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# Designing a Strategy Map in order to Facilitate Strategy Implementation

## ABSTRACT

*The strategy map is a visual presentation of a company's critical success factors and the cause-and-effect relations between them. Strategy maps can be used, e.g., to illustrate the strategy of a company. Especially, the duty-related strategy maps can illustrate how the duties of an employee relate to the objectives of an organisation. The objective of this paper is to model the designing of a strategy map. Also, the question whether strategy maps can be used in decreasing the gap between strategy formulation and strategy implementation is discussed in the paper.*

*The research can be characterised as a qualitative and normative action research. The empirical part of the research consists of one case in which the strategy maps were designed for supporting the implementation of the new goal setting. The contribution this paper makes is as follows. First, the paper presents a step-by-step model of designing a strategy map. Second, this paper presents how to design a duty-related strategy map. Third, the process of designing strategy maps is described in practice.*

**Key words:** *Performance measurement, strategy, strategy map*

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## 1. INTRODUCTION

### 1.1 Introducing the research issue

The gap between strategy formulation and strategy implementation is a subject that has concerned both academics and practitioners for years. Different ways and tools have been developed for decreasing this gap. This study is about one tool – the strategy map. Strategy maps show the cause-and-effect relations between an organisation's critical success factors. Strategy maps can be used, e.g., to illustrate how an increase in employee motivation improves productivity and profitability or to show how an employee's operative activities contribute to achieving company-level objectives (see e.g. Kaplan and Norton 2004, p. 15). It also serves as a tool in developing a company's performance measurement system (Lauslahti and Alhola 2003).

According to Kasurinen (2000), strategy maps can be used in a situation where the strategy has already been created, but it must be further clarified. By clarifying and visualising strategy, creating strategy-connected measures becomes easier when it is actually visually seen and realised what is relevant. Further, the strategy map is a tool for presenting tacit knowledge (collected, e.g., through interviews) and clarifying what is relevant to be measured. It is also recognised that in order to be able to evaluate the strategy as a whole for the performance measurement system, i.e. realising what is relevant to be measured, visualising the cause-and-effect relationships between different factors is crucial (Tuomela 2000, p. 172). This visualising can be done with help of strategy maps.

### 1.2 Objectives and the scope of the study

The strategy map seems to be a potentially useful managerial tool in supporting strategy implementation. However, in the current literature there is a lack of a detailed model for designing a strategy map. Thus, it is unclear how an organisation should design a strategy map. The objective of this paper is to address this question by constructing a model of how to design a strategy map. In addition, the paper aims to assess the usefulness of strategy maps as a tool in strategy implementation.

There are many ways to support the strategy implementation in companies (e.g. Management by Objectives or strategic performance measurement). This paper examines strategy implementation only from the point of view of the strategy map, i.e. in case the strategy map is chosen as a tool in supporting strategy implementation, what should it be like and how should it be designed?

A central part of designing a strategy map is the strategy itself. In a way, the management's understanding of the relationships between the critical success factors is a representation of what the strategy is. Strategy map is primarily a tool that can be used to visualise these relationships – not to design the strategy. Therefore, this paper does not focus on the designing of the strategy (which is an important topic as such) but only the (technical) designing of the strategy map.

## 2. RESEARCH METHOD

This paper addresses a practical managerial problem – how to design a strategy map in an organisation – and aims to construct a normative model that will help solve the problem. The research consisted of reviewing relevant literature regarding strategic management, performance measurement and especially the strategy map. In addition, the topic was examined in practice in one case company. The model for designing a strategy map was constructed based on the existing knowledge about the designing of strategy maps and the implementation of strategy found in the literature as well as the experiences of designing strategy maps in the case organisation. Later, after the strategy maps had been designed, the management's experiences of using the maps were examined using an interview.

The research conducted can be characterised as a qualitative and normative action research (cf. Coughlan and Coughlan 2002; Gummesson 2000, p. 209; Olkkonen 1994, pp. 72 – 75). It can also be defined as case research. During the research, a strategy map was designed for a Finnish forest industry production unit which employs several hundred people. Three duty-related strategy maps were designed for the unit, too. The production unit was chosen as a case organisation because it was going through an implementation of its goal setting, including, e.g., performance measurement system implementation, empowerment of the employees and guiding employees towards the overall objectives of the unit. In addition, the researchers had a possibility to participate in the process of designing the strategy map which was being developed to support the process.

According to Eisenhardt (1989, p. 534), case study is a research approach that focuses on understanding the dynamics present within single settings. Case studies are carried out in order to examine in-depth and holistically certain phenomena in selected cases. These features were the main reason for choosing case research as the approach also in this study. One of the authors had an access to the research phenomenon while acting as a facilitator during the strategy map design process. Studying the process while it occurred (i.e. action research) provided an in-depth understanding of the issues related to strategy implementation at the case organisation as well as the design process of the strategy map (cf. Coughlan and Coughlan 2002; Gummesson 2000, p. 209; Kaplan 1998).

