Third generation Balanced Scorecards for libraries: from measuring instrument to core strategic management tool

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Abstract

Over a period of seventeen years the Balanced Scorecard has evolved from a performance measurement instrument to a key strategic management tool firmly entrenched in the business world and also used by many non-profit organizations. The article first sketches the key points in this history and how it has been used by the library. A case study is then described of a recent BSC implementation for the University of Pretoria Library Service's Open Scholarship Programme. The conclusion is that the balanced scorecard and in particular its associated strategy map is a useful tool for translating, communicating and implementing strategy.

Introduction

When the Balanced Scorecard (BSC) was introduced in 1992 it was a response to the growing realisation that financial measures are inadequate to describe the performance of an organization or to use as a basis for decision making. Robert Kaplan and David Norton, who created the concept, aimed to broaden performance management by including three additional perspectives: customers, internal business processes, learning and growth. Apart from giving a more balanced view of an organization's performance it was also argued that financial performance is a lag indicator, telling you what already happened without any indication of the organization's readiness for future development and growth. In seventeen years it has gone through three developmental phases, or generations, evolving "to be a strategic management tool that involves a wide range of managers in the strategic management process, provides boundaries of control, but is not prescriptive or stifling and most importantly removes the separation between formulation and implementation of strategy" (Lawrie & Cobbold, 2004).

First Generation

Balanced scorecards were designed by selecting five or six good measures for each perspective and presenting them in the BSC model with the perspective clusters arranged around the organization's vision and strategy (Figure 1). The perspective at 12h00 was perceived to be the most important. Brevity and focus was considered a plus point for effective communication of priorities (Kaplan & Norton 1992).
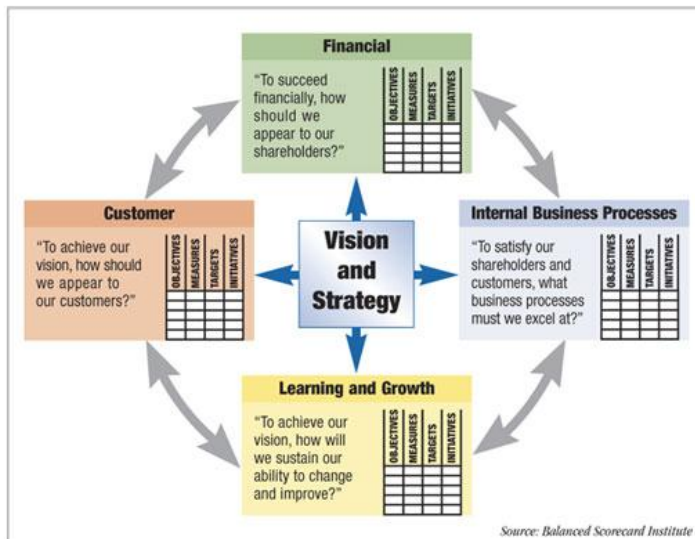
Figure 1: Generic 1st generation balanced scorecard (http:// doqkhanh.wordpress.com)

The idea was greeted with enthusiasm, balanced scorecards abounded and consulting services sprang up. In the non-profit sector the balanced scorecard made sense in the absence of mostly non-existing financial indicators: at last we could discuss performance measurement on an equal footing. Alternative definitions and headings and even more perspectives were proposed.

However, many scorecards never lived up to their promise and died a quick death or just faded away. This lack of success is blamed on vagueness and lack of direction with regard to measure selection and grouping. The biggest challenge was to select the right measures reflecting the most important activities from a vast range of possibilities and to cluster them correctly, deciding which measures should appear in which perspective (Lawrie & Cobbold, 2004, Self, 2004). In the absence of reliable methods for selection and clustering confidence in the design process was low and users were reluctant to buy in. Results did not produce a coherent picture.

First Generation Gains

Fortunately this did not spell the end of the BSC. It was obvious that considerable progress was made. While every industry has a primary focus which should be represented in its performance measurement, a more *balanced* set of measures provided a comprehensive view of an organization. It was apparent that the client, internal process and learning and growth perspectives have an impact on financial outcomes with management interventions in these areas affecting the bottom line. For non-profit organizations it emphasized the need to find logical financial measures and to include them in scorecards.

