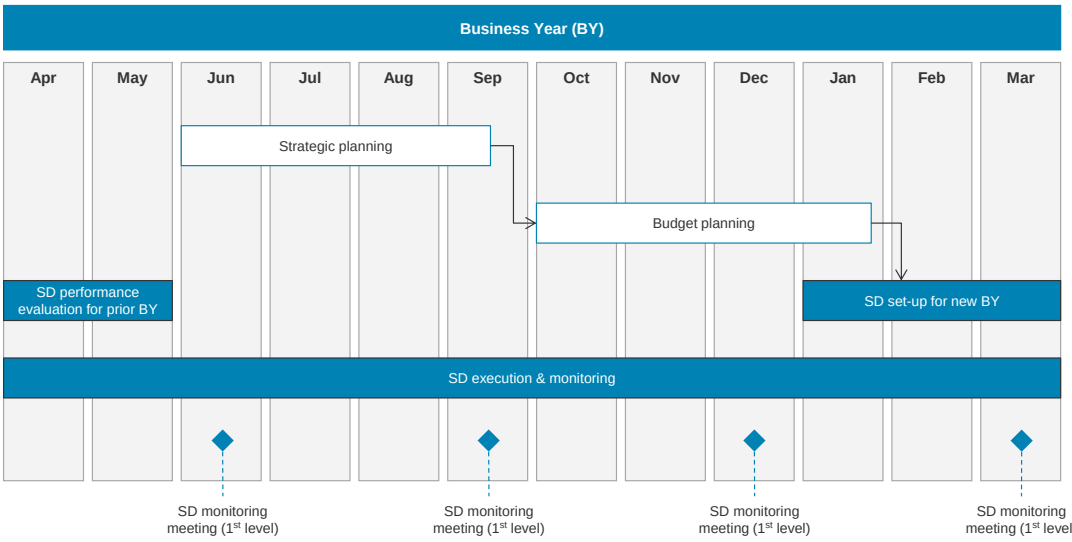


Figure 37.: Interaction between yearly Strategic Planning, Budget Planning and Strategy Deployment (personal design)

According to the PDCA cycle (cf. chapter 4.1), the SD process starts with the **plan phase (yearly SD set-up)**. This process is divided into the SD preparation phase and the cascading down phases. Figure 38 shows the SD set-up process with its individual phases and specific tasks conducted in each phase.

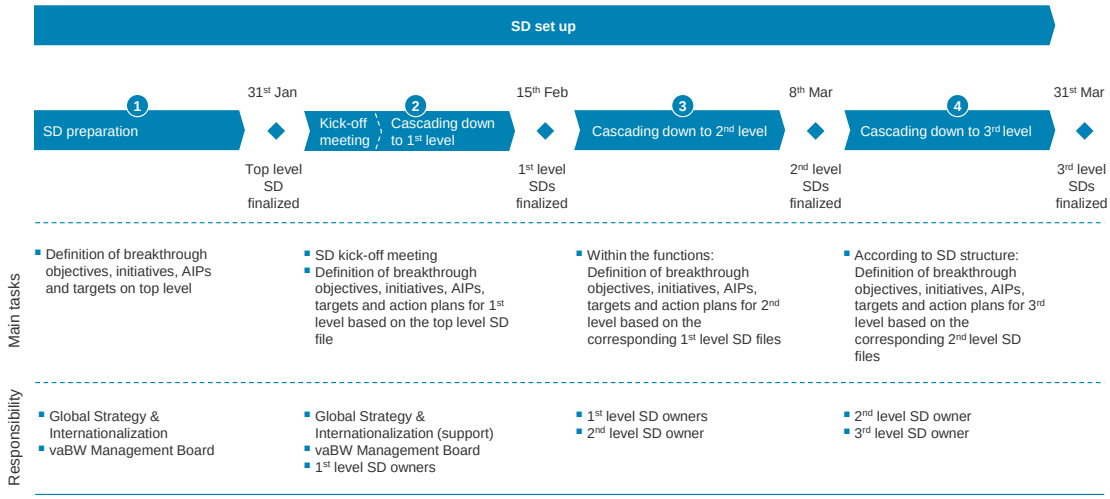


Figure 38.: Improved SD set-up Process within vaBW (personal design)

In the SD preparation phase, breakthrough objectives, initiatives, AIPs and targets on the top level are defined. The major input for the development of the top level SD file are the mid-term target figures defined in the budget planning, the global overall strategic program and challenges which are coming bottom-up from lower levels. Responsible for a successful execution of the preparation phase is the vaBW Management Board in cooperation with Global Strategy & Internationalization.

In the beginning of February, the cascading down into 1st level starts. Important is that in the beginning of this phase the official SD kick-off meeting is held. In this meeting, the Management Board, 1st level SD owners (functional leaders) and Global Strategy & Internationalization in collaboration develop the 1st level breakthrough objectives, initiatives, AIPs and SMART[1] targets based on the top level SD file. This meeting is essential to ensure that the content of the SD files is aligned throughout all functions.
In the middle of February, all 1st level SD files are finalized and the cascading down phases within the functions starts. These phases are conducted as catchball processes as described in chapter 4.1. According to the defined SD structure, objectives, initiatives and AIPs are cascaded down through all levels. On each level, specific tasks, which are required to complete the AIPs, are developed. The achievement is tracked through specific KPIs, SMART targets or milestone achievements. 1st level SD owners are responsible for successful cascading down within their functions. All SD files are to be defined, verified and approved by the beginning of a new BY (April) at the latest.

The **do phase** according to the PDCA cycle, which includes the execution of defined tasks and

[1] SMART stands for specific, measurable, achievable, relevant and time-bound as already defined in chapter 4.1

actions, is a continuous process throughout the whole year. The decision, whether to manage these tasks with a simple action plan or with the support of additional PM, depends on the size and complexity of the corresponding AIP. Through a systematic and structured procedure this approach ensures that strategic intentions (**Do the right things...**) are translated into feasible tasks (**do the things right...**) and executed in a defined time frame (**at the right time**) (cf. chapter 3.1).