The classification of research approaches by Neilimo and Näsi (1980) and Kasanen et al. (1991) has been quite widely accepted in the context of Finnish research on business economics and industrial management. Within that classification, the research for this paper could also be related to action-oriented (similar to action research) or constructive research approach (cf. Kasanen et al. 1991). An important component of constructive research is testing the functionality of developed construction. This was not possible in this study because the construct (process mod-

el) was designed during the single case study. However, the management's experiences of applying the strategy maps in practice may be considered testing how they work in that case.

During the case research, three methods (interviewing, analysing documents and observing operations) were utilised in designing the strategy map. They are described in Chapter 5. These methods had a dual role. Primarily, they were used to create the substance and the structure of the strategy map as well as to make sure that the strategy map designed would serve the strategy implementation process in the organisation. In addition, they produced insight about issues related to the process of designing a strategy map and thus affected the model presented as a result of the study.

### 3. LITERATURE REVIEW

#### 3.1 Strategy Map – What Is It?

Cognitive mapping is a tool developed in the study of managerial and organisational cognition (Huff and Jenkins 2002, p. 2). Eden (1992, p. 261) defines cognitive mapping as a device for displaying, through the use of map-like diagram, a collection of items that are taken as elements of thinking at a given time. Huff and Jenkins (2002, p. 3) define 'map' as a visual representation that establishes a landscape or domain, names the most important entities that exist within that domain and simultaneously places them within two or more relationships. They also state that maps make conceptual entities more visible and thus facilitate the discussion of cognitive processes.

Strategy map can be considered a cognitive map. According to Day et al. (1987, p. 1548), strategy map presents the interrelationships among the performance measures and strategy variables. The strategy map is a visual presentation of an organisation's critical success factors and of the cause-and-effect relations between them. Strategy maps provide a consistent way to represent the strategy, so that objectives and measures can be established and managed. (Anon. 2001, p. 9; Kaplan and Norton 2004, p. 10; 2000, p. 176) According to Neely and Bourne (2000, pp. 3 – 5), the strategy map is a cause-and-effect relationship diagram derived from a company's strategy. Marr (2003, p. 27) considers the strategy map as a presentation describing how an organisation sees itself.

Kaplan and Norton (2004) relate the strategy map strictly to the Balanced Scorecard framework. They consider the strategy map as an illustrative one-page presentation in which an organisation's overall goals are integrated to the four perspectives of the Balanced Scorecard (Kaplan and Norton 2004, p. 55). According to Banker et al. (2004, p. 1), an essential aspect of the Balanced Scorecard itself lies in its articulation of the linkage between performance measures and strategy. Strategy maps can be used to support this articulation by presenting the linkages in

a visual form. However, strategy maps can also be used outside the Balanced Scorecard environment (see e.g. Neely and Bourne 2000).

The benefits of cognitive mapping in general are similar to the benefits of using strategy maps. Strategy maps can be of benefit as follows:

- The strategy map clarifies the path from non-financial success factors to financial results and facilitates the implementation of a performance measurement system (Laitinen 2003, p. 381),
- it clarifies a company's strategy to employees by showing how their duties are linked to the organisation's overall goals,
- it can be used to align business units and focus management processes (Kaplan and Norton 2004, p. 15),
- it provides the missing link between strategy formulation and strategy execution (Kaplan and Norton 2004, p. 10) and
- it is a tool for supporting performance measurement in organisations by trying to highlight a company's important matters, i.e. the matters which should be measured (Kaplan and Norton 2004, p. 55).

In the literature the terms used to describe the strategy map differ from each other. Kaplan and Norton (see e.g. 2004) have used the term 'strategy map', but Neely and Bourne (see e.g. 2000) have used the term 'success map'. However, the definitions of the terms are congruent with each other. The term 'strategy map' is used in this study.

### **3.2 Strategy Map as a Tool in Strategy Implementation**

According to Mintzberg (1994), the ways of strategic thinking can be divided in descriptive and prescriptive ways. The descriptive way of strategic thinking is concerned with describing how strategies get made. By contrast, the prescriptive school of strategic thinking is more concerned with how strategies should be formulated than with how they necessarily do form. Strategy maps try partly to *prescribe* the path between strategy formulation and strategy implementation. Further, the prescriptive way of strategic thinking can be divided in three strategic schools: the design school, the planning school and the positioning school. According to the representatives of the design school, strategy is a case-specific perspective in which the main problem is to find the balance between external and internal factors of the firm (cf. Selznick 1957). The planning school represents strategy as a formal and deliberated procedure (cf. Ansoff 1987). The positioning school is concerned with positioning the company inside the market by using generic strategies (cf. Porter 1980).

Designing a strategy map seems to fall mostly into the second category – the planning school. In the designing of a strategy map it is assumed that strategy formulation and implementation are detached from each other. Further, it is assumed that a strategy can be implemented by communicating it to employees and the progress in implementation can be monitored with performance measures. When used in this way, the strategy map and the performance measures related to it can be considered a diagnostic control system (Simons 2000). Banker et al. (2004, p. 22) have found out that managers who understand the organisation's strategy will rely more on strategically linked performance measures and less on non-linked measures than those with less knowledge about the strategy.

The planning school approach is criticised for being too formal and rigid to serve the purpose as a guiding line of strategic planning. In addition, not nearly every intended strategy is realised – the realised strategy can also be an emergent one. If the intended strategy is not realised, the planning school's premises lose a part of their intention. However, a formal strategy planning process has also positive sides. For example, formal planning can be a suitable alternative in situations where an organisation needs to change its direction.

