The challenge of implementing the Balanced Scorecard

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ABSTRACT
Many large companies use a performance measurement system like the Balanced Scorecard (BSC). However, many small and medium enterprises (SMEs) do not have a performance measurement system. Companies that start with a performance measurement system face difficulties with the implementation. This paper proposes some potential solutions based on the research literature.

Keywords
performance measurement, balanced Scorecard, bsc, implementing.

1. INTRODUCTION
In 1992, Kaplan and Norton published an article about the Balanced Scorecard (BSC) [KN92]. At that time, it was a new approach to strategic management. They recognized some of the weaknesses and vagueness of previous management approaches. The balanced scorecard approach provides a clear description as to what companies should measure in order to 'balance' their financial perspectives.

Nowadays many large companies use a performance measurement system like the BSC but many smaller companies have no performance measurement system [SAG06]. Companies that start with a performance measurement system face difficulties with the implementation. There are only a few articles published in journals concentrating on implementation issues of performance measurement systems in small and medium-sized organisations.

The paper starts with the introduction of the Balanced Scorecard, followed by the literature review of the Balanced Scorecard. Next, the case background and research method are described, followed by the results. Finally, the recommendations and conclusion is presented.

2. LITERATURE REVIEW

2.1 What is the balanced Scorecard?
The Balanced Scorecard is a performance management tool that enables a company to translate its vision and strategy into a tangible set of performance measures. However, it is more than a measuring device. The scorecard provides an enterprise view of an organisation's overall performance by integrating financial measures with other key performance indicators around customer perspectives, internal business processes, and organisational growth, learning, and innovation. Kaplan and Norton describe the innovation of the balanced scorecard as follows: "The balanced scorecard retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation [KN96b]."

2.2 Cause-and-effect relationships
The Balanced Scorecard relies on the concept of Strategy developed by Michael Porter [KN96b] p37. Porter argues that the essence of formulating a competitive strategy lies in relating a company to the competitive forces in the industry in which it competes. The scorecard translates the vision and strategy of a business unit into objectives and measures in four different areas: the financial, customer, internal business process and learning and growth perspective. The financial perspective identifies how the company wishes to be viewed by its shareholders. The customer perspective determines how the company wishes to be viewed by its customers. The internal business process perspective describes the business processes at which the company has to be particularly adept in order to satisfy its shareholders and customers. The organisational learning and growth perspective involves the changes and improvements which the company needs to realize if it is to make its vision come true.

A strategy is a set of hypotheses about cause and effect. The measurement system should make the relationships (hypotheses) among objectives (and measures) in the various perspectives explicit, so that they can be managed and validated. The chain of cause and effect should pervade all four perspectives of a BSC [KN96b] p30-31. For example, the strategy of an engineering company could be to perform consultancy besides the regular work because it provides a higher return. Return-on-capital-employed (ROCE) may be a scorecard measure in the financial perspective. The driver of this measure could be expanded sales to new and existing customers as a result of a high degree of loyalty among those customers. Thus, new customers and customer loyalty is included on the scorecard in the customer perspective because it is expected to have a strong influence on ROCE. A market analysis may have revealed that there is a need for consultancy. In this case, providing consultancy is expected to lead to new customers and higher customer loyalty, which, in turn, is expected to lead to higher financial performance. So new customers, customer loyalty and consultancy (which could be measured by the number of consultancy projects that have been carried out) are incorporated into the customer perspective of the scorecard.

The process continues by asking which internal processes for the engineering company are necessary in order to practice consultancy. To achieve this, the business may need new quality consultancy products. The new products must first be developed and afterwards tested on quality. Developed consultancy products and process quality on consultancy products are factors that could be scorecard measures in the internal perspective. The engineering company can develop consultancy products by training its operating employees in the required skills. If the company also engages experienced consultants, this will shorten the development time of the consultancy products. These experienced consultants can act as mentors for the trained employees. Experienced consultants and trained employees for consultancy are objectives that would be candidates for the learning and growth perspective. Now the entire chain of cause-and-effect relationships can be established.
as a vertical vector through the four BSC perspectives (see Figure 1):

![Figure 1. Cause-and-effect relationships](image)

Because Kaplan and Norton assume the following causal relationship: measures of organisational learning and growth → measures of internal business processes → measures of the customer perspective → financial measures, the measures of organisational learning and growth are therefore the drivers of the measures of the internal business processes. The measures of these processes are in turn the drivers of the measures of the customer perspective, while these measures are the drivers of the financial measures. According to Kaplan and Norton a good balanced scorecard should have an appropriate mix of outcomes (lagging indicators) and performance drivers (leading indicators of the business unit’s strategy [KN96b] p32).