Secondly, the importance of assessment or *scoring* was once again emphasized. As the saying goes *If you're not keeping score, you're just practicing* (Hannabarger *et al*, 2007).

Gains and awareness of shortcomings were combined to take the BSC into a second and third (some even talk about a fourth) generation.

Second generation: finding a niche in measuring strategy implementation

The most successful BSC implementations came from organizations who used the scorecard to support major strategic and organizational changes which prompted Kaplan and Norton to admit that the additional perspectives would not necessarily guide organizations towards doing (and measuring) the right things. The answer was simple: the right things that would lead the organization to prosperity are included in the strategy. "Measure the strategy!" therefore meant that the balanced scorecard had to be derived from the organization's vision and strategy (Kaplan & Norton, 2000). The BSC became a core management system and a valuable tool for

- driving strategy execution,
- clarifying strategy,
- making strategy operational,
- identifying and aligning strategic initiatives,
- linking resources with strategy,
- aligning the organization with strategy.

In a new, improved design method strategic objectives were plotted on a strategy map, a type of strategic linkage model. The interdependence of objectives was illustrated. Measures were identified to assess the extent to which these objectives were reached. Not only were these measures better contextualised but they also measured what was considered to be strategically important and were therefore easier to work with. The strategy map translated the strategy in actionable terms and with the BSC became a key element of the strategy focused organization (Figure 2) (Kaplan & Norton, 2000).
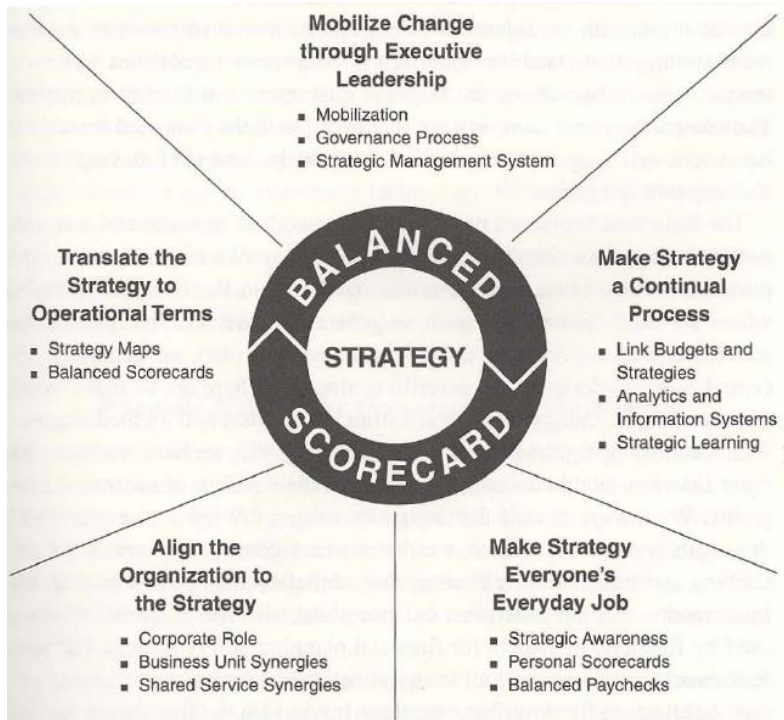
Figure 2: The balanced scorecard at the centre of strategic management in the strategy focused organization (Kaplan & Norton, 2000)

The Strategy Map

"Strategic planning produces an explicit description of how an organization is moving from the present day described by the mission in the intended direction and towards the state expressed by the vision" (Kettunen , 2008). It is also said that strategy cannot be executed if it cannot be understood and it cannot be understood if it cannot be described. The need for a "reliable and consistent framework for describing strategy" could be filled by the logical architecture of the strategy map that defines a strategy by specifying relationships among shareholders, customers, business processes and competencies (Kaplan & Norton, 2000) and showing how the intangible drivers (internal processes and learning and growth) lead to tangible outcomes or outputs.

Every strategy has definite outcomes in mind which will take the organization from what it is now to what it wants to become. Strategic objectives are chosen to fulfil the outcomes. A strategy map is designed by grouping the objectives according to the perspectives of the balanced scorecard and illustrating the cause and effect relationships between objectives Fig 3).. These relationships describe the logic of the strategy. A strategy map is in fact a graphical description of the written strategy (Kettunen, 2007).