From the view of strategy implementation, strategy maps try to bridge the gap between strategy formulation and strategy implementation by, e.g., visualising the connection between an organisation's strategic objectives and operative ones. It seems possible to use strategy maps as an interactive control system (cf. Simons 2000). This way a strategy map would generate feedback from operations to the design phase of strategy. This would further decrease the gap between the design and the implementation of strategy. In practice, the distinction between diagnostic and interactive use of a control system may not be great. According to de Haas and Kleingeld (1999, p. 235), the process of designing and applying diagnostic control systems seems to be a logic vehicle for initiating a strategic dialogue, which is a key issue within interactive control systems.

A key issue in strategy implementation is to be able to guide the actions of the whole organisation towards the same strategic objectives. This includes the guidance of employees operating at different organisational levels. According to de Haas and Kleingeld (1999, p. 254), a recurring strategic dialogue is necessary from the viewpoint of fit between organisational behaviour (i.e. actions) and organisational goals (i.e. strategy). In order to achieve the fit, the strategic dialogue ought to be consistent, causing the same strategic issues to be discussed at multiple organisational levels, although in terms appropriate for each level (ibid.). The different terminology used at different organisational levels usually means that the performance measures, e.g., at business unit level are different from those at shop-floor level because they are used for different purposes. From the point of view of the strategy map, it may be difficult to design a strategy map for the whole organisation because of the differences in terminology at different organisational levels. This issue will be later discussed from the point of view of the case study.

## 4. HOW TO DESIGN A STRATEGY MAP?

### 4.1 The Designing of a Strategy Map According to Kaplan and Norton

Kaplan and Norton (see e.g. 2004) have modelled the designing of the strategy map. Their model concentrates on strategy map templates. Each of the templates is based on a different strategy, e.g. operational excellence or product leadership, and on the cause-and-effect relations in the strategy. A company should choose a strategy and then tailor the strategy map for the organisation.

According to Kaplan and Norton (2000, pp. 170 – 176), the designing of a strategy map should begin with defining the objectives of a company and then proceed to the means for reaching the objectives. The defining of the objectives begins with identifying the reasons for a company's existence. After this, the management of a company defines the vision. Defining of the strategy follows the vision. The next stage is to illustrate the critical objectives of a company and the relations between these objectives in line with the four perspectives of the Balanced Scorecard. The perspectives should be handled in the following order: financial perspective, customer perspective, internal process perspective and learning and growth perspective.

*Financial perspective:* The objective of the financial perspective is to link the revenue growth strategy and the productivity strategy together. *Customer perspective:* The core of the strategy is the customer value proposition. The value proposition can be chosen from three differentiators: operational excellence, product leadership and customer intimacy. A company should excel in one of the three areas and meet general requirements in two others. *Internal process perspective:* After a company has a clear picture of its customers, it should define the means by which it will achieve the value proposition for customers and the financial objectives. *Learning and growth perspective:* The fourth perspective of the strategy map is the learning and growth perspective. An organisation must decide how to reach the objectives of the internal process perspective. (Kaplan and Norton 2000, pp. 170 – 175)

The model assumes that the objectives needed for designing the strategy map can be clearly identified based on the strategy. However, companies have often critical objectives outside the strategy that should be taken into account in a strategy map (see e.g. Malmi 2002, pp. 69 – 70). A critical objective outside a company's strategy could be, e.g., good flow of information. In addition, Kaplan and Norton have not explained in detail how to execute the designing process of a strategy map, e.g. who carries out the process. Rather, the basis of their model lies in utilising the basic templates based on different strategies.

### 4.2 The Strategy Map and the Process of Designing Performance Measurement Systems

Strategy maps are related to performance measurement and they are sometimes developed to support the designing and the use of a performance measurement system. The designing of strat-

egy maps seems to have the same kind of phases as the designing of a performance measurement system has. For example, identifying critical success factors is an important phase in designing strategy maps and in designing a performance measurement system. Therefore, examining the process for designing performance measurement systems can be considered useful when trying to construct a model for designing strategy maps.

The designing of a performance measurement system is a much-explored area (see e.g. Olve et al. 1999, pp. 37 – 83; Kaydos 1999, p. 63). The models for designing a performance measurement system are quite alike (Hannula et al. 2002, p. 150). Toivanen (2001, pp. 121 – 131) has developed a model for the Finnish business environment in cooperation with Finnish companies. Figure 1 illustrates the first four phases of Toivanen's model. The other phases of the model are not discussed because they deal only with designing performance measures.

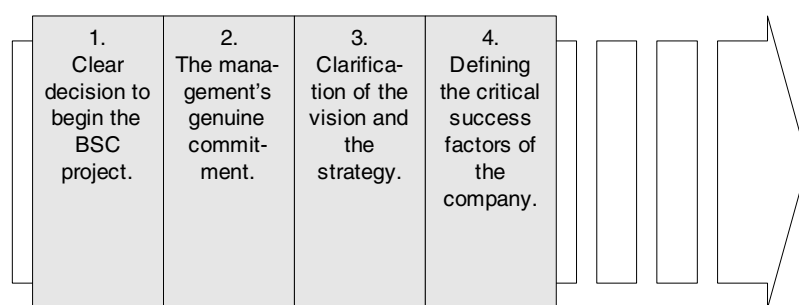


FIGURE 1. Performance Measurement System Construction Model (Amended from Toivanen 2001, p. 121)

In the following paragraphs the four phases of the model presented in Figure 1 are discussed. The phases are examined from the point of view of how they relate to designing a strategy map.