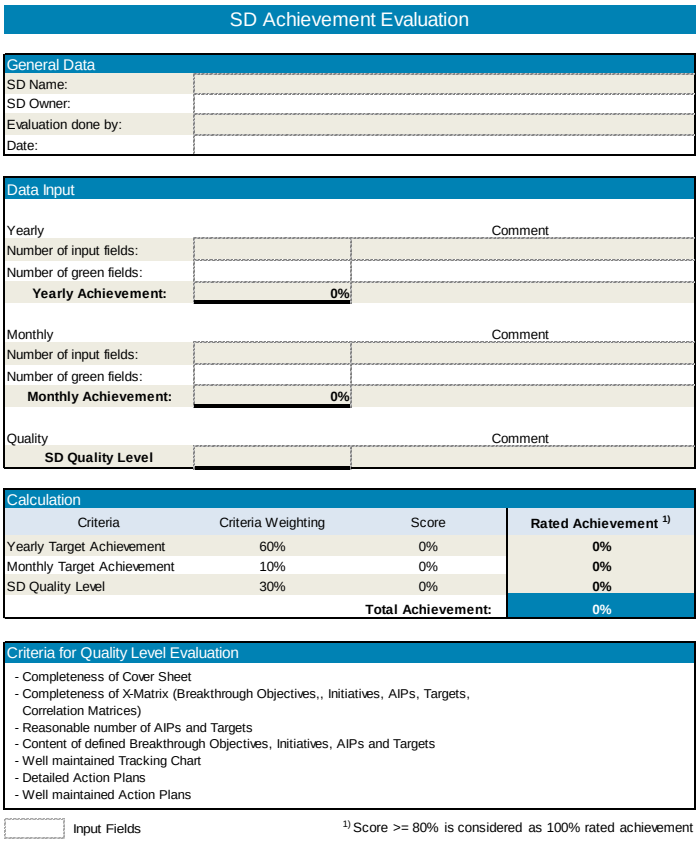
The **check phase** according to the PDCA cycle is accomplished through periodic SD monitoring meetings. These meetings are conducted quarterly on 1st level. Participants of the 1st level meetings are the Management Board, Global Strategy & Internationalization and 1st level SD owners. In the course of these meetings, the progress regarding target achievements is reviewed (tracking charts). At the same time meetings are important to ensure alignment between the functions and to define additional measures or countermeasures if required. The ability to react in time, to target deviations or changes regarding the strategy permissions etc. is guaranteed. As a result, the **act phase** comes hand in hand with the check phase according to PDCA and is not seen as a separate phase within vaBW's SD process.

To ensure a clear and systematic process flow, alignment and communication within the organization is essential. Therefore, the governance structure for vaBW is defined as shown in figure 39. SD monitoring meetings are conducted in defined time intervals. In addition to that, major communication mails, which are send to all SD owners, ensure the required information flow within the organization.

What	Major Content	Timeline	Participants
SD kick-off meeting	▪ Development of 1st level SD files	▪ Yearly	▪ Management Board ▪ Global Strategy & Internationalization ▪ 1st level SD owners
1st level monitoring meetings	▪ Review of SD target achievements on 1st level	▪ Quarterly	▪ Management Board ▪ Global Strategy & Internationalization ▪ 1st level SD owners
SD review within the functions	▪ Review of SD target achievements on 2nd and 3rd level	▪ Monthly	▪ 1st level SD owners ▪ 2nd level SD owners ▪ 3rd level SD owners
Major global communication mail	▪ Results of SD monitoring meetings on 1st level	▪ Quarterly	▪ Global Strategy & Internationalization for all SD owners

Figure 39.: SD Governance Structure within vaBW (personal design)

In the beginning of each BY, a **SD performance evaluation** of the previous BY is carried out. This is important to review where (in which function or area) the target achievements have not been sufficient, to analyze why the performance level in this functions or areas has been low and especially, to evaluate the performance level of individual SD owners. The performance level of individual SD owners is directly linked to a performance-orientated remuneration. This approach represents the link between SD and the applied management principle of MbO (cf. chapter 3.3). The evaluation is conducted by 1st level SD owners within their functions for all 2nd and 3rd level SD files. Global Strategy & Internationalization is responsible for the evaluation of 1st level SD files. The whole evaluation is finished in May at the latest. To ensure an objective and uniform evaluation approach, an evaluation template with standardized evaluation criteria was developed. Figure 40 shows the corresponding .xls evaluation template.



SD Achievement Evaluation

General Data

SD Name:	
SD Owner:	
Evaluation done by:	
Date:	

Data Input

Yearly		Comment
Number of input fields:		
Number of green fields:		
Yearly Achievement:	0%	

Monthly		Comment
Number of input fields:		
Number of green fields:		
Monthly Achievement:	0%	

Quality		Comment
SD Quality Level		

Calculation

Criteria	Criteria Weighting	Score	Rated Achievement 1)
Yearly Target Achievement	60%	0%	0%
Monthly Target Achievement	10%	0%	0%
SD Quality Level	30%	0%	0%
		Total Achievement:	0%

Criteria for Quality Level Evaluation

- Completeness of Cover Sheet
- Completeness of X-Matrix (Breakthrough Objectives,, Initiatives, AIPs, Targets, Correlation Matrices)
- Reasonable number of AIPs and Targets
- Content of defined Breakthrough Objectives, Initiatives, AIPs and Targets
- Well maintained Tracking Chart
- Detailed Action Plans
- Well maintained Action Plans

Input Fields

1) Score >= 80% is considered as 100% rated achievement

Figure 40.: SD Performance Evaluation Template (personal design)

The three evaluation criteria are:

- Yearly target achievement (weighting: 60 %)

- Monthly target achievement (weighting: 10 %)

- SD quality level (weighting: 30 %)

The SD quality level is evaluated by criteria such as completeness of the SD file, quality and content of the objectives, initiatives, AIPs and targets.
In the evaluation logic it is defined that 80 % performance achievement is considered as 100 % achievement according to the performance-orientated remuneration. This is valid for total achievement as well as for each of the three detailed evaluation criteria.

Implementation of the Improvement Concept regarding the SD Structure

According to vaBW's key-functional centralized organization structure, the SD structure was adapted and now consists of four levels. One 1st level SD file on the top level is followed by seven SD files on the 2nd level. Each of the seven SD files represents one function within vaBW. The 2nd level is depended from how the particular function is organized; either defined by regions, segments or sub-functions. Therefore, the 3rd level is either defined by countries, manufacturing locations, sales units or sub-segments. Figure 41 shows the SD structure adapted to vaBW's organizational structure. The structure includes 92 SD files.