Third generation: BSC into the 21st century

At the start of the 21st century the Balanced Scorecard had a prime place in the management repertoire. For some it was a management tool with a strong performance management component

while others viewed it as a performance management framework that aims to improve the effectiveness of strategic management. This phase produced the Destination Statement and a simplification of the strategy map which lead to improved functionality and more relevance. Multiple scorecards for complex organizations are now also seen as a practical solution.

Destination Statement

At the completion of a strategy map and scorecard the question invariably is asked what the organization or unit will look like once strategic success has been achieved as a way to ensure that it is well constructed. It was realised that if such a destination statement would be created at the beginning of the design process it would be easier to select objectives to realise this end-state. A destination statement is a clearly articulated and quantifiable short description of the organization/unit at a defined point in the future (3-5 years) assuming the current strategy has been successfully implemented – what the future will look like, not how to get there. The destination statement can also be sub-divided into categories similar to the perspectives.

Simplified strategic linkage model

In this model the four perspectives are replaced by an **outcome** perspective which groups the financial and customer perspectives together and an **activity** perspective to combine internal business processes with learning and growth. Linkages are as important as ever to show the cause and effect relationships between objectives, to clarify the hypotheses inherent in the strategy and to prevent non-related objectives to creep into the model. The model is expanded by definitions for strategic objectives and the measures selected to monitor the objectives. The active involvement of management in the "imagining" exercise to build consensus on the desired future contributes to building management ownership which impacts very positively on the success of a BSC.

Table 1 summarizes the developments that took place over a period of seventeen years:

1st Generation	2nd Generation	3rd Generation
Mixture of financial and non-financial.		
Limited number of measures (max 25).		Multiple balanced scorecards within complex organisations and therefore many more measures.
Clustered in 4 groups relating to the 4 perspectives: *financial, customers, internal processes, learning and growth.*	More or other groups are used. Perspectives redefined.	Perspectives regrouped as Outcomes (*financial + customers*) and Activities (*internal processes + learning and growth*).
Measures are chosen to relate to what's important to measure for the organization: difficult to choose most appropriate from many possibilities.	Measures are chosen to relate to specific strategic objectives, the design aim being to identify about 20-25 strategic objectives each with one or more measures and assigned to one of four perspectives. Clustering regarded as more important than filtering.	A destination statement describing the organization after successfully implementing the strategy is developed up front. It guides the selection of objectives and measures. Objectives and measures are explicitly defined.
Some attempt is made to represent causality	The major causal relationships between strategic objectives are visually documented by laying out the results in a strategy map, a framework for describing strategy.	The *strategic linkage model*, a simplified version of the strategy map is introduced. Strategic objectives are segmented into two perspectives, activities and outcomes. Linkages indicate hypothesised causal relations between strategic objectives.
Measures should be chosen in a way that gains the active endorsement of the senior managers of the organisation.		The "imagining" exercise presupposes the active participation of management.

Libraries and the Balanced Scorecard

Librarians like other non-profit practitioners welcomed the balanced scorecard for its steering away from financial measures as the only indicators of success. Local experiments in many libraries created a new awareness for performance management and scorecards can be found on library web sites and in strategic documents. However, many of these scorecards lean towards the first generation and it is not clear to what extent the library's strategic plan was used as a point of departure. Strategy maps are scarce. Warwick University Library has a strategy map which can be viewed at http://www2.warwick.ac.uk/services/library/main/basics/about/aims/library_strategy_map_-_fyp_2008.pdf.

At the University of Pretoria a concerted effort to use the BSC as a management framework in the late 90's (Pienaar & Penzhorn 2000) resulted in a positive step in a process of strategic renewal which

started in the mid-eighties and continues to this day with excellent results. Unfortunately the use of the BSC was not long lasting.

The most elaborate use of the BSC was by a German project, funded by the German Research Foundation, to create an integrated quality management system for a "balanced" evaluation of libraries, completed in 2001 (Poll 2001 and Ceynowa & Coners, 2002).

Perspectives were renamed and described as:

Users: How do we come up to user expectations?
Finances: How can we allocate resources in a cost-effective way?
Processes: How to organize our processes to come up to user expectation?
Potentials: How to guarantee fitness for future?

