

Using the Balanced Scorecard to Facilitate Strategic Management at an Academic Information Service

HEILA PIENAAR AND CECILIA PENZHORN

Academic Information Service, University of Pretoria, South Africa;
Department of Information Science, University of Pretoria, South Africa

This article reports on the implementation of the Balanced Scorecard model for facilitating strategic management at the Academic Information Service (academic library) of the University of Pretoria, South Africa. Robert Kaplan and David Norton developed the concept of the Balanced Scorecard in the early 1990s for motivating and measuring business performance. This management methodology is seen as an excellent vehicle for implementing organisational transfor-

mation measures in the Academic Information Service. The article starts by giving a short theoretical introduction to the concept of the Balanced Scorecard, followed by an outline of the implementation of the Scorecard on both the strategic and operational levels. It concludes by examining the ways in which the Balanced Scorecard is currently being used to facilitate the strategic management process at the Academic Information Service.

Introduction

The need to remain competitive, productive and open to the challenges of the future in the face of organisational change is becoming more important than ever, and the demand for innovative technology and service in the information age environment is just one of the challenges facing companies today (Kaplan and Norton 1996). An examination of the current realities and the requirements for the future in terms of a changing environment compelled the Academic Information Service to reconsider its strategic positioning within the University of Pretoria and the profession as a whole. It was recognised that a different approach to strategic management and organisational development, one that could respond to these challenges, was needed. Consequently, the Academic Information Service has been in the process of organisational transformation for the past couple of years.

This transformational process can, to a great extent, be appreciated if viewed from a management philosophy, which finds parallels in the so-called "new science" as expounded by Margaret Wheatley (1994). The relationship between the creative energy of information and information management systems is one of the aspects of the new science within which organisational transformation in the Academic Information Service can be understood. In contrast to the older view, which regarded information as a product generated by the activities of the organisation itself, the new sciences show that information is not a reaction to happenings within an organisation, but is in itself a dynamic force providing order, growth and definition to the organisation. Lessons learnt from this approach – such as, the continuous generation of information within organisations, that information should be allowed unrestricted flow to all parts of the organisation, as well as the importance of being able to function as a responsive

Dr. Heila Pienaar, is internal consultant and member of strategic management at the Academic Information Service, University of Pretoria, Pretoria 0002, South Africa. Email: heila.pienaar@ais.up.ac.za

Mrs. Cecilia Penzhorn is a lecturer, specialising in information retrieval, at the Department of Information Science, University of Pretoria, Pretoria 0002, South Africa. Email: cpenzhor@postino.up.ac.za

and open system – form the focal point of the new information management strategies implemented in the Academic Information Service, of which the Balanced Scorecard is one (Pienaar et al. 1999).

The Academic Information Service is using the Balanced Scorecard to facilitate strategic management in two complementary ways, namely:

- To identify and implement a strategic vision and strategic and operational objectives;
- To facilitate the strategic management process.

The Balanced Scorecard concept

In 1990 Robert Kaplan and Davis Norton carried out a yearlong research project with 12 organisations at the leading edge of performance measurement. They came to the conclusion that traditional performance measures, having a financial bias and being centred on issues of control, ignored the key issue of linking operational performance to strategic objectives and communicating these objectives and performance results to all levels of the organisation (Corrigan 1995). Realising that no single measure can provide a clear performance target or focus attention on all the critical areas of business, they proposed the concept of a Balanced Scorecard as a more sophisticated approach for meeting these shortcomings.

Kaplan and Norton are of the opinion that the Balanced Scorecard has its greatest impact when deployed to drive organisational change. In a rapidly changing environment, innovative firms are increasingly using the Balanced Scorecard to identify and communicate key factors that drive future values (Kaplan and Norton 1996) giving better indicators of where the organisation is going. If companies are to survive and prosper in a competitive environment, they must use measurement and management systems derived from their strategies and capabilities (Kaplan and Norton 1996). The Balanced Scorecard can be seen as a management system that bridges the gap between strategic objectives set at the senior level within an organisation, and their operational execution. This is accomplished by translating vision and strategy into objectives and measures, providing a framework to communicate this vision and strategy to employees, and thereby channel-

ling the energies, the abilities, and the specific knowledge of people throughout the organisation towards achieving long-term goals. By developing a set of measures that gives managers a fast and comprehensive view of the organisation (Kaplan and Norton 1992), the Balanced Scorecard method strives to focus the whole organisation on what must be done to create breakthrough performance. The Scorecard takes the company's vision, translates each key statement into measurable steps and then presents information so that the critical success factors can be evaluated and compared (Campbell 1997).