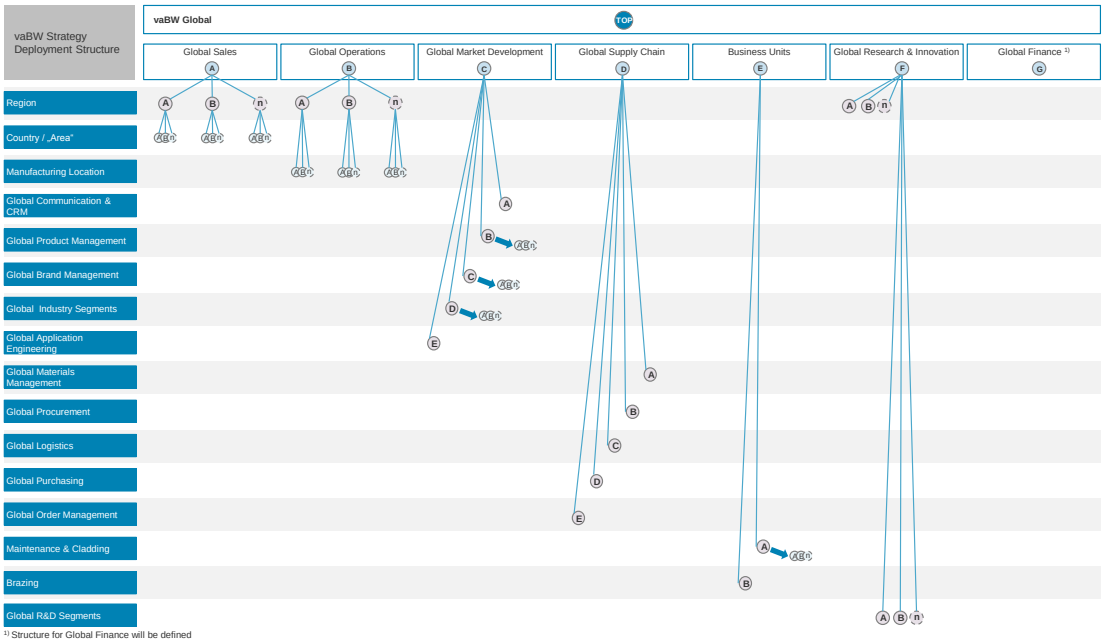


Figure 41.: Modified SD Structure within vaBW (personal design)

Implementation of the Improvement Concept regarding the SD Tool

The software evaluation discussed in chapter 5.4 shows that an SD-specific software can improve the SD process in certain cases. Nevertheless, such a software roll-out requires a lot of resources. The effort and costs in relation to the expected benefit are high. In addition, such a global software roll-out leads in the starting phase to additional workload for the SD owners. The result of the conducted as-is analysis also showed that the satisfaction level with the .xls templates is high for most SD owners. The major advantage of the .xls template is that all SD owners are used to work with Microsoft Excel, which reduces the required support for SD owners significantly compared to an SD-specific software.

Weighting the pros and cons it was decided to implement a common sharepoint platform in vaBW intranet to manage the SD files instead of implementing a SD-specific software. With this solution it is possible to manage all SD files centralized on one platform. Furthermore, the amount of individuals who have got access to the SD files, in contrast to an SD-specific software, is not limited. Different SD team rooms (folders), which are based on the SD structure are embedded in the starting page of Global Strategy & Internationalization, to ensure a straightforward and clear SD file management. Figure 44 shows the different SD team rooms in the vaBW intranet and how they are structured.
Each SD file is assigned to a specific SD team room and each SD team room has specific access rights to ensure that only the individuals who have the corresponding permissions are able to access the SD files. The centralized and structured SD file management enables that the top management has the ability to open and review each specific SD file whenever it is required. Furthermore, this simplifies the review of SD files during meetings, reduces the mail traffic related to SD significantly and ensures that at any time only one valid version of the corresponding SD file exists.

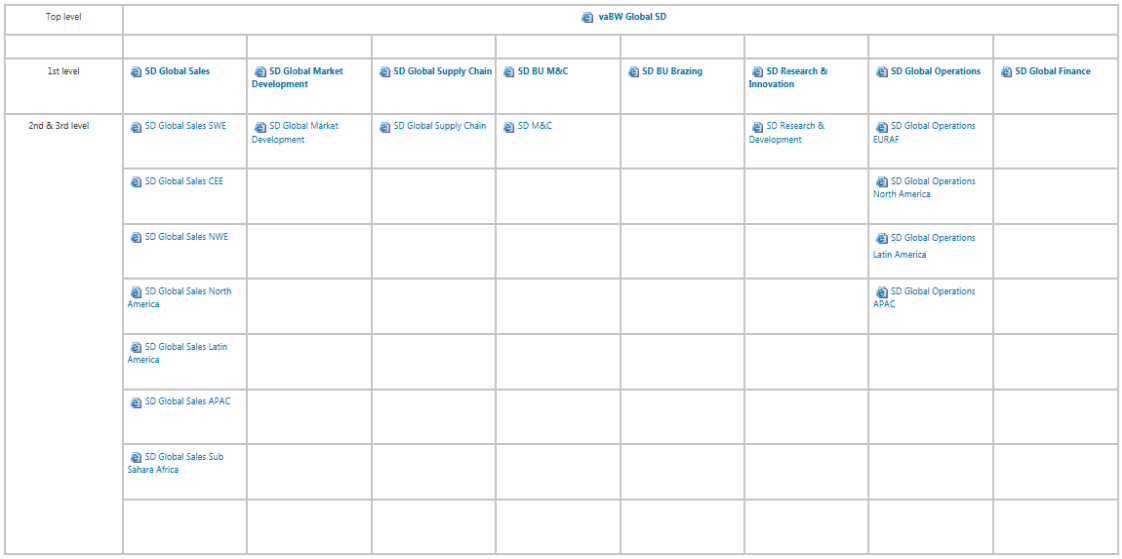


Figure 42.: SD Team Rooms in vaBW Intranet (personal design)

The approach for access rights to the SD team rooms is based on the general SD structure. The Management Board as well as the 1st level SD owners have access to all SD files. 2nd and 3rd level SD owner only have access to the corresponding SD files within the team room to which their own file is assigned to, the corresponding 1st level SD file and the top level SD file. Furthermore, each SD owner has the opportunity to nominate one individual, who gets the same access rights as themselves, to support data maintenance.
In addition to the set-up of this sharepoint platform, the modified SD process and structure required the development of new templates for SD. These templates are .xls files with the following spreadsheets:

- **Cover Sheet:** It contains general data such as the name of the SD file, the name of the SD owner and the date of the last update.

- **How to use sheet:** This sheet is a short description of how to use the SD template.