The User perspective was put at the top in line with libraries' mission to provide good service to a defined user community.

This is a good example of a balanced scorecard used as a generic measuring instrument for libraries covering what is considered to be the most crucial aspects of a library service in a balanced way. As such it does not correspond with the strategic management intent whereby the BSC would reflect the strategy of each organization in a unique way. Interesting is the broad view described as "the system thus integrates financial and non-financial data, input and output data, the external perspective (funding institutions, users), and the internal perspective (processes, staff), goals and measures taken, and causes and results" (Poll 2001).

Whether the model actually lead to "an integrated system that connects strategy, evaluation and action" is unclear. Eventually aspects of the model found their way into the 2007 revised edition of *Measuring Quality: Performance Measurement in Libraries (*Poll & te Boekhorst, 2007 and Poll, 2008*)* under the following headings:

Resources, infrastructure: What services does the library offer?
Use: How are the services accepted?
Efficiency: Are the services offered cost-efficiently?
Potentials and development: Are there sufficient potentials for the development of the library?

Case study: University of Pretoria's Open Scholarship Programme

What the programme entails

The UP Open Scholarship Programme was refocused in 2006 with the following goal:

To change scholarship practice at University of Pretoria towards becoming an Open Scholarship institution with these characteristics

1. Theses and dissertations are available online and open access based on a policy of mandatory submission
2. Research and conference papers are available online and open access <u>and</u> researchers actively contribute based on a policy of mandatory submission
3. Researchers and students actively use open access material
4. Researchers publish in available open access journals and the institution has policy and financial support in place for that
5. Researchers <u>actively</u> manage the copyright of their publications, inter alia with addenda to their contracts or using Creative Commons contracts, and the necessary policy exists
6. Publications from the institution's press/publishing house are available in open access based on policy
7. The institution publishes its own online open access journals OR provides infrastructure and support for members of its community who are involved with society publishing
8. Dissemination forms part of the University's publication strategies

The Open Scholarship programme (http://library.up.ac.za/openup/) is managed by the Open Scholarship Office in the Merensky Library on the Hatfield Campus. Currently the following four sub-programmes are in operation:

- Mandated submission of research papers (openUP),
- Mandated submission of theses and dissertations (UPeTD),
- Collaboration with Department of Research and Innovation Support on the university's Research Report,
- Advice on and facilitation of open access journal initiatives on campus.

Performance measurement

The programme is derived from the University's strategic plan and straddles two important strategic goals of the Library Service

1. To impact positively on research and e-research, and
2. To develop, implement and integrate e-services to enhance UP research, learning, teaching and Library services.

Being a fairly new programme with a new manager who had limited experience of strategic management, a decision had to be made about measuring performance. Existing measures and quality assurance activities did not provide adequate information to assess the success of the programme. Open access is generally considered to be a good idea and institutional repositories are "good" products resulting from it. Many excellent reasons are offered why universities should engage

in open scholarship (Hammes, 2007and 2009). The verdict on the return on investment is still heavily debated which made it imperative to include financial indicators in a measuring scheme. Furthermore the success of the programme implies the involvement of many contributors and role-players outside the library and even outside the university for whom the strategy has to be clearly communicated in order to understand their roles and contributions.

From previous experience we were familiar with the strengths of the 1st generation BSC. Subsequent developments appealed to us, particularly the strategy map which could be used as a framework for describing, communicating and implementing the strategy. (Rigby 2007, 2009). We consider ourselves to be a strategy-focused organization and were keen to expand strategic awareness in this way.

Development of the strategy map

Before constructing the strategy map the position of such a map as part of the value creation process was determined:

Mission	*Why we exist*	UP: Promote scholarship through the creation, advancement, application, transmission and preservation of knowledge.
Values	*What's important to us*	UP: Share information and knowledge, a universal academic value
Vision	*What we want to be*	UP: World class modern research university that contributes to international knowledge
Strategy	*Our game plan*	Library to develop and run an effective and sustainable open scholarship programme
Strategy map	*Strategy translated*	
Balanced scorecard	*Measure and focus*	
Targets and initiatives	*What we need to do*	
Personal objectives	*What I need to do*	

Client/Stakeholder value proposition

The strategy map was constructed with the client (customer) perspective at the top describing their needs and performance requirements as the objectives of this perspective. As with most public-sector organizations the customers of the programme are not a homogeneous group. Two distinct groups with different needs were identified and these were grouped with the most important stakeholder, the university itself.