### 2.3 Key performance indicators

Metrics used in the BSC are typically called Key Performance Indicators (KPIs) because they measure how well the organisation performs against predefined goals and targets. There are two major types of KPIs: leading and lagging indicators. Leading indicators measure activities that have a significant effect on future performance, whereas lagging indicators, such as most financial metrics, measure the output of past activity. Leading indicators are powerful measures because it gives managers more time to influence the outcome.

### 3. BSC USAGE IN SMALL MEDIUM SIZED ENTERPRISES

Nowadays, many large companies use a performance measurement system like the BSC but many smaller companies have no performance measurement system. In a recent study Sousa et al. indicate that the SMEs surveyed, recognise the importance of performance and a performance measurement system but their level of use was significantly lower [SAG06]. Speckbacher et al. found a significant association of size (measured as the number of employees) and BSC usage; larger companies are more likely to have implemented a BSC [SBP03]. However, the examined companies are large and not small or medium sized organisations. Neely et al. pointed out that measurement is a luxury for SMEs. They concluded that the cost of measurement is an important issue to managers in SMEs [NGP95]. Also, nowadays most SMEs use an information system by which data for measures can easily be obtained, but the costs of implementing and purchasing a scorecard system can still be an issue to managers.

#### 3.1 Types of Balanced scorecards

Speckbacher, Bischof and Pfleiffer found in their large-scale research with high response under German companies quoted on the stock exchange a high support for ambivalence in the BSC concept [SBP03]. They defined three types of BSCs:

- **Type I BSC**: a specific multidimensional framework for strategic performance measurement that combines financial and non-financial strategic measures.
- **Type II BSC**: a Type I BSC that additionally describes strategy by using cause-and-effect relationships.
- **Type III BSC**: a Type II BSC that also implements strategy by defining objectives, action plans, results and connecting incentives with BSC.

50% of the examined companies that use the BSC appeared to work with a type I BSC, 21% with a type II BSC and 29% with a type III BSC. Only the companies that use type III BSC are in position to fully benefit of the BSC as a performance management system that bridges the gap between strategic plans and real activities. However, linking the reward system to the BSC has some risks [KN96b] p218-219. The question arises whether or not measures on the BSC are right. Are the data for the selected measures reliable? Could there be unintended or unexpected consequences in how the targets for the measures are achieved? Despite the risks of linking the reward system to BSC, it seems reasonable to assume that companies are able to steer the organisation according to the strategy (described by BSC measures and cause-and-effect chains) if they reward managers on the basis of BSC measures [Mal01]. The study of Speckbacher et al. shows that companies implementing a more developed BSC (particularly Type III) rely more on the BSC approach and are more satisfied with their BSC than those with a less developed BSC.

In the majority of organisations, the implementation of the BSC is a difficult process. The types defined can be interpreted as three typical evolitional steps in the process of BSC implementation [SBP03]. Half of the companies that use the BSC were not able to obtain cause-and-effect relationships. One reason for this could be that those companies have only recently started the process of implementation. It is also likely that a
large number of the companies, that are using the type I BSC, might find it too difficult to obtain cause-and-effect relationships.

3.2 Conditions for Implementing the Balanced Scorecard
Nowhere in their books and articles do Kaplan and Norton describe the conditions an organisation must in order to be able to apply the Balanced scorecard. The way they describe organisations that applied the BSC in numerous examples suggests that this method is universally applicable. According to Kaplan and Norton, the Balanced Scorecard enables companies to modify strategies [KN96a]. Companies in a highly dynamic environment have to change their strategy constantly, which, leads to frequently changing the measures in the BSC. In a critical analysis of the BSC, Nørreklit stated that companies in dynamic surroundings will frequently change their measures, resulting in a substantial uncertainty margin regarding the usefulness of the defined indicators [Nør00]. In general, it is difficult for an organisation to establish performance measures for activities with which the organisation has very little or no experience. Therefore, as measuring effects is particularly difficult in companies which constantly have to adapt to new situations, the BSC is not applicable for companies in highly dynamic environments.