- **X-matrix:** Within the x-matrix, all breakthrough objectives, initiatives, AIPs and targets are documented. In addition, the included correlation matrices show how they are related to each other. The relations are marked with an x. Also, the section that defines which AIP is further cascaded down and into which SD file of the corresponding next level according to the defined SD structure is important. Moreover, each AIP has to have one person who is responsible for this specific AIP. This responsibility is also documented in the x-matrix. For each SD level according to the defined SD structure (cf. figure 41,) a particular template

exists. In these templates, breakthrough objectives and initiatives from superior level SD files are included to show the consistency of strategy through all levels. Since the x-matrix is a key component of the whole SD template, an example of a 2nd level x-matrix is shown in figure 43.[1]

- **AIP description:** This spread sheet includes an additional description for each AIP to ensure that everybody has the same understanding of what the key content of the corresponding AIP is.

- **Tracking chart:** It is used to track the achievement level of each SMART target and KPI, which are defined in the x-matrix. The targets and KPIs are divided into monthly targets. This monthly targets are defined and tracked on a cumulative base.

- **Action plans:** The number of action plan spread sheets depends on the number of AIPs requiring an action plan. In case that an AIP is further cascaded down, it is not required to define an action plan on the current level, however, an action plan is required for each AIP at least on the last SD level. The reason why these action plans with detailed defined milestones and tasks are developed is to ensure a systematic execution and tracking of the single tasks which are required to achieve the defined AIPs and targets.

[1] An example of all spread sheets (cover sheet, how to use sheet, x-matrix, AIP description, tracking chart and action plans) is shown in appendix A.2. SD Template

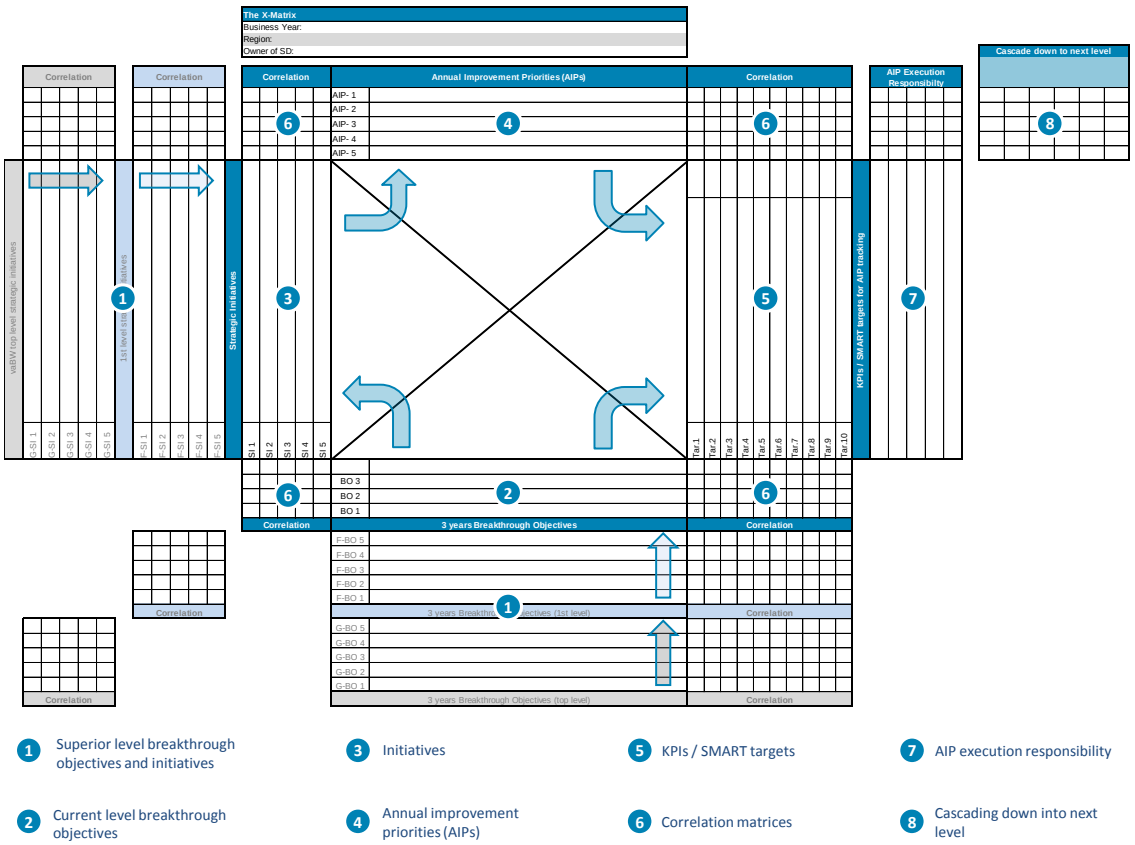


Figure 43.: X-Matrix for a 2nd level SD File (personal design)

An overview regarding the spread sheets of the template including a comparison to the SD templates described in the literature, is shown in figure 44. The major improvements are that AIPs are described in detail additionally to the x-matrix, that in the x-matrix breakthrough objectives and initiatives from superior levels are documented to guarantee consistency through all SD levels and that in the x-matrix a section is provided where it is defined which AIP is cascaded down and into which SD file on the next level.

Spreadsheet	Literature	vaBW Approach	Improvement
Cover sheet	• None	• Documentation of general data (name of SD file, name of SD owner, date of last update etc.)	• High transparency
How to use sheet	• None	• Rough description about how to use the SD template	• Support for SD owner • Clarity according to the SD template and related tasks
X-matrix	• The same x-matrix design for all levels • 3-5 years breakthrough objectives • No documentation, which AIPs are cascaded down	• One specific x-matrix for each level • Breakthrough objectives and initiatives from superior SD levels are included • 3 years breakthrough objectives • Documentation of whether an AIP is cascaded down or not • Documentation into which SD file on the next level, an AIP is cascaded	• Improved consistency through including superior levels objectives & initiatives • High flexibility though a maximum time horizon of 3 years for breakthrough objectives • Clear determination of which AIP is cascaded down and into which SD file on the next level it is cascaded
AIP description	• None	• Additional description to each AIP (what is important regarding this AIP, why is this AIP important etc.)	• Clear and detailed definition of each AIP • AIPs are easy to understand
Tracking chart	• Monthly tracking of KPIs and targets	• Monthly tracking of KPIs and targets	• No improvements
Action plan	• Simple action plan	▪ Simple action plan ▪ In case of complex activities combination with PM	• Action plans for simple activities • PM for complex activities

Figure 44.: Comparison of vaBW SD Template and SD Templates proposed in Literature (personal design)

Implementation of the Improvement Concept regarding the SD Culture

During the implementation of the modified SD process:

- SD owners were trained and instructed regarding the SD approach.
- SD information material was developed, communicated and is now provided on the vaBW intranet.
- SD owners were guided during the SD set-up phase for the current BY.