By measuring organisational performance across *four balanced perspectives*, the Balanced Scorecard complements traditional financial indicators with measures for customers, internal processes, and innovation and improvement activities (Kaplan and Norton 1996) – which in turn must all be linked to the organisation's strategic vision.

Implementation of the Balanced Scorecard concept

The Balanced Scorecard is a concept that can be implemented in many ways. One prerequisite is that it must be adapted, or changed to fit a specific organisation. A good Scorecard reflects the strategic plan of the organisation, provides a framework that helps shape work behaviour, allows each person to measure his/her individual performance and gives data to make changes immediately so that performance is enhanced (Campbell 1997).

Strategic implementation of the Scorecard in the Academic Information Service

On the strategic level the Balanced Scorecard translates an organisation's mission and strategy into a comprehensive set of performance measures that provides the framework for a strategic measurement and management system. A successful Scorecard programme demands a high level of commitment and time. External consultants or knowledgeable internal practitioners can play a critical role in launching a successful programme (Kaplan and Norton 1996).

In 1997, when the Academic Information Service embarked on the implementation of the Bal-

VIRTUAL INFORMATION SERVICE

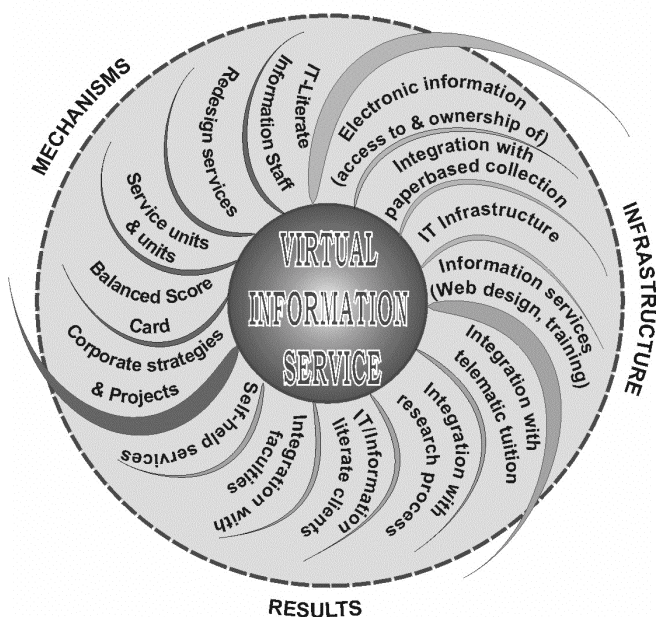


Figure 1: Strategic vision of a virtual information service

anced Scorecard, a project leader in the person of the internal consultant was selected by colleagues to facilitate the process of developing and implementing the project. The first step taken in the Academic Information Service was to identify and describe a demanding and exciting strategic vision that would serve to focus the information service's staff and resources. It was decided to use the "virtual information service" (see Figure 1) as a short to medium term strategic vision. The Balanced Scorecard was seen as one of the mechanisms for the transformation to a virtual information service. The access to and ownership of electronic information was seen as part of the necessary infrastructure and information literate clients as one of the results.

During 1998, as part of the University of Pretoria's overall renewal strategy, the Academic Information Service was evaluated. A high-level committee consisting of stakeholders from the profession as well as from the University undertook this evaluation. A business consultant acted as facilitator. After completion of the evaluation process, the report was submitted to the Rector of the University who recommended that a business

renewal-plan be drawn up. As the Academic Information Service had by then already started with the implementation of the Balanced Scorecard concept, and as the idea had been well received by staff members, the director and senior staff decided to use the Balanced Scorecard in drawing up this renewal-planning document. This was done in the format of a three-year plan for 1999 to 2001. At the beginning of 2000 the renewal plan was revised, updated and expanded in order to be relevant for the period 2000 to 2002.