*Clear decision to begin the BSC (Balanced Scorecard) project.* Instead of examining a BSC project, the strategy map project should be examined. In the first phase the resources demanded by the project as well as the advantages and the disadvantages should be defined because many development projects might compete for a company's limited resources. In other words, the project must be justifiable (cf. Lönnqvist and Mettänen 2003, p. 85). In addition, depending on the size of the organisation, it should be decided how broad the designing project is (cf. Olve 1999, pp. 43 – 44). Does it consider the whole organisation or just a part of it?

*The management's genuine commitment.* In order to successfully follow through the designing project, the management should be committed to the project. Especially, the top management of a company should be committed because their stand tells employees how important the project really is. (cf. Olve 1999, pp. 44 – 46; Institute of Management Accountants 1998, p. 10)



*Clarification of the vision and the strategy.* In order to be able to communicate the vision to the whole organisation, the vision should be quite simple. The vision should be a compact presentation in which an organisation's objectives are described. (Kaplan and Norton 2004, pp. 34 – 35) According to Morris (1987, pp. 51 – 55), the vision should take into account all stakeholders' interests. A good vision is practical and within reach. After clarifying the vision, a company should clarify its strategy. The strategy should relate to the vision and illustrate how to reach the target stage of an organisation.

*Defining the critical success factors of the company.* The fourth phase consists of defining the operational environment, the competitors, the products and the customers of a company. In practice, this means recognising strengths, weaknesses, opportunities and threats. In other words, the critical success factors of a company must be defined. The critical success factors of a company include information, competencies, resources and features by which a company gains success. Critical success factors depend on the branch a company is in. (Toivanen 2001, pp. 124 – 125) When choosing critical success factors, the strategy map as a whole and the balance between different perspectives are to be considered. This means, e.g., that every perspective should have at least one critical success factor. (cf. Lönnqvist and Mettänen 2003, p. 92)

The phases described are necessary prerequisites for designing a strategy map. In other words, the performance measurement system design process lays a solid foundation for designing a strategy map by identifying the critical success factors that will later be visualised. However, there are no practical guidelines regarding how to actually carry out the visualisation.

### **4.3 Summary**

In summary, it can be stated that currently there is no comprehensive guideline available for designing a strategy map. Kaplan and Norton (2004) have discussed broadly about strategy maps. The strategy map templates describe in detail the contents of strategy maps. However, they do not provide a process or a technical guide for designing a strategy map. The performance measurement system design phases discussed in this study are vital for designing a strategy map. For example, without a committed management the project might be a failure. However, the final phases of the strategy map design process are excluded in the models for designing a performance measurement system.

## **5. EMPIRICAL EXAMINATION**

### **5.1 Designing the Strategy Map in the Case Organisation**

The empirical research was carried out in a Finnish forest industry production unit. The reason for designing strategy maps was to support the implementation of the new goal setting of the unit.

The study was confidential. Therefore, this paper cannot present the contents of the strategy maps designed for the unit. However, the general design and the process of designing the strategy map are discussed.

A researcher external to the business unit had the principal responsibility for the designing of the strategy map. The following methods were applied in order to create the strategy map. Thirty-eight employees were interviewed from different organisational levels. According to Bourne (2001), some of the difficulties and specific complexities in designing performance measures can be uncovered by involving the people whose areas of direct responsibility are being measured. Presumably the situation is alike in designing strategy maps. Because the implementation of strategy, in this case the implementation of the new goal setting, is linked to the responsibility and the action of an entire organisation (cf. Johnson and Scholes 1999), there is a need for strategic dialogue. A necessary precondition for this dialogue is the participation of employees whose bottom-up ideas and initiatives are important. From a cognitive viewpoint, this participation may result in increased information, knowledge and creativity which helps in better solving organisational problems through better communication and utilisation of knowledge. (de Haas and Kleingeld 1999)

Each of the interviews took approximately an hour. The interviews were partly structured. After the structured questions, the interviewees were encouraged to express freely their emotions towards the project. The interviews were made between 11<sup>th</sup> June and 18<sup>th</sup> September 2003. Various documents of the unit were also analysed. The documents analysed included material from the branch and from the market, e.g. annual reports of the company. Particularly, a document concerning the present and the target stage of the unit was examined. Additionally, the researcher observed the unit with a foreman for 64 hours. Observing the unit consisted of communicating with the blue-collar workers and trying to understand the actual processes of the unit. The major part of the unit's departments was observed. The phases of designing the strategy maps for the case organisation were carried out as follows.

*Start and organise the project and ensure the management's commitment.* At the beginning the project organisation and the empirical methods were chosen. Designing the strategy map was a part of a broader entity. The strategy map is linked to a new goal setting project and to a tool used in it, the Balanced Scorecard. The idea of designing a strategy map came from the unit manager. To ensure the middle management's commitment, the unit manager communicated the strategy map in different meetings. According to the interviews, middle management was committed to the project.