This approach has the major advantage that the SD owners were trained at the workplace, facing real problems, which is exactly in line with the recommendations given in SD-specific literature (cf. chapter 4.3) and helps inspire and create acceptance as well as ownership regarding SD. Thus, SD as an approach for strategy implementation is further strengthened and integrated in vaBW's business culture.

5.6. Review and Modification of Improvement Measures

In the last phase of the case study, the success of the implemented improvement measures was reviewed. This phase is assigned to the check respective act phase of the PDCA cycle (cf. figure 26) and is important to evaluate the level of success and benefit gained through implementation of improvement measures, as well as to gain important insights for the future and to identify where further fine tuning is required.
In course of one of the quarterly monitoring meetings conducted on the 1st level and in additional feedback discussions, it was observed that the level of satisfaction with the improved SD approach generally is high.

Review and Modification of Improvement Measures regarding the SD Process

The implemented SD process with its specific phases (cf. chapter 5.5) and the defined timeline in particular harmonizes well with the the strategic planning and budgeting process (cf. figure 37) within vaBW. The detailed definition of a process for the SD set-up including cascading down within the organization, as well as the definition of a precise SD monitoring process are key topics to ensure successful strategy implementation. Furthermore, the quarterly SD communication mails (cf. figure 39) are important to ensure alignment and an adequate communication through all SD levels. In addition, the author especially considers the yearly SD performance evaluation as major improvement according to the SD process. The reason is that it is essential to review results and to identify weaknesses and strengths to enable further improvement.

Review and Modification of Improvement Measures regarding the SD Structure

The new SD structure with four SD levels, which is based on vaBW's organizational chart, proved to be successful. The definition of a detailed SD structure for finance is in progress (cf. figure 41) and will be implemented at the beginning of the upcoming BY. The current SD structure within vaBW includes 92 SD files.

Review and Modification of Improvement Measures regarding the SD Tool

The solution customized for vaBW according to the SD-supporting tool leads to: time savings (simplification of data maintenance), reduced mail traffic (all SD files are centralized in the SD team rooms in vaBW intranet), detailed defined AIPs (separate AIP description spread sheet), clarity about which AIPs are cascaded down (cascade to next level section in the x-matrix) and consistency

according to breakthrough objectives and initiatives through all SD levels (breakthrough objectives and initiatives of superior level SD files are included in the x-matrix).
Only the approach for the access rights to the SD files in the vaBW intranet required modifications and increased administrative staff. In addition to the existing access permissions, a few additional individuals received access to the SD files. One example are the global sales excellence process specialists for vaBW, who got access to all SD files which are assigned to the sales function.

Review and Modification of Improvement Measures regarding the SD Culture

The implementation of the new SD approach within vaBW entailed an increased level of acceptance and ownership regarding SD. Managers as well as employees improved their knowledge regarding SD. Furthermore, SD is now well-integrated into vaBW's business culture. The approach to train directly at the workplace (cf. chapter 5.5), thus facing real problems, was successful.
In the author's perspective additional SD trainings for vaBW's staff are not required.

5.7. Conclusion of the Case Study

The conducted as-is analysis showed that SD in general is seen as a powerful method for strategy implementation, in particular to stay focused on a few overall breakthrough objectives. The key topics for improvement were identified in the SD process and in the adaptation of the SD structure with regard to the key-functional centralized organization. The cascading down phase, but also the SD monitoring process required modifications and the determination of a clear timeline.

To ensure a successful strategy implementation within vaBW, the SD process was modified and adapted according to the new key-functional centralized organization. The SD process is divided into specific phases and is based on the PDCA cycle. After the yearly strategic and budget planning phase, the SD set-up starts in January of each year. In the period from January until the end of March, the SD planning and cascading down through all SD levels within the organization is conducted. Important within the SD set-up phase is the SD kick-off meeting, which is conducted in the beginning of February. In this meeting, the participants (Management Board, Global Strategy & Internationalization, 1st level SD owners) define breakthrough objectives, initiatives, AIPs and targets for each 1st level SD file together. This approach ensures alignment within the organization. Throughout the year, quarterly monitoring meetings on the 1st level are conducted to track target achievements and to ensure alignment within vaBW. In the beginning of each BY a SD performance evaluation for the previous BY is conducted with clearly defined evaluation criteria. This is important as the SD achievements are directly linked to a performance-orientated remuneration. This SD performance evaluation for each individual SD owner represents the connection of SD with the management principle of MbO.

The adapted SD structure is based on the new key-functional centralized organization and is divided into four levels starting with one overall SD file on the top level. Important inputs for the development of this top level SD file with its breakthrough objectives, initiatives, AIPs and targets are the outcome of the budget planning, objectives and milestones out of vaBW's overall strategic program and challenges, which are coming bottom up from lower levels.

The conducted SD-specific software evaluation showed that a software can lead to improvement regarding SD execution, but that the ratio between roll-out effort and benefit is not as good as it has to be in order to justify the additional costs and effort for a global roll-out of such a software. Out of the four software solutions that were analyzed in detail, Dploy achieved the best result in the final evaluation phase, followed by Planbase Hoshin.
To ensure full alignment between vaBW's organizational structure and additional requirements regarding SD, customized .xls templates and a common sharepoint platform, which is integrated into vaBW intranet, were established.

In the course of the implementation of the SD process and the new SD structure, the knowledge about SD and, furthermore, the level of acceptance and motivation to participate in SD-related work was significantly improved. SD as method for strategy implementation is ingrained in vaBW's business culture. The applied concept of learning-by-doing was successful within vaBW and further specific SD trainings are not required.

In figure 45 the implemented improvement measures and achieved results are summarized. The key benefits for vaBW are improved performance according to strategy implementation as a result of a clearly defined SD process (SD set-up, cascading down of objectives, SD monitoring etc.), improved communication and alignment within the organization, clear responsibilities, decreased administrative effort, full alignment between SD structure and vaBW's key-functional centralized organization. In addition, the understanding and ownership regarding SD was increased. SD is fully established as a steering tool and strategy implementation method within vaBW.