A specific focus-area, represented in the form of a mind-map, is identified for every individual year – the focus in 1999 was the World Wide Web and for 2000 the focus is for the Academic Information Service to link up with the renewal initiatives of the University. These procedures and renewal-plans were very well received by the top management of the University as well as the staff of the Academic Information Service, with the result that aims corresponding to the strategic vision of the Academic Information Service can be achieved within set dates.

Using the four perspectives of the Balanced Scorecard (see Figure 2) and answering the four associated questions, helps to ensure that all critical performance measures are included in the planning and that one area is not overemphasised at the expense of another (Willyerd 1997). As a result of this approach, the Academic Information Service functions on a healthy and advanced strategic level.

Some examples of using the four perspectives for formulating and aligning strategic objectives to the strategic vision in the Academic Information Service are as follows:

- The *customer perspective* asks the question: To achieve our vision, how should we appear to our customers? Here companies identify customer and market segments in which they have chosen to compete, assessing how well the organisation is fulfilling needs of customers – from the customer's perspective. In the Academic Information Service an Academic Cyber Space or Internet cafe was developed on the entrance level of the information centre. A Web page was designed to group Web information services (for example, the Web-based catalogue and access to electronic journals) and Web student services (for example, examination papers and results). The Academic Cyber Space homepage is available at the URL: <http://www.up.ac.za/asservices/ais/cyber/cyber.htm>. This development was a direct result of a comprehensive client