*Determine the present state of the organisation.* The identification of the business unit's operational environment was carried out at first by examining, e.g., the annual reports and other documents concerning the industry. After this, the examination concentrated on the business unit.

The most important document in this stage was the document concerning the present and the target stage of the unit. In addition, the unit was observed at grass roots level. The observation included among other things discussion with the operating force of the unit, as mentioned.

*Clarify vision and strategies.* The executive group of the case organisation created the vision in a meeting which considered the unit's goal setting. The researcher participated in the meeting, too. In the meeting exchange of views took place and eventually the vision was ready to be presented. The vision was shaped practical and attainable, which are the requirements for a good vision (see Chapter 4.2). Based on the vision and certain changes in operational environment, the strategy of the unit was defined as areas of focus by the management.

*Identify critical success factors and clarify the cause-and-effect relations between them.* The fourth phase consisted of two partly overlapping components; first, identifying critical success factors and second, clarifying the cause-and-effect relations between them. The interviews carried out were used to identify the critical success factors and the cause-and-effect relations between them. A factor was considered critical if, e.g., it occurred several times when interviewing various employees performing similar duties. In total, thirty-eight employees from different organisational levels were interviewed. The interviewees were chosen with the unit manager and department heads. Also, the documents of the unit and the observations from grass roots level were taken into account when identifying critical success factors and clarifying the cause-and-effect relationships between them. After brainstorming and several discussions with the management of the case organisation, a bundle of preliminary critical success factors were identified. Once the preliminary critical success factors were defined, numerous iterations were made with the management to reach a consensus on the final factors and the cause-and-effect relations between them. As the result, the final factors and the relations were defined.

Every perspective of the strategy map should consist of a suitable combination of critical success factors. That is why *the layout of the strategy map must be created* at the same time as identifying the critical success factors. In this study, the layout of the strategy map was similar to the four perspectives of the Balanced Scorecard because it is also used as the framework for the performance measurement system of the unit. Thus, the strategy map of the business unit contains four perspectives: financial perspective, customer perspective, internal process perspective and learning and growth perspective.

*Visualise the strategy map.* In the last phase the strategy map was visualised. In practice, the critical success factors were illustrated as boxes and the cause-and-effect relationships as arrows between them. The objectives of a critical success factor were illustrated as a list below the critical success factor. The strategy maps were visualised using information technology. An example of a strategy map's perspective is shown in Figure 2.

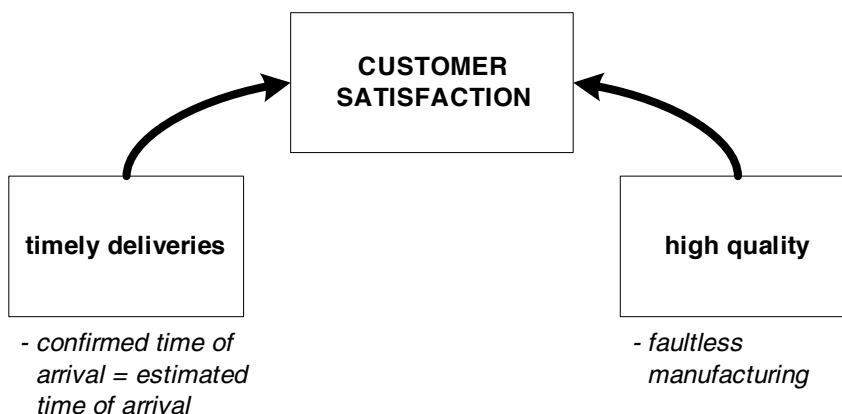


FIGURE 2. Example of a Strategy Map Perspective

A key purpose for using the strategy map in the organisation was to illustrate to employees how their duties relate to the overall business objectives of the business unit and the company. However, the strategy map of the business unit was considered not detailed enough to be able to visualise the relation. Further, as it was recognised in Chapter 3.2, there is a need for using different terminology at different organisational levels. For example, a strategy map for a middle manager should differ from a strategy map designed for a person within the working force. Usually, the lower an organisational level is the more practical matters should be illustrated in a strategy map. Therefore, additional duty-related strategy maps were designed in order to illustrate how the work of employees performing a certain duty relates to other activities of the business unit. The connection between the strategy map of the business unit and the duty-related maps is described in Figure 3.

In Figure 3, the financial perspectives of the strategy maps are alike, i.e. a foreman's financial objectives are similar to the business unit's financial objectives. In the strategy map of a business unit the objectives of the customer perspective are customer satisfaction and customer loyalty. The foreman's objectives – timely deliveries and high quality – support customer satisfaction. The tasks of the foreman consist of supervising the following three stages: raw material handling, storing and manufacturing. The stages above support effective operations management, which is one of the critical success factors in the internal process perspective of the business unit's strategy map. Leadership and flow of information are the foreman's critical success factors in the learning and growth perspective. They relate to employee competencies, which is a critical success factor in the strategy map of the business unit.