Category	Implemented Improvement Measures	Achieved Results
Process-related	▪ Integration of the SD process into vaBW's yearly strategic management process ▪ Adaptation of the SD process according to the PDCA cycle ▪ Definition & implementation of a detailed SD set-up process including the determination of the cascading down approach ▪ Definition & implementation of a detailed SD monitoring process ▪ Definition & implementation of the SD governance structure within vaBW ▪ Implementation of quarterly SD communication mails ▪ Development & implementation of a yearly SD performance evaluation approach	▪ Improved performance through clearly defined timelines, tasks and responsibilities according to SD set-up, cascading down of objectives and SD monitoring ▪ Improved alignment and communication within vaBW ▪ Identification of weaknesses and strengths in the course of the yearly SD performance evaluation
Structure-related	▪ Adaptation & alignment of the SD structure according to vaBW's key-functional centralized organization	▪ Further roll-out of SD within vaBW ▪ SD structure is in line with vaBW 's organizational structure
Tool-related	▪ Set-up of a common SD sharepoint platform customized for vaBW ▪ Definition & implementation of an approach for access rights to the SD team rooms (folders) in vaBW intranet ▪ Development & implementation of a new SD template	▪ Decreased administrative effort for managing SD files ▪ Easy access to all SD files (e.g. during meetings) ▪ No limitations according to the number of SD files or SD owners ▪ The SD sharepoint platform can be modified or expanded any time ▪ Improved transparency according to the strategy implementation process ▪ Well-documented objectives, initiatives, AIPs and targets ▪ Well-documentation of who is responsible for realization of specific AIPs and targets ▪ Clear defined AIPs ▪ Clear documentation of which AIPs are cascaded down and into which SD file on the next level they are cascaded
Culture-related	▪ Trainings for SD owners were conducted ▪ Development and communication of SD information material	▪ Increased acceptance and ownership regarding SD ▪ Increased knowledge and understanding regarding SD ▪ SD as approach for strategy implementation within vaBW is strengthened and well-integrated in vaBW's business culture

Figure 45.: Conducted Improvement Measures and achieved Results according to SD (personal design)

If an organization decides to perform SD "seriously", the author states, as one of the major outcomes form the research, that a person needs to be dedicated to this topic. Whether it is a part- or full-time task, depends on the size and complexity of the organization.

6. Implications and Conclusion

The increasing complexity and dynamic of the entrepreneurial environment requires high flexibility regarding the organizations strategy, structure and behaviour. This causes challenges for organizations, particularly in accordance to strategic management. Continuous improvement and the permanent adaptation to the new situation is required.
The background of this thesis was a problem identified at voestalpine Böhler Welding Group GmbH (vaBW), a business unit of voestalpine AG within the Metal Engineering Division, where a global realignment and reorganization from a decentralized to a key-functional centralized group caused the challenge of ensuring successful strategy execution on a global scale despite the new situation. The realignment of an organization requires radical changes, significant breakthroughs and alignment throughout the whole organization. Based on these preconditions, the objective of this thesis was to propose an approach for successful strategy implementation, which fulfils the particular requirements after the change process and organizational realignment. The corresponding research question was formulated as:

What needs to be considered in an organization to ensure strategy execution after a global reorganization from a decentralized to a global key-functional centralized group?

As approach to achieve the formulated research objectives, action research was conducted. Based on theoretical insights from pertinent literature, the case study conducted at vaBW delivered the required findings according to practical aspects. The focus of the case study was on adaptation and optimization of the strategy implementation approach, which is supported by strategy deployment (SD).

In the course of the case study, vaBW's SD process was modified and adapted according to the PDCA cycle. The process of SD set-up and cascading down as well as the SD monitoring process were defined in detail. In addition, a yearly SD performance evaluation approach was implemented. The SD structure was adapted according to vaBW's organizational structure. Furthermore, an evaluation of SD specific software solutions was conducted. A new SD template tailored for vaBW's SD approach was developed and implemented. All SD files are managed through a common sharepoint platform, which was also developed and implemented in the course of this master thesis. Managers and employees at vaBW were trained regarding the new SD approach.

Key insights gained from the literature research and from the case study are summarized in figure 46. The theoretical as well as the practical part showed that not only the strategy planning, but rather a successful strategy implementation is essential for organizations success. A key aspect for successful strategy implementation is a smooth transition from strategic management to operative management. The strategic management is long-term orientated and focused on definition of tasks (doing the right things - effectiveness), whereas operative management is short-term orientated and focused on execution of tasks (doing the things right - efficiency). An organizational realignment requires radical changes, significant breakthroughs and improvements. SD provides the necessary means to achieve such breakthroughs. Examples of well-known organizations (e.g. Toyota, Hewlett Packard and General Electrics) show that SD can significantly improve an organization's performance.

The insights from the case study confirm that SD is a powerful approach to systematically implement strategy, and it can be applied in combination with other methods. Another insight from the case study is that the effort for a global roll-out of an SD-specific software after a change process is high compared to the gained benefit. In addition, it was identified that to perform SD "seriously" one person needs to be dedicated to this topic; to what extent depends on the size and complexity of the organization.

According to action research, the definition of strategy for this master thesis was derived from theoretical and practical insights. This definition is stated in chapter 2.1.

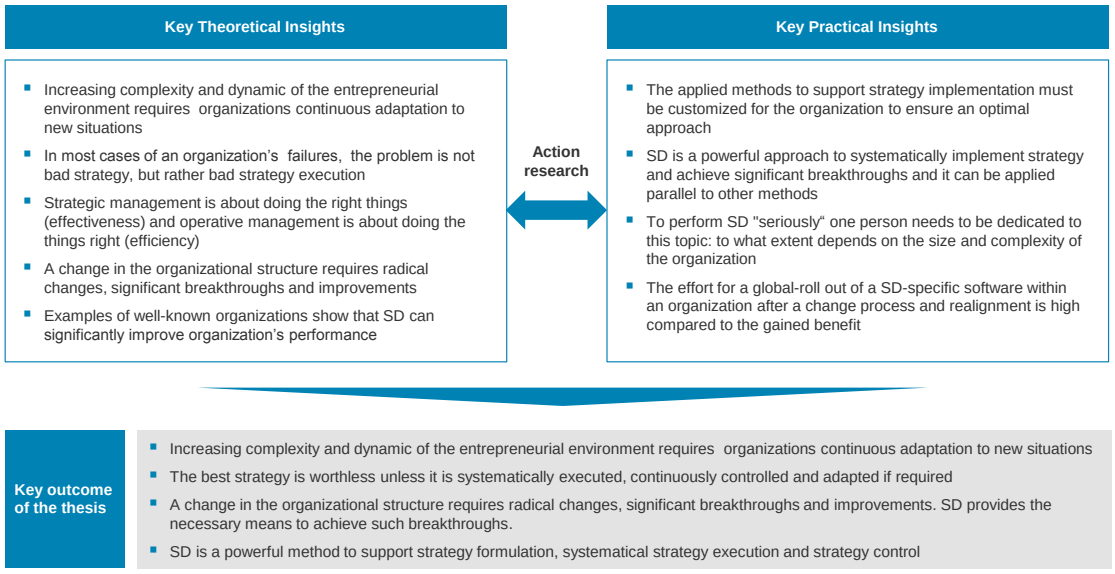


Figure 46.: Summary of Key Insights (personal design)