International researchers and public

Little is known about this group except that they need access to information which we are in a position to supply. Sometimes they are our own clients or researchers and students from well-resourced institutions but mostly they come from developing countries. The service is in line with the basic academic value to share information in order to make it useful and to build on it.

For this group we offer:

- Free and easy access to quality research results
- Remote online access, and
- Manageable downloading

UP Researchers (staff and students)

In terms of university policy this group has to contribute to the programme by self-submitting their research papers and theses, an activity which they not necessarily relish. In return for that the following advantages are offered. Enhanced citation is deliberately not promised since it is not clear if this is in fact the case.

- Visibility of research contribution
- One-stop access to own publications
- Improved research reporting
- Guaranteed archiving
- Uncomplicated submission process

University of Pretoria

The university funds the programme in return for

- Comprehensive view of research
- Efficient research reporting leading to more income
- Increased impact and reputation.

Growth and usage of the two collections are the prime indicators for success. Anecdotal evidence from surveys (Hammes & Mahlangu, 2007) and offered spontaneously is collected systematically to confirm the concept of value creation.

Financial perspective

As mentioned the financial perspective is very important in such a start up operation. The library service made a deliberate decision to take resources from the traditional client service to begin the Open Scholarship Office and proof has to be supplied that the programme is run in a cost-effective way

Secondly the programme only has two permanent staff plus two part time staff who are contracted when money is available from vacancies in the library. The researchers who have to self-submit their research papers, staff in the post-graduate offices of the faculties and library staff in the faculty libraries do the bulk of the work. University and library IT staff also contribute substantially. This is called "Let others do the work".

Lastly a very important objective is to secure more research income for the university. In South Africa universities are subsidized by the state based on an audit of research outputs. It is therefore of the utmost importance to ensure that every single research paper that was authored by staff or students of the university is included in the report to government. The programme is proving to be very successful in this area (Olivier, 2009).

The financial perspective will be measured by the submission cost per item (cost-efficiency), the percentage of self-submissions by researchers, and the number and monetary value of research papers which were not submitted by researchers to the Research Information Management System,

Internal process perspective

To ensure these outcomes we have to excel in a number of critical internal processes grouped as

Operations management

This rubric includes the day to day work of the unit which is coordinating the efforts of the expanded work force, managing the quality and contributing to the University's research report. Copyright management is at the heart of this operation and is done centrally by the unit. The measures are the number of copyright issues resolved and collection growth.

Customer management

This section is slightly "misused" for the processes that create the infrastructure and positive comfort zone for the researchers and faculty librarians to operate optimally because it is so critical to our success. The percentage of papers submitted by researchers indicates the extent to which they buy into the process and find it easy enough to do so.

Innovation management

This programme can only succeed if it is governed by policy that mandates the active participation of researchers and postgraduate students. Our very first objective in this area then was to develop policy and have it accepted by Senate. Secondly the University's implementation of Oracle will be used as an opportunity to embed the theses part of the programme fully into the postgraduate programme which will make it more effective and will save us the equivalent of 20 hours per week in

administrative work. At the same time we will migrate the theses to a new access platform. These are all once off processes which will be evaluated as they evolve.

Learning and growth perspective

These objectives, the drivers for future performance and value, describe our investments in human resources, information and organizational capital.

In the human resources area the development of important skills such as project management, "virtual teamwork" and assessment needs interventions on our side. Strategic awareness is raised by conferencing and contributing to national and international initiatives.

Customization and integration of the systems we use (DSpace, Oracle, RIMS, ETD-db, Microsoft Office) are important developments necessary for success in the other perspectives and to eliminate rework. We also capture our considerable store of knowledge and make sure it is re-used and shared with others.

The UP Library Service was responsible for putting these important issues on the University's agenda and playing a leadership role and to bring it to fruition. Strong alliances with the faculties, the research support establishment, the publishers and a variety of other bodies outside the University is necessary for future success.