The duty-related strategy maps were designed after designing the business unit's strategy map. The first phase was to *choose the duty for a duty-related strategy map*. In this study the du-

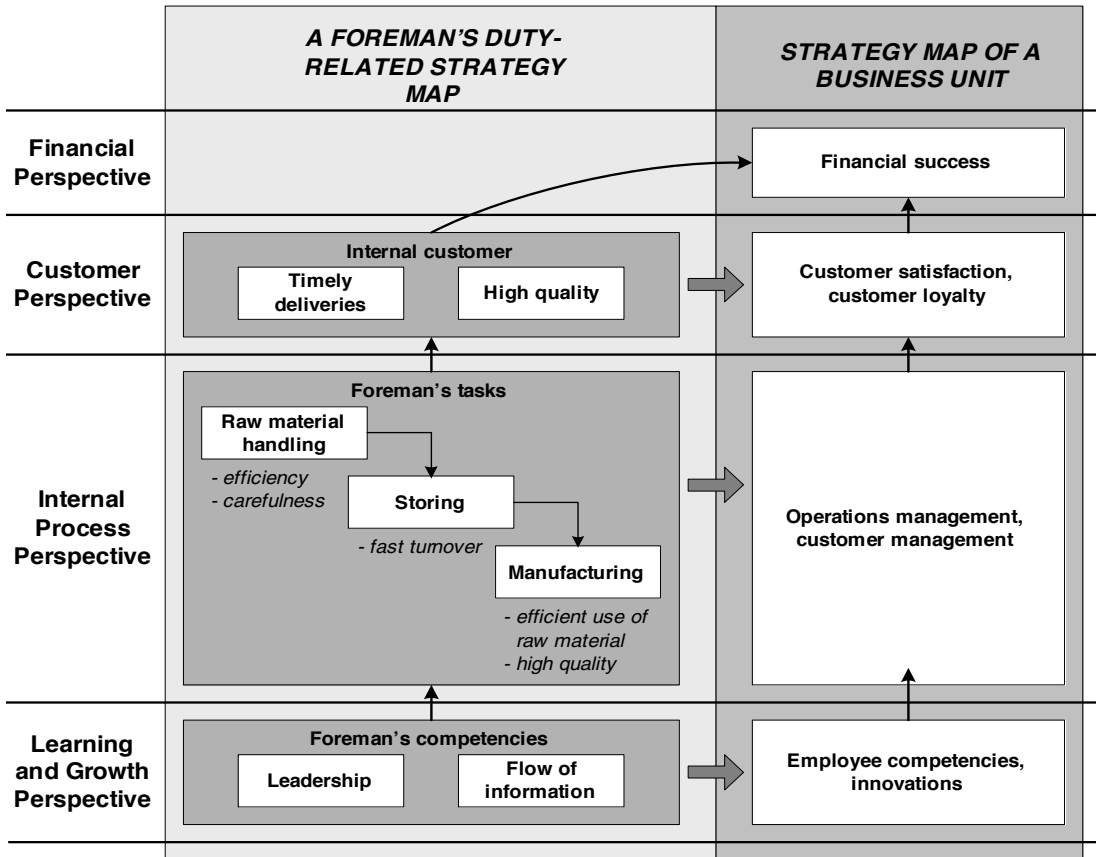


FIGURE 3. Example of How a Foreman's Duty-Related Strategy Map Relates to a Business Unit's Strategy Map

ties illustrated with a strategy map were chosen by the management of the unit. The selection criteria included, e.g., high contribution to the manufacturing process.

Identify critical success factors and clarify the cause-and-effect relations between them. The implementation of this phase was quite similar to the phase, in which the critical success factors were identified and the cause-and-effect relations were clarified for the unit. The interviews, the unit's documents, especially the duty descriptions, and the observations from grass roots level served as an instrument. Further, it was considered separately by each of the duty-related strategy map how does the person performing a particular duty contribute to the unit's overall objectives. Also, the unit's strategy map was utilised.

*Create a layout.* In this study the layout of the duty-related strategy maps was similar to the layout of the unit's strategy map. The critical success factors of the duty-related strategy maps differed from each other and from the unit's strategy map. One reason for the differences is that the critical success factors in the internal process perspective were defined, e.g., by duty descriptions which differed from each other in every duty. In addition, the success factors were more detailed, i.e. they focused on specific areas of the operations, in the duty-related strategy map than in the business unit's strategy map. Finally, *the strategy maps were visualised* similarly as the unit's strategy map.

At the end of the project possible communication channels to communicate the strategy maps to employees were planned. A possible communication channel could be the internal meetings within unit. The strategy maps could also be presented in different personnel development meetings. The prerequisite for obtaining advantage from the strategy maps is, naturally, that the employee being familiarised understands the contents of the strategy maps.

## 5.2 Management's Experiences of Applying the Strategy Map

The manager of the business unit was interviewed 15 months after the strategy map designing project was completed. The manager was asked to answer to the following questions: How has the unit utilised the strategy maps? Has the utilisation of strategy maps had an effect on the goal setting project? In addition, the manager was asked to express freely his viewpoints of the project as a whole.

According to the manager, using the strategy maps has successfully supported the implementation of the new goal setting. However, the contribution of the strategy maps is difficult to specify because the designing project has been a part of a bigger process. The strategy maps have been presented as such in a couple of internal meetings and they are to be further developed in the future. The manager highlighted some points in which the strategy maps have an important role.