Based on these findings, the research question can be answered as following:

After a global reorganization from a decentralized to key-functional centralized group to ensure strategy execution it is required to:

- *Review the strategy implementation approach and to analyze the specific strengths and weaknesses*
- *Adapt and align the strategy implementation process and structure*
- *Check new systems (e.g. software solutions) to simplify the strategy implementation approach*

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A. Appendix

A.1. Software Evaluation

Criteria \ Tool		Weighting	Planbase Hoshin		Dploy		Qualica (Hoshin edition)		Hoshin Online	
			Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Benefit	Upgradeability	1%	3	0.03	3	0.03	2	0.02	4	0.04
	SAS (Software as a Service)	1%	7	0.07	7	0.07	0	0.00	7	0.07
	On site support offered	10%	7	0.70	7	0.70	7	0.70	0	0.00
	Online support offered	3%	7	0.21	7	0.21	7	0.21	7	0.21
	Web based	5%	7	0.35	7	0.35	0	0.00	7	0.35
	Versatility	1%	4	0.04	6	0.06	7	0.07	3	0.03
	Reliability	14%	6	0.84	6	0.84	6	0.84	4	0.56
	SAP compatibility	5%	7	0.35	0	0.00	0	0.00	7	0.35
	Compatibility to vaBW process structure	10%	2	0.20	7	0.70	2	0.20	1	0.10
	Automated reminder for maintaining data	10%	7	0.70	7	0.70	0	0.00	7	0.70
	Layout & design	15%	4	0.60	6	0.90	4	0.60	2	0.30
	Automated cascading down option	15%	7	1.05	7	1.05	0	0.00	0	0.00
	Handling	10%	5	0.50	6	0.60	2	0.20	4	0.40
	Result:	**100%**		**5.64**		**6.21**		**2.84**		**3.11**
Effort	Trainings effort	25%	4	1.00	2	0.50	6	1.50	4	1.00
	Roll out effort	40%	4	1.60	3	1.20	6	2.40	4	1.60
	Maintenance effort	35%	4	1.40	3	1.05	5	1.75	4	1.40
	Result:	**100%**		**4.00**		**2.75**		**5.65**		**4.00**
Cost	Cost per year (150 User) in EUR	100%	18,840.00	18,840.00	21,000.00	21,000.00	116,524.00	116,524.00	43,200.00	43,200.00
	Result scaled costs:	**100%**		**1.13**		**1.26**		**7.00**		**2.60**
Comparison	Advantage		- Easy handling		- Easy local support - Additional support on SD process		- Many additional capabilities		- High level of customization possible - Free updates	
	Disadvantage		- X- Matrix just as possibility of displaying (no operating option in this mode)		- Not directly SAP compatible		- Price		- No on site support - Low compatibility with current SD process in vaBW	

Scale: yes/no Criteria

7 yes
0 no

Other Criteria

1 not sufficient
2 very low
3 low
4 medium
5 high
6 very high
7 outstanding / huge

1) Based on the exchange rate $ / € from April-10, 2015

A.2. SD Template

Strategy Deployment

General information	
Business Year:	
Region:	
Abbreviation:	
Level:	

SD Responsibilities	
Owner of SD:	
Data update:	
Sharepoint Upload:	

Tracking / Updates	
Month	**Date of Update**
April	
May	
June	
July	
August	
September	
October	
November	
December	
January	
February	
March	

How to use and complete the Strategy Deployment

Completion of X-Matrix

Steps	Description
1	Copy BOs and Strategic Initiatives from the top level and 1st level into your SD (this is just for information and to have the BOs and initiatives on the next level in mind). To hide and unhide top and 1st level use the group function in MS Excel.
2	Add your 3 years Breakthrough Targets (2nd level) - 3 years BOs shall be in line with your MIP2 figures
3	Breakdown BOs to strategic initiatives on the left side of the X-Matrix. The strategic initiatives shall shall guaranttee the achievement of your BOs and shall be in line with the strategic group and 1st level initiatives
4	Check, in addition if your strategic initiatives fits to the C3P strategy execution programm of vaBW
5	Do the correlation of BOs with your strategic initiatives (Which BO is supported by which strategic initiative), mark the correlation with an "x" in the corresponding cell
6	Breakdown your BOs to yearly targets on the right side of the X-Matrix - Yearly targets shall be in line with your budget figures
7	Breakdown your strategic initiatives to clear yearly AIPs. AIPs which are cascaded down from 1st level are the base for AIPs on 2nd level. In order to that always check the corresponding 1st level SD!
8	Do the correlation of strategic initiatives with your AIPs (Which strategic initiative is supported by which AIP), mark the correlation with an "x" in the corresponding cell. Do not forget to fill the correlation matrix which shows the correlation between your AIPs and top level as well as 1st level strategic initiatives.
9	Define clear SMART targets for each AIP on the right side of the X-Matrix (the yearly targets, broken down from your 3y BOs shall be already there). If it is impossible to find clear quantitative targets for an AIP, develop Milestones (Milestoneplan) for the specific AIP. In this case the progress of the AIP (Milestones achieved yes or no) is going to be monitored. This means,the target could be for example: "All defined Milestones are achieved until Oct 2015".
10	Make sure that your SMART targets also support the tracking of higher level SD SMART targets.
11	Define for each AIP the responsible person for AIP execution and name them in following way: Surname and First name.
12	Connect the AIP owner with the corresponding AIP using a "x"
13	Define for each AIP in which lower level SD it has to be cascaded down (where is it relevant). In order to that either use "x" for simply cascading down (the action plan has to be defined on lower level) or "**•**" for AIPs which require an action plan (realization instruction for lower level) on the current level (2nd level).
14	Make sure that everything is in place. Check if all correlation matrices are filled.