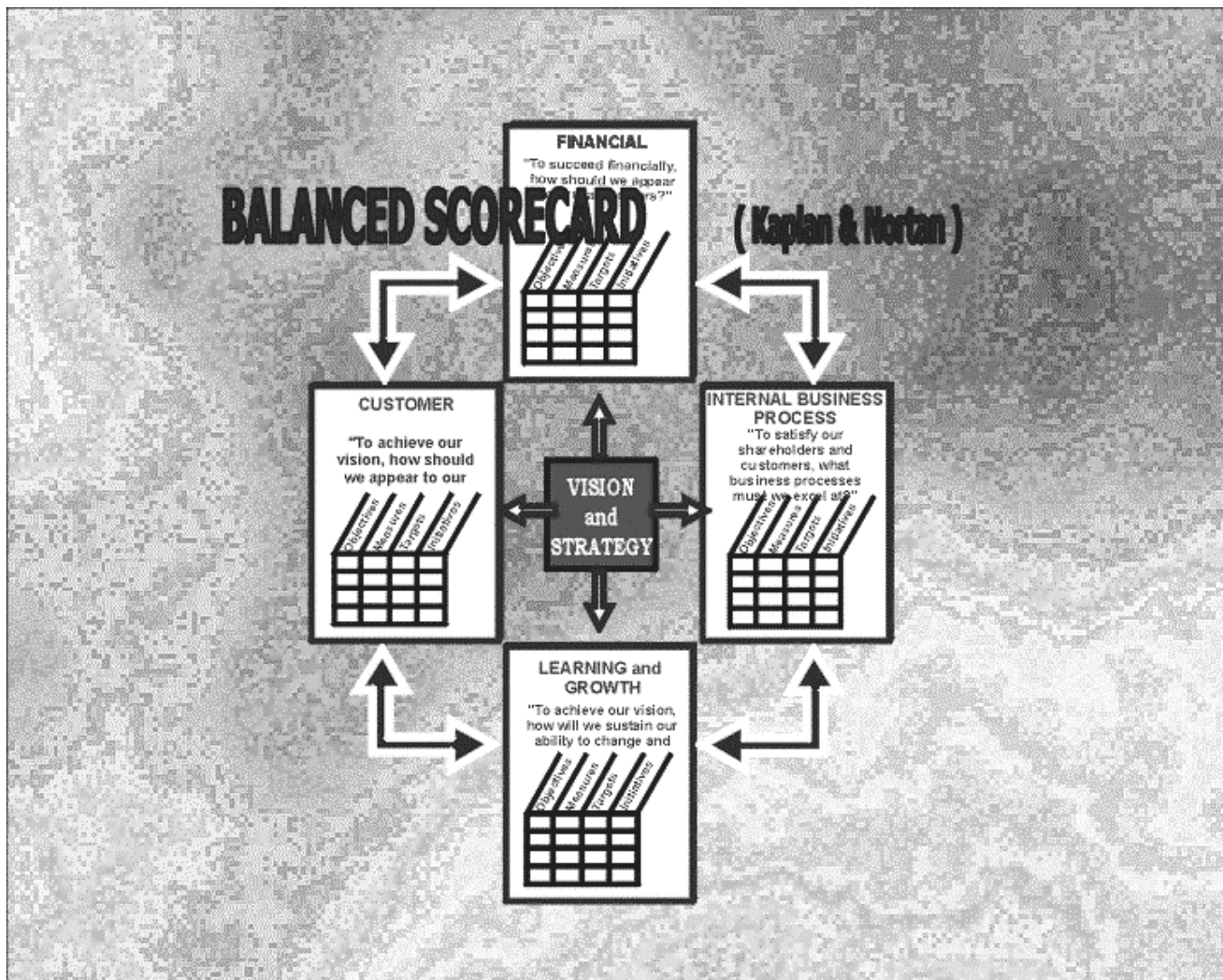


Figure 2: Four perspectives of the Balanced Scorecard

survey that was done in 1998 as part of the evaluation process in which clients asked for Internet facilities in the information centre.

In addition, an information portal is currently being developed to provide academic clients personalised access to electronic sources

- The question for the *internal process perspective* is: To satisfy our shareholders and customers, what business processes must we excel at? The internal perspective must reflect the organisation's core skills and the critical technology involved in adding value to the customer's business (Newing 1995).

In the Academic Information Service one of the objectives is that information personnel must be known as Web experts. A comprehensive training programme was implemented in 1999 to reach this objective. It consisted of three phases: a course on Web search engines; a Web page design course and a Web-based course with the title: "Personal knowledge manage-

ment and the Internet". The results of the training programme can be seen at the URL: <http://hagar.up.ac.za/catts/learner/heilap/assignments.html>.

With the intention of creating capacity to achieve the renewal objectives, the Academic Information Service is also presently looking into the possibility of re-engineering some of its key business processes. Cataloguing and classification as well as ordering activities, are two sub-processes that are currently under investigation.

- To achieve our vision, how will we sustain our ability to change and improve? is the question asked for the *learning and growth perspective*.

In the Academic Information Service, an outcomes-based compensation system is being developed. Web competencies and outcomes are directly linked to compensation in this system.

The structuring of the personnel corps in terms of diversity is also presently receiving attention.

- For the *financial perspective*, one has to ask: To succeed financially, how should we appear to our stakeholders? The driving factors in this perspective will be customised to the organisation and its specific environment.

The Academic Information Service decided to divide this perspective into two perspectives, namely *partnerships* and *resources*.

Partnerships: The University of Pretoria and the CSIR (Council for Scientific and Industrial Research) in Pretoria, recently decided on the forming of a strategic convergence. Subsequently, the information services of these two organisations are busy with a project that could lead to the eventual joining of the two information services into one service.

Resources: One of the resources objectives is to establish an internal business unit to generate additional funds. The information service is at this stage busy with the development of a fee-based system for external clients on the Web.

The information source strategy forms part of the resources perspective. A successful project was launched with the aim of making electronic journals available to clients on the Web. (URL: <http://www.up.ac.za/asservices/ais/TYDSTUKS/home.htm>)

Operational implementation of the Scorecard in the Academic Information Service

Successful strategic management implies the effective implementation of strategic objectives on the operational level. Therefore a comprehensive effort was launched in order to effect the translation of corporate objectives into operational objectives and measurements.

The transformation process at the Academic Information Service involved major structural changes. The Academic Information Service is structured on the concept of a flexible project-based network organisation comprising groups and teams, namely: client-centred service teams (i.e. service units), support teams such as information systems and technology, a strategic management team, and suppliers, all of which form essential components of this network (see Figure 3).