First, the design process of strategy maps itself has been a valuable method in guiding the organisation to same direction. Especially the interviews and observing the unit have signalled to employees that also their opinions are worthwhile. The manager expressed this as follows (translated into English):

*"The whole (designing) process has been a good method in communicating the new way of thinking to employees."*

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*"The goal setting process has been strengthened partly through the (designing) process."*

As a result, the majority of the organisation has adopted the overall objectives of the unit. Further, the barriers between different departments have become lower by visualising the relations be-

tween them. The manager also emphasised the importance of the neutrality of the person being responsible for the project (cf. Olve et al. 1999, p. 48).

Second, the strategy maps could be used as such as tools in familiarising new employees like the manager pointed out (translated into English):

*“Because the strategy maps visualise the goal setting of the unit, they can be used in illustrating, for example, the relations between different departments to new employees.”*

Third, the strategy maps help in piecing together the operations of the unit by visualising the cause-and-effect relations between different matters. Hence, the employees are able to get the general view of the unit’s activity easier.

## 6. CONCLUSIONS AND DISCUSSION

According to the literature, the strategy map seems to be a useful tool in strategy implementation, e.g., because it can clarify strategies, be used to align business units and focus management processes, visualise the cause-and-effect relationships between different factors and provide the missing link between strategy formulation and strategy execution (see e.g. Kaplan and Norton 2004, Kasurinen 2000, Tuomela 2000). The experiences from this case research support these earlier findings. An important issue in determining the effectiveness of the strategy map as a tool in strategy implementation is that the strategy map is understood by employees at different organisational levels (cf. Banker et al. 2004, de Haas and Kleingeld 1999). This makes it possible to align the activities of the whole organisation and to use the strategy map as an interactive control system.

This paper concentrated on the design process of a strategy map and explained in detail how to design a strategy map. As a result, a new model for designing strategy maps was created (see Figure 4). The model constructed in this study for designing strategy maps is based on Kaplan and Norton’s model, the models for designing a performance measurement system and the empirical examination in a Finnish forest production unit. The model presented summarises the key phases of designing a strategy map. It elaborates a suitable layout for the strategy map and the visualisation of the map. In addition, it shows how duty-related strategy maps can be designed. The model constructed supplements Kaplan and Norton’s model and performance measurement system models.

The case organisation of the study was a business unit and the strategy maps were designed on two organisation levels: the unit’s level and an employee’s level. Depending on the size of a company, it should be considered which levels are to be illustrated with strategy maps. For example, in the case of a conglomerate it could be meaningful to design strategy maps for, e.g., the