Completion of AIP Specification

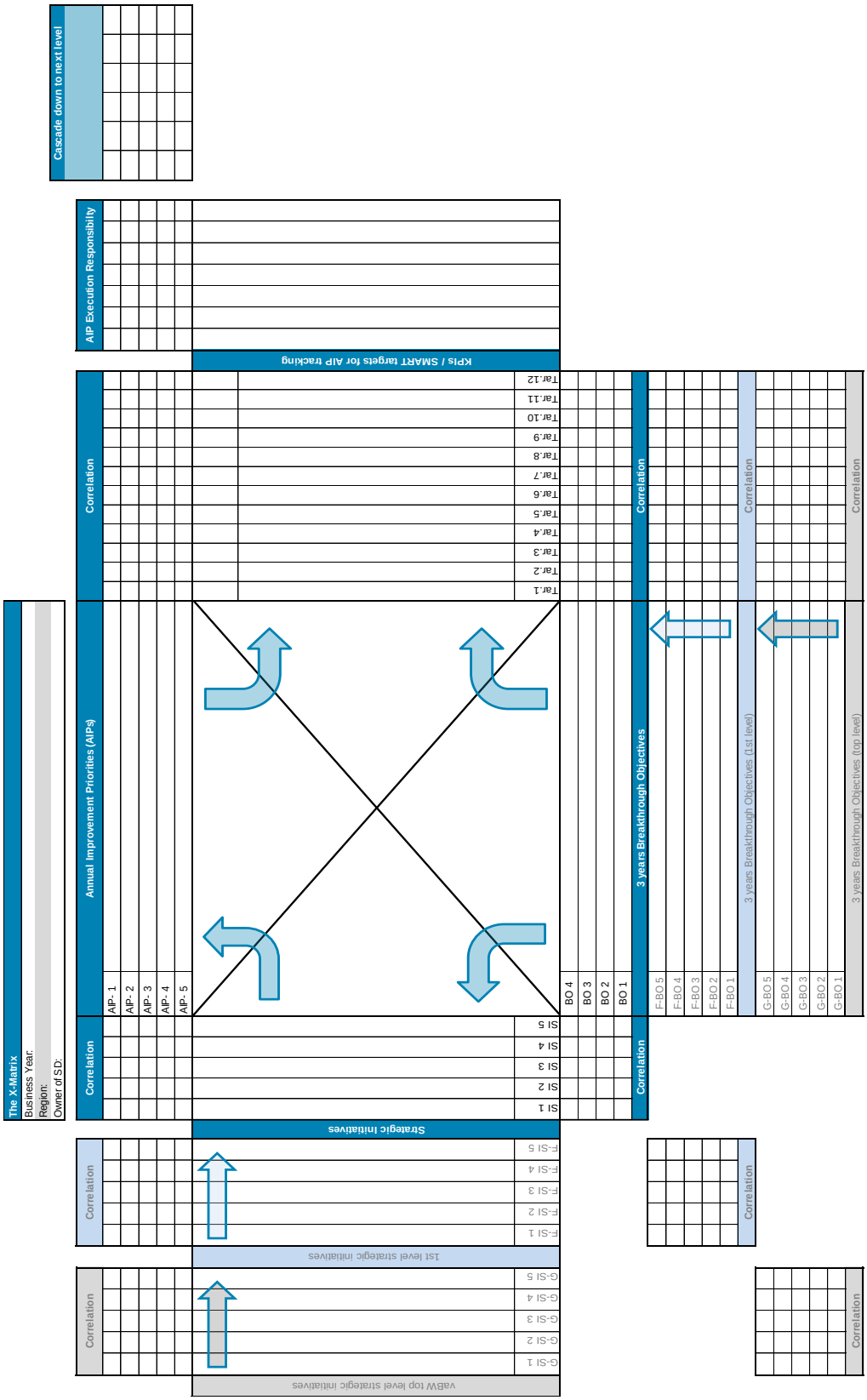
Steps	Description
1	Write a short description to each AIP. This additional specification should clarify what is meant by the AIP and what is important for other SD owners troughout all functions and levels.

Completion of Tracking Chart

Steps	Description
1	Start with left column and add which AIP(s) is/are tracked with the SMART target
2	The SMART targets and yearly targets are automatically transfered to the Tracking Chart from the X-Matrix
3	Add the data for the SMART target from previous FY, if they are existing
4	Add the plan data for the SMART target for the current FY
5	Add the measurement unit for each SMART target
6	Breakdown the SMART targets for the plan FY on a monthly basis
7	Complete the actual data for each SMART target on a monthly basis
8	During the monitoring process set a traffic light for each actual SMART target on a monthly basis, meaning if the monthly target was achieved mark the corresponding cell with a green background, if the monthly target was not achieved mark with a red colored cell background

Completion of Action Plans (AIP Plan)

Steps	Description
1	Create as many Action Plan Spreadsheets as you need. Name them (Action Plan to AIP "*no. of related AIP*"). Also set and fill the fields "Action Plan:" and "Owner of Action Plan:" in the top left corner.
2	Enter the actions/tasks which are necessary to get the AIP done - enter each task/action in one line
3	Define the responsible person for the tasks and inform them
4	Give a rough indictation for the total manpower to get the task done
5	Set the planned start as well as end date
6	Correct the planned start or end date to an actual start or end date if changes are necessary, i.e. delayed start or execution of an action
7	In the columns monthly review add a traffic light for each task (green…task on track-will be finished in time / orange…task execution critical-end date could not propably not achieved / red … task definitely not on track)


The X-Matrix
Business Year:
Region:
Owner of SD:
Annual Improvement Priorities (AIPs)
AIP- 1
AIP- 2
AIP- 3
AIP- 4
AIP- 5
Correlation
Strategic Initiatives
SI 1
SI 2
SI 3
SI 4
SI 5
3 years Breakthrough Objectives
BO 1
BO 2
BO 3
BO 4
KPIs / SMART targets for AIP tracking
Tar.1
Tar.2
Tar.3
Tar.4
Tar.5
Tar.6
Tar.7
Tar.8
Tar.9
Tar.10
Tar.11
Tar.12
AIP Execution Responsibility
Cascade down to next level
vaBW top level strategic initiatives
G-SI 1
G-SI 2
G-SI 3
G-SI 4
G-SI 5
1st level strategic initiatives
F-SI 1
F-SI 2
F-SI 3
F-SI 4
F-SI 5
3 years Breakthrough Objectives (1st level)
F-BO 1
F-BO 2
F-BO 3
F-BO 4
F-BO 5
3 years Breakthrough Objectives (top level)
G-BO 1
G-BO 2
G-BO 3
G-BO 4
G-BO 5

AIP detail specifiaction
Business Year:
Region:
Owner of SD:

Item	AIP	AIP description
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

The Tracking Chart
Business Year:
Region:
Owner of SD:
Data update:

AIPs	SMART - Targets to track AIP execution	Previous FY	Plan FY	[Unit]	Plan FY	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	YTD (actual)
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													
					Plan													0
					Actual													

Action Plan:
Business Year:
Region:
Owner of SD:
Owner of Action Plan:

				Timing				Monthly status review											
Item	Detail Task/Activity or Milestone	Owner	Required Ressources in Mandays	Planned Start	Actual Start	Plannend End	Actual End	A	M	J	J	A	S	O	N	D	J	F	M
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
		In total required Ressources:	0	Mandays															