The Balanced Scorecard signals to everyone what the organisation is trying to achieve, and to be truly effective, a Scorecard must be deployed to all levels of an organisation.

If an organisation's strategy is to succeed it is important that the critical objectives that must be accomplished be communicated to and comprehended by all employees and departments within the organisation. It is furthermore imperative

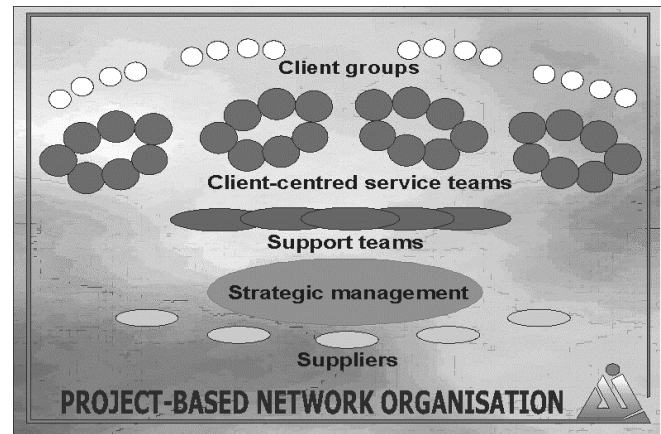


Figure 3: Structure of the Academic Information Service

that departmental and personal goals be aligned to the strategy (Kaplan and Norton 1996).

With the dual aim of introducing the concept of the Balanced Scorecard to the various service units within the Academic Information Service, as well as facilitating the process of understanding and internalising the concept within the framework of the overall organisational strategy, a series of *workshops* was held with the members of the individual service units. The workshops operated as follows:

- As an introduction to the concept and the practical implications of the implementation of the Scorecard, Kaplan and Norton's Harvard Business School video: *The Balanced Scorecard: measuring corporate performance* was shown. This video profiles the individual processes of the introduction and implementation of the Balanced Scorecard in two companies: FMC Corporation, a diversified industrial company, and Rockwater, an offshore underwater construction company.
- As a next step, in order to establish a firm theoretical knowledge of the Balanced Scorecard, a short introductory lecture on the aims, processes and measurements of the Scorecard was given. This was followed by an explanation of the strategic implementation of the Scorecard within the Academic Information Service.
- Members of the service unit were then divided into groups of four or five and given the assignment of physically creating their own visual construction of the Scorecard, representing their view of the application of the Scorecard within the service unit. The material available for this visual presentation consisted of construction kits (children's toys), books and articles on the scorecard, and flip charts and markers for further exposition. The execution of this task required not only the knowledge and a reasonable understanding of the theoretical underpinning of the scorecard, but considerable imaginative and creative skills as well.

- After completion of the assignment, each group was given a chance to explain their proposal, with the leader of the service unit ending the session by giving an overall view of applications and future plans for the implementation of the Balanced Scorecard in the service unit. Video clips of these workshops are available at the URL: <http://hagar.up.ac.za/catts/heilap/balancedscorecard.ppt>
- In December 1999 and June 2000 the leaders of all service units reported on the progress made in terms of operational objectives within the framework of the Balanced Scorecard.

The workshops were extremely well received and enjoyed by the staff members. As a result of these positive experiences, service units in the Academic Information Service felt encouraged to formally develop and finalise, in the space of a year and a half, their own Balanced Scorecards on the operational level within the overall strategic framework. Thus one can confidently say that the chances of success of the Balanced Scorecard are virtually assured.

Computerisation

Campbell (1997) is of the opinion that in order to have and use prompt, accurate and timely data about all facets of a business, the only way to make the Scorecard work is to use a computer system to gather the data and have people perform the analysis. It is important that strategic and operational objectives be integrated with a management information system.