The measures for Learning and Growth perspective may seem underdeveloped. This is because the activities in these areas are very specific and aimed at focused outcomes. Generic measures such as "Time spent on training per staff member" have no real meaning in this context: we have identified specific training needs which have to be fulfilled irrespective of the time it takes.

Although the linkages are still underdeveloped the strategy map provides a good snapshot of what we try to accomplish and the success we have made in a short space of time.

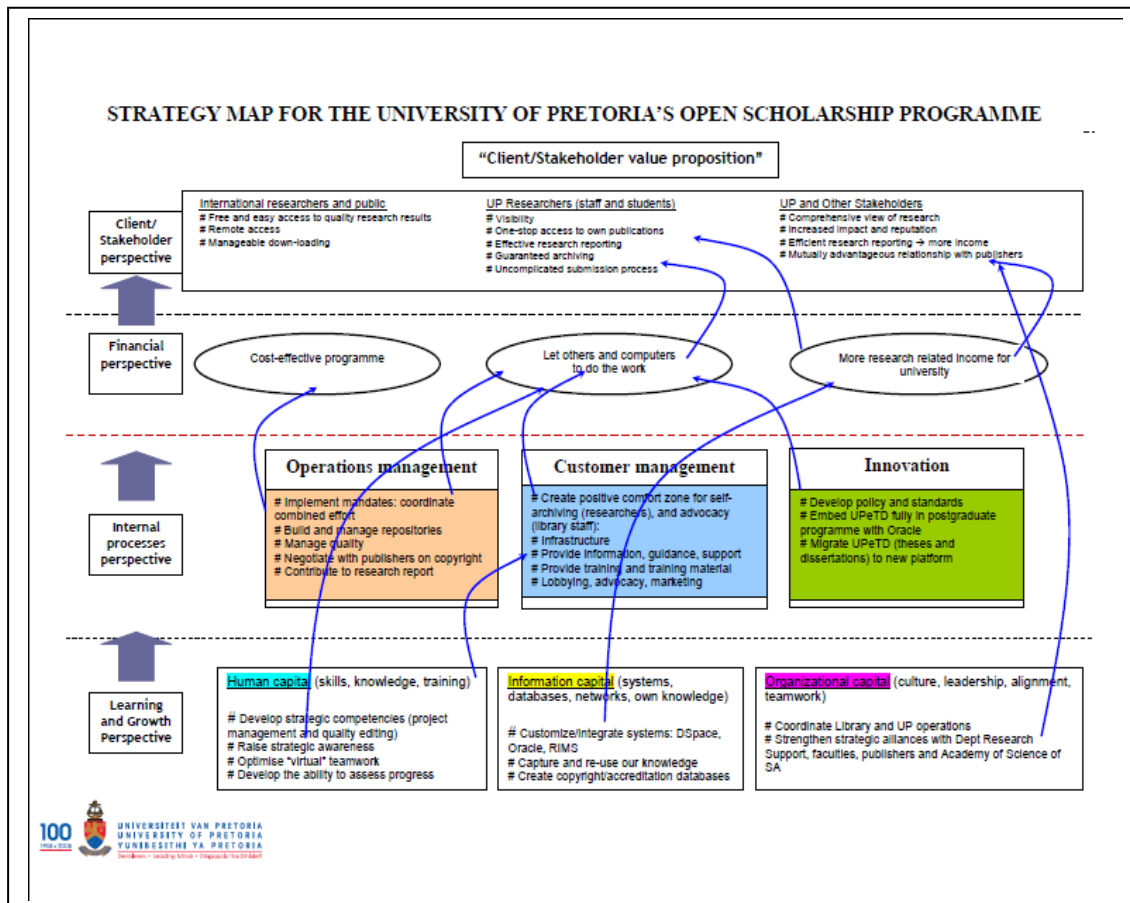Figure 3 presents the final strategy map.

Figure 3: Strategy map for the University of Pretoria's Open Scholarship Programme

Conclusion

A strategy map with its associated measures is an effective tool for clarifying, translating and communicating strategy. It is an advantage to be able to see all the elements and their relationships on one page. It simplifies strategy implementation and the monitoring of progress. Creating a balanced scorecard for an entire organization can be a daunting task. Restricting it to one discrete programme was found to be manageable and hopefully will also prove to be sustainable. The understanding and skills that were acquired during the process can be transferred to other units.

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