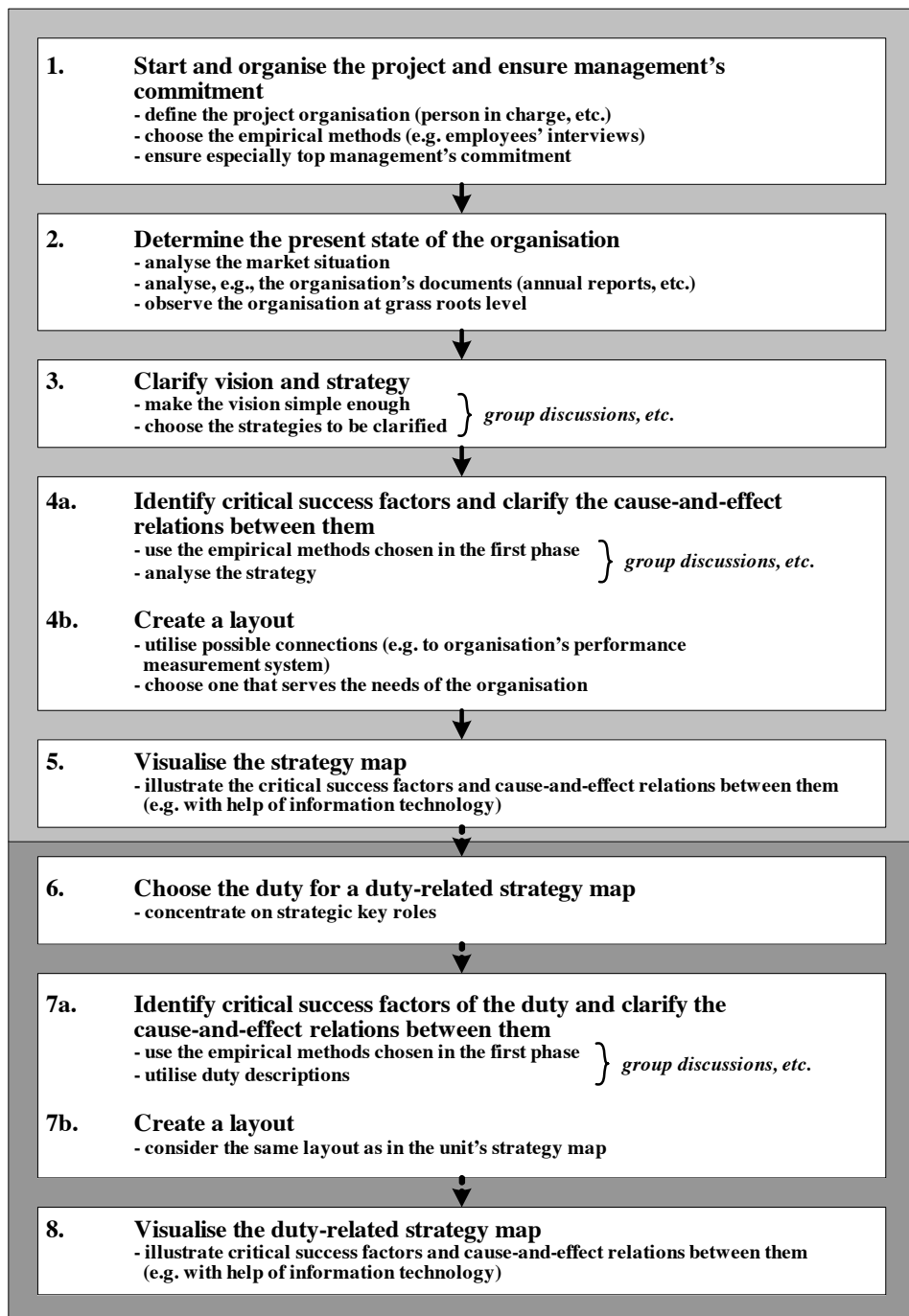


FIGURE 4. Model for Designing Strategy Maps



conglomerate level, the company level, the unit level and the duty level in order to proceed step by step. In other words, the step from conglomerate level to duty level could be too big to take at once.

The literature suggests that strategy maps can be used to visualise the strategy of a company. They are also suggested for use in supporting performance measurement in order to better perceive the objectives that are measured. Traditionally, the layout used for the strategy maps is similar to the Balanced Scorecard's four perspectives. This type of strategy maps can likely be used for the purposes mentioned. However, strategy maps are also suggested to illustrate how the duties of an employee relate to the objectives of an organisation. The traditional-type strategy map of, e.g., a business unit may not be detailed enough to achieve this. Instead, duty-related strategy maps that are more detailed and focus specifically on the duty in question may be needed.

Duty-related strategy maps may be a necessary supplement to the business unit's strategy map in order to guide the actions of employees operating at different organisational levels towards the same strategic objectives. Using both types of strategy maps may lead to consistent strategic dialogue despite the difference in terminology at different organisational levels (cf. de Haas and Kleingeld 1999). Duty-related strategy maps could also be used as a tool in empowering the employees of an organisation. An alternative for a duty-related strategy map might be a work group or a team-based strategy map. However, these options were not considered in this study.

The contribution this paper makes is as follows. First, comparing the new designing model presented with the other model found in the literature, Kaplan and Norton's model, the contribution of this paper is the step-by-step guidelines for the process of designing strategy maps. Kaplan and Norton concentrate primarily on the substance of strategy maps and the modelling of a map is limited to strategy map templates. In other words, Kaplan and Norton have not explained how to execute the process of designing strategy maps. In the same way as the Balanced Scorecard framework describes what should be measured and how it should be done, the performance measurement system design processes describe how a measurement system can be created for an organisation. Using the same analogy, the new model can be considered as a supplementary design model when creating strategy maps based on, e.g., Kaplan and Norton's templates.

The second contribution of this paper is the introduction of the duty-related strategy map. For example, Kaplan and Norton's templates deal with company-level strategy maps. This paper showed how strategy maps can be extended to be used at the level of individual employees in order to, e.g., assist in empowering employees.

Finally, this paper also makes a contribution by presenting how the unit's and duty-level strategy maps were defined in practice in the case organisation. Because the designing project was a part of a bigger plan in the case organisation, the practical contribution of the strategy maps is difficult to specify. However, some points can be highlighted. The whole designing process itself

supported the implementation of the new goal setting going on in the unit. Especially, the interviews and observing the unit were considered to be valuable. The strategy maps could be used as such in familiarising new employees. The strategy maps are also helpful in illustrating "the big picture" of the unit.

The strategy maps designed in the case organisation could have turned out different if a person who works for the unit had carried out the designing project. A typical characteristic of action research is that the researcher affects the organisation (see e.g. Gummesson 2000). In this case, the researcher was able to act as a neutral outside actor. In addition, discussions with the top management of the business unit ensured that the strategy map visualised the planned strategy correctly. Thus, action research can be considered a suitable approach for this study. On the other hand, a person with inside knowledge might have been more efficient because of already knowing the organisation. The choice between an inside and an external facilitator of the process seems to involve both negative and positive aspects that must be decided case by case.

The analysis carried out in this research can be criticised as follows. The empirical part of the study was performed in only one business unit. Thus, the results of the study reflect strongly the operations of the case organisation. However, it is likely that similar phases in designing strategy maps are relevant also in other organisations. A weakness of the model constructed is that it was not tested in other organisations, which would be necessary in order to ensure the functionality of the model. The fact that the strategy maps designed have been utilised in the case organisation and the utilisation was reported to have created some benefits suggest that the weak market test of constructive research approach is fulfilled (cf. Kasanen et al. 1993, p. 253). Nevertheless, the authors encourage other researchers as well as practitioners to test and further improve the model. ■

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