Fortunately, software is available to assist in this. An example of this kind of software is the Renaissance Balanced Scorecard. It was jointly developed by Gentia Software and Renaissance Worldwide to automate the management model developed by Kaplan and Norton. It is an automated strategic management system for translating strategy into action at all levels of the organisation. The new version of the Renaissance Balanced Scorecard uses Web technology to shorten deployment time and provide users with instant access to information regardless of location and can be accessed at the URL: http://www.gentia.com/balanced_scorecard/demo/rbsc_demos.htm. By using graphics, text and statistics, it enables users to perform a variety of functions, such as viewing Scorecard reminders and details, making assessments, and analysing

portfolios, Scorecards and initiatives from any location.

Although the Academic Information Service is in the process of discussing the possible implementation of this system, it is, however, very expensive. Currently use is being made of a *pro-forma* system with facilities incorporated for accounting for all aims and objectives on both the strategic as well as the operational levels. Both the renewal-planning document and this *pro-forma* are available on the Intranet of the Academic Information Service.

Using the Balanced Scorecard to support the strategic management process

The Balanced Scorecard, which was initially proposed as a general measurement system, has rapidly evolved into a strategic management system for implementing a company's strategic vision (Kaplan 1994). The Scorecard has developed into a system that supports the strategic management process (see Figure 4).

Using the Scorecard as the central, organising framework for the strategic management process implies the use of four successive management steps:

- *Clarifying and translating vision and strategies.* The process starts with senior management working together on the vision and how it is to be implemented. This linking of the competitive position of the organisation to the operational of its processes is necessary to translate strategy into action (Booth 1996). In the Academic Information Service a business consultant assisted a group of senior staff in the formulation of a corporate vision and strategies according to the four perspectives of the Balanced Scorecard. The emphasis here was on the process and principles of co-operation and specifically co-creation – unless the whole team was fully engaged in the process, a successful outcome was unlikely and consensus of shared vision and strategies throughout the organisation not attainable. The vision and strategies were discussed in the first part of this article.
- *Communicating and linking* serves to signal to all employees the critical objectives that must be achieved if an organisation's strategy is to succeed. The Balanced Scorecard is thus used as a vehicle for communication by cascading it down through the organisation and by defining measures that relate to more and more detailed activities. It then becomes possible to use the Scorecard as a basis for setting personal goals and linking these goals to personal rewards (Booth 1996). With the aim of ensuring multidirectional open communication channels allowing free circulation of or-

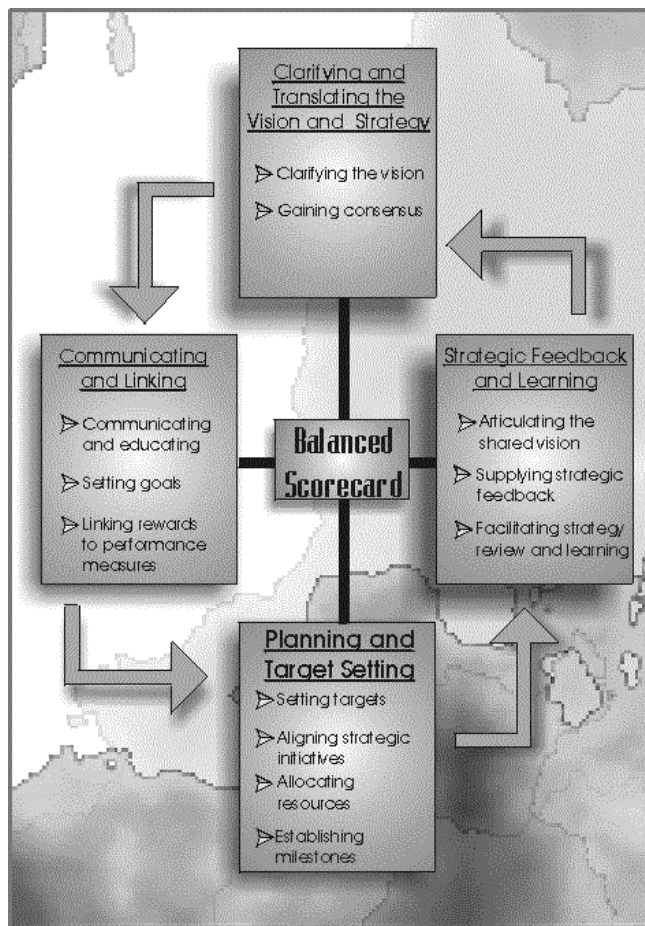


Figure 4: Strategic management process

organisational information, the director of the Academic Information Service communicated the vision and strategies to the rector of the University, as well as having a series of open information sessions with the staff of the Academic Information Service on a regular basis. Translation of the vision and strategies resulted in one of the most influential vehicles for the transformation process namely the establishment of a Performance Management System based on competencies and outcomes. As a direct result of continuous communication with the University top-management, a similar system is now in the process of being implemented for the university as a whole.