3.3 Obstacles and key success factors to implement the balanced scorecard
Although Kaplan and Norton describe many successful implementations of the BSC, they also identify sources of the failure of the Balanced Scorecard implementation. Table 1 shows the obstacles and key factors in the implementation of the BSC.

4. CASE BACKGROUND AND RESEARCH METHOD
4.1 Problem Statement
A Dutch engineering company of about 160 employees which has nine branches in The Netherlands and several branches abroad started with the implementation of the BSC early 2005. Usually it takes 6-12 weeks for a small organisation to complete the initial design and for large companies 12-16 weeks [ACG01]. Usually after the initial design, most work has been completed. After two years, the engineering company is still busy implementing the BSC. The BSC has without doubt disadvantages but this research will not address the disadvantages, unless it is related to the implementation of the BSC.

4.2 Organisation profile
The Dutch engineering company has nine branches in The Netherlands and several branches abroad. All branches in the Netherlands are autonomous. The branches have no departments. This structure can be characterised as a divisionalised organisation structure. The engineering company tends to be a learning organisation. Assignments of customers are thematically carried out by project teams. For each assignment, a project team is formed.

4.3 Research method
For this project, a case study is the most suitable way to carry out the research. Case studies typically combine data collection techniques such as interviews, observation, questionnaires and document and text analysis. A well-organised and categorised set of case data will facilitate the task of analysing the case study evidence, in order to address the research questions [DSB98]. Two of the six types of evidence sources were used to conduct this case study:

- A review with the CIO of the engineering company.
- A policy plan from 2006, a concept strategy plan for 2007-2012 and a new corporate BSC.

A case study is well suited to understanding the interactions between information technology-related innovations and organizational contexts. It is useful as a means of studying information systems development and use in the field; in this research an implementation of the BSC in a Dutch engineering company.

Most of the ad hoc questions for this research were answered by the contact at the company. He maintains the quality management system for the engineering company which is based on theory of W. Edwards Deming.

4.4 Research questions
The research question is “What are the challenges of implementing the Balanced Scorecard?” This research question is divided in the following sub questions:

- Which conditions should the organisation fulfil in order to implement the BSC?
- To what extent does the engineering company fulfil these conditions?
- What are the obstacles in the implementation of the BSC in the organisation?
- What are the key factors in the successful implementation of BSC?
- How is the BSC being implemented now?
- Can the way of implementation be found in the research literature?
- What are the disadvantages in the chosen implementation method?
- What improvements can be recommended concerning the implementation process?

The results of this research project will be translated into a set of recommendations on how to overcome the difficulties of implementing the BSC.

5. RESULTS
5.1 ANALYSES POLICY PLAN
In the central policy plan 2006 the policy was divided into four perspectives of the BSC. After that the corporate BSC and the BSCs of the branches were dealt with. Together, these formed the central policy plan. Every BSC contained the following perspectives: “Financial”, “customers”, “internal processes”, and finally “knowledge and learning”. It is interesting that the introduction contained the picture from the first article by Kaplan en Norton in 1992. Here, the perspective innovation and learning was used that in later articles had been replaced by learning and growth. In the policy plan, “learning and growth” was used and later on the label of this particular perspective in the BSCs was changed again into “knowledge and learning”. The consultant at the company stressed the necessity to implement the BSC sprang from the ISO-certification 9001 that
<table>
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<tr>
<th>Authors/ (research method)</th>
<th>Obstacle</th>
<th>Description</th>
<th>Key factor</th>
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<tr>
<td>Kaplan and Norton [KN01a]</td>
<td>Too few measures (two or three) per perspective</td>
<td>As mentioned before, a good balanced scorecard should have an appropriate mix of outcomes (lagging indicators) and performance drivers (leading indicators) of the company’s strategy. Therefore, when the organisation constructs too few measures in each perspective, it fails to obtain a balance between leading and lagging indicators or non-financial and financial indicators.</td>
<td>Obtain a balance between leading and lagging indicators.</td>
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<td>Kaplan and Norton [KN01a]</td>
<td>The organisation adopts too many indicators</td>
<td>In this case, the organisation will lose focus and cannot find any linkage between indicators.</td>
<td>Obtain only the indicators that reflect strategy and are most critical.</td>
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<td>Kaplan and Norton [KN01a]</td>
<td>Measures selected for the scorecard do not reflect the organisation’s strategy</td>
<td>This happens when the organisation tries to apply all their Key Performance Indicators (KPIs) into each perspective without screening only for the measures that are linked to its strategy. Therefore the organisation’s strategy is not translated into action and the organisation does not obtain any benefit from the Balanced Scorecard.</td>
<td>Only select measures that are linked to the organisation’s strategy.</td>
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<td>Schneiderman [Sch99], Nørreklit (analytical) [Nør00]</td>
<td>Try to make a quantitative link between non-financial leading indicators and expected financial results</td>
<td>The financial measures are the dependant variables and are the retrospective, lagging indicators. Some organisations are tempted to make this linkage quantifiable but since lag time is difficult to predict and numerous factors may influence the result, a quantitative link can not be established. Therefore, they should not make a quantitative link between non-financial leading indicators and expected financial results.</td>
<td>Do not make a quantitative link between non-financial leading indicators and expected financial results.</td>
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<td>Kaplan and Norton [KN01a], Braam and Nijsen (empirical) [BN04], Schneiderman [Sch99]</td>
<td>Lack of senior management commitment</td>
<td>Delegation of the project to middle management and defining the project as performance measurement is described as one of the most common causes of failure, by missing focus and alignment to implement strategy. This is a process that can only be led from the top.</td>
<td>Senior management should support and lead defining the project as performance measurement.</td>
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<td>Kaplan and Norton [KN01a]</td>
<td>Too few individuals are involved</td>
<td>The senior leadership team must work together to build and support the implementation of the Balanced Scorecard, including objectives, measures and targets. If not, there can not be the shared commitment which is required to align the organisation.</td>
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<td>Kaplan and Norton [KN01a], Schneiderman [Sch99], Andersen et al. [ACG01]</td>
<td>Keeping the scorecard at the top</td>
<td>To be effective, the Balanced Scorecard, including strategy and action to support implementation, must eventually be shared with every member of the organisation (see figure 2). If there is no deployment system that breaks high level goals down to the sub-process level where actual improvement activities reside, significant process improvements throughout the organisation fail to generate bottom line results [Sch99].</td>
<td>Involve the whole organisation in the implementation process.</td>
</tr>
<tr>
<td>Kaplan and Norton [KN01a], Braam and Nijsen (empirical) [BN04]</td>
<td>The development process takes too long</td>
<td>If the implementation takes too long, it can happen that during the implementation process, the strategy has changed. This results in the fact that some of indicators have become obsolete and requires new indicators. Measuring with wrong indicators can distract an organisation from its strategy.</td>
<td>Keep the development process short.</td>
</tr>
<tr>
<td>Kaplan and Norton [KN01a]</td>
<td>Introducing the Balanced Scorecard only for compensation</td>
<td>Support for the linkage of compensation to strategic measures can only occur effectively when it is part of the process of strategy translation in the organisation.</td>
<td>Support the linkage of compensation to strategic measures when it is part of the process of strategy translation in the organisation.</td>
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states that strategic aims should be SMART (Specific Measurable Achievable Realizable Time-bound). This seems to be underlined by the policy plan of 2006. This states that the BSC is a tool to test the SMART goals. However, the BSC is not just meant to test strategic aims. It entails so much more than that. It makes that the strategic goals will lead into actions [KN96b].

With each indicator, the critical success factor, aims and actions for improvement were listed. For most indicators, the numbers for these indicators were not yet known, although it can be assumed that for the indicator revenue, the numbers are known. Sometimes indicators were defined that were not clear and therefore not measurable such as the defined indicator “employee coaching”. Moreover, all BSCs varied and cause-and-effect relations could not be established. E.g., the performance indicator of employee skills is not specific enough and this is not a performance driver for the indicators that were defined in the internal/business process. Figure I illustrates how the cause-and-effect relations could look for the strategy in order to aim at consultancy. Also, most of the indicators defined in the corporate BSC had not been included in the BSCs of the branches.