- *Planning and target setting* can be used as a basis for business planning. Through quantifying long-term outcomes to be achieved, establishing short-term goals, and identifying mechanisms for achieving these outcomes, an organisation provides for the alignment of organisational plans with financial and other resources. Specific targets for renewal plans for the Academic Information Service were set for one, two and three year periods and strategic co-ordinators for the various established perspectives were appointed. This renewal team is annually reconsidered and adapted to changing circumstances. Leaders of service units are responsible

for the translation of strategic objectives into feasible action plans on the operational level.

- *Feedback and learning* permits a feedback loop to be established (Booth 1996) and is regarded by Kaplan and Norton (1996) as being the most innovative and most important aspect of the entire Scorecard management process. By setting targets during planning sessions and making mid-course corrections (Birchard 1995) strategy can consistently be evaluated as to its appropriateness within the developing organisational environment.

In the Academic Information Service this process serves as a way of ensuring that it becomes a real learning organisation. Quarterly feedback sessions are held by the strategic co-ordinators and the service unit leaders, monitoring the progress made with the three-year plan. Open feedback sessions with the rest of the staff are also held regularly. Information that is fed back through these processes results in modifications to strategies where necessary.

In June 2000 a strategic discourse was held by the leader-corps in the light of the renewal objectives. A panel discussion format was used. Three topics received attention: i) The formulation of an Internet strategy; ii) The implications of knowledge management on the functioning of the Academic Information Service; iii) The possible convergence with the CSIR Information Service.

Conclusion

As in the words of Campbell (1997), the Academic Information Service is of the opinion that the Balanced Scorecard is "an idea whose time has come". The Balanced Scorecard is used as a communicating, informing and learning, not controlling, system (Kaplan and Norton 1996) and is therefore well suited to the type of organisation the Academic Information Service is trying to become. The Academic Information Service is in a constant state of positive change and the Balanced Scorecard is seen as a vehicle, through which a wide range of innovations and improvements in performance can be achieved, contributing to the development and continuance of long-term competitive benefit within a constantly challenging environment. The formulation of a three-year renewal plan within the framework of the Balanced Scorecard has already had many positive and exciting results for the clients, personnel and stakeholders of the Academic Information Service.

References

- Birchard, B. 1995. Making it count: how innovative companies really use the new metrics. *CFO* October: 42-51.

Using the Balanced Scorecard to Facilitate Strategic Management at an Academic Information Service

- Booth, R. 1996. The blue sky and the brown field. *Management Accounting* September: 16.
- Campbell, A. 1997. Keeping the engine humming. *Business Quarterly* Summer: 40–46.
- Corrigan, J. 1995. The balanced scorecard: the new approach to performance measurement. *Australian Accountant* August: 47–48.
- Kaplan, R.S. 1994. Devising a balanced scorecard matched to business strategy. *Harvard Business Review* September–October: 15.
- Kaplan, R.S. and D. P. Norton. 1992. The balanced scorecard: measures that drive performance. *Harvard Business Review* January–February: 71–79.
- Kaplan, R.S. and D.P. Norton. 1996. *The balanced scorecard: translating strategy into action*. Boston, Mass.: Harvard Business School Press.
- Newing, R. 1995. Wake up to the balanced scorecard. *Management Accounting* March: 22–23.
- Pienaar, H., et al. 1999. Organisational transformation at an academic information service. *Library Management* 20(5): 266–72.
- Wheatley, M.J. 1994 *Leadership and the new science: learning about organizations from an orderly universe*. San Francisco: Berrett-Koehler.
- Willyerd, K.A. 1997. Balancing your evaluation act. *Training* March: 52–58.