The usage of critical success factors is not a BSC method. Internet contains many articles that actually relate to a different method or a combination of a different method and the BSC. Critical success factors originate from the theory that Rockart wrote down and this method differs from the BSC [Roc81]. Van Veen-Dirks and Wijn state that the BSC is inappropriate for strategic control, because the BSC, by definition, deals with implementing a fixed strategy [VDW02]. They assume that the BSC should be completed by a system that does contain the possibility for strategic control, such as the CSF-method.

5.2 Analysis concept strategic plan
A concept strategic plan was drawn up for 2007-2012. This document contained the strategy plan for 2007-2012 and a PowerPoint presentation of the management meeting. This explicitly stated that the engineering company was going to focus itself on consulting. Human resource management will mainly focus on selecting highly educated professionals, technicians and all round consultants. Secondly, it will focus on education and personal development. The concept did not contain a mission or a vision. It is likely that this had not been dealt with as it was a concept. Furthermore, the difference between strategic and operational goals had not been made clear, probably for the same reason. The BSC had not been taken into consideration in determining the strategy and is not mentioned in the strategic plan.

5.3 Analysis of the new corporate Balanced Scorecard
Later, the new corporate BSC came available just like the strategic plan. The set-up of this BSC was the same as the previous BSCs from the policy plan, i.e each perspective contained critical success factors, strategic aims, performance indicators, target figures and actions for improvement. Just like the BSCs in the policy plan, it concerns a design of the BSC. The KPIs in the corporate BSC were a subset of the KPIs in the former corporate BSC.

5.4 Results interview with the chief information officer
The assignments focussed on the region the branch was situated in. So each branch can be regarded as autonomous.
The motivation to implement the BSC was that the BSC is a well known method and the CIO has had some experience with it in a course he had taken.

The engineering company started with the implementation of the BSC early 2005 for its Dutch branches. The BSC will not be implemented for the foreign companies. According to the CIO, the reason for the lengthy development process was that the implementation was executed bottom-up. This means that the managers of each branch had to develop a BSC. They were expected to do so after an elaborate presentation by the CIO (at that time he was a branch manager). The branch managers are all engineers and most of them have had or still have additional management training. The CIO preferred a top-down approach, which will be used as of now. Firstly, a corporate BSC will be developed in which the number of measurements will be highly reduced, because he thought there were too many, and then the branch managers will develop the BSC for their organisations. Furthermore, he commented that developing measurable qualitative performance drivers is a difficult task.

The main goal of the organisation is to obtain a higher position within the top ten ranking of engineering companies. This list is ranked by revenue. 3D drawing systems will be used to integrally deliver support for the designing process. Moreover, the engineering company will aim at consultancy.
De critical success factors in the BSCs come from articles at the internet.

5.5 Further analysis
This analysis is made on the basis of the interview, analysis and obstacles found in the literature:

- In the new corporate BSC, only two a three indicators are used. This number of measures is not enough for an appropriate mix of outcomes and performance drivers (obstacle #1).
- The reason for the lengthy development process, according to the CIO, was that the implementation was executed bottom-up. Delegation of the project to middle management and defining the project as performance measurement is described as one of the most common
causes of failure, by missing focus and alignment to implement strategy (obstacle #5).

- There is at the moment only a corporate BSC and no other BSCs which indicates that only the senior management is developing the BSC. This lead to obstacle #7: keeping the scorecard at the top.

- The development process has already taken too long (obstacle #8), but it is not certain why the indicators were removed from the corporate BSC.

6. CONCLUSION AND RECOMMENDATIONS

The literature says a top down approach is important for the BSC to be successful. The facts of the case show that a bottom up strategy was used. Therefore, one way to solve the problem is to start over again using a top down strategy. Moreover, keeping the scorecard at the top will require actual improvement of sub-process level. Defining only a corporate BSC indicates this. Therefore, one way to get an effective BSC, including strategy and action to support implementation, must is to share it with the whole organisation.

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