

Using Strategy Maps to Support Strategic Planning and Decision Making in Higher Education.

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Abstract

During 2008 and 2009 the University of Newcastle developed a one-page Strategy Map to facilitate communication of the Strategic Plan within the organisation and to focus attention on areas of high performance and areas in need of improvement. This presentation will describe the development and use of the Strategy Map within the University. The approach is based on the Balanced Scorecard performance management system and provides a visual tool to facilitate the measurement, monitoring and reporting of the University's progress towards meeting its strategic goals. To be effective, a Strategic Plan must cascade into actions, goals and targets and the Strategy Map illustrates the cause-and-effect relationships between the drivers and the desired outcomes.

Strategic Planning involves the ongoing review and refinement of priorities to determine whether direction, targets and measures remain appropriate in light of new opportunities, threats and changes in the economic, regulatory or competitive environment in higher education. We are using the Strategy Map to provide regular reports on progress, using a traffic light approach. Areas coded orange or red have become the focus for action at many levels throughout the University and future reports will illustrate trends over time in progress in key strategic areas. The Strategy Map is also being used as a visual aid in the planning, budgeting and reporting cycle and particularly to provide focus for the operational planning process for 2010. The presentation will discuss the use of Balanced Scorecard techniques to support strategic planning and decision making.

Keywords: Strategic planning, key performance indicators, quality enhancement

Introduction

The 'Balanced Scorecard' approach to planning and monitoring performance was developed in the early 1990's. The technique was developed in response to what seemed to be an over reliance on financial accounting measures and balance sheets to monitor the performance of organisations. In many ways, the financial situation of an organisation is a 'lag' measure that reflects past actions and decisions. A review of organisations that were more successful showed that they tended to focus on their customers and on measures of internal processes, such as building the skills and knowledge of the workforce, rather than just on financial outcomes (Kaplan & Norton, 1992; Kaplan & Norton, 1996).

The approach has been refined over time and is now used in a variety of organisations and settings. The emphasis more recently has been on helping organisations to embed strategic planning as a continual process and not as an exercise that is conducted once every five years or so. Another more recent feature is to communicate the importance of linking and aligning the strategy to operations in a real and practical way that all employees can understand (Kaplan & Norton, 2008). The approach has been adapted to government and non-profit agencies and to specific areas within organisations, such as IT, as one of a set of available tools to measure and improve performance (Keyes, 2005; Niven, 2003).

One key stage in the process is to obtain agreement on the objectives of an organisation and to draft a strategic plan – a process that is commonplace within our universities. The next and in some ways more important challenge is to clearly describe 'what success looks like' and to consider the activities that underpin and lead to the successful outcome. These activities and outcomes can then be linked in a 'cause-and-effect' diagram to form a strategy map, (Kaplan & Norton, 2004). This paper describes how

the University of Newcastle developed and used a strategy map to facilitate communication of the Strategic Plan within the organisation. The map helped focus attention on our areas of high performance and on those areas most in need of improvement. The map is underpinned by an extensive set of key performance indicators (KPIs) developed within the higher education sector to monitor performance, including measures of the student experience, teaching and learning, research, community engagement and staffing (AUQA 2009 Appendix E; CUC, 2006).

The University of Newcastle Strategic Plan and Strategy Map

The University of Newcastle Strategic Plan 2007-2011 “Building Distinction” aims to increase our national and international reputation as a University of distinction, and fulfil our founding mandate as a regional university that contributes to our community. Our five strategic priorities for 2007-2011 are:

- We will make the high quality education of professionals a defining feature of the University.
- We will further enhance our international research profile and impact.
- We will extend our reputation as a national and international leader in Indigenous collaboration.
- We will foster partnerships that enrich and develop our communities in mutually beneficial ways.
- We will ensure a financially strong university with sound academic and organisational governance and high quality performance.

The Strategic Plan was developed in consultation with staff and other stakeholders and provides the foundation for the University’s strategic planning in the longer term. It was always envisaged that the document would evolve and be reassessed in light of changes over time in higher education. The stages of our strategic planning process include:

- Develop – a consultation process led by Executive Committee
- Action – through a network of implementation and operational plans and initiatives
- Align – organisational units and activities with priority areas
- Communicate – raising awareness of the strategy
- Motivate – supporting and managing performance in line with the plan
- Review – monitor, review and improve processes to achieve the strategy
- Update – revise strategy to account for changing internal and external environment

The early stages of our strategic planning process were completed during 2006-2007 and the focus for 2008 was on embedding the strategy and developing a one-page Strategy Map (Figure 1) based on the Balanced Scorecard approach. The map starts with the clear vision of the University and is colour coded in six themes. Five of the themes are as noted in the original “Building Distinction” Strategic Plan as our five strategic priorities. The sixth new theme relates to a learning and growth perspective for the University, with the development of a performance culture. Essentially this relates to strong mindsets within the University to focus on students, community, research, diversity and continuous improvement. A strong performance culture will also engage staff in using our management information system to assess our progress against all of our key goals. We will continue to build strongly in this area, improving our capability to transform data into information and then knowledge to aid decision making.

The one-page Strategy Map format has enhanced our ability to communicate our strategy simply and clearly to staff and stakeholders. It has allowed us to report progress in our key strategic areas on a simplified traffic light basis, so that areas which need increased focus can be clearly identified. The Strategy Map clearly identifies only eight key outcomes across our five colour-coded priority areas (across the top of the map). To be effective, the Strategy Map must help define actions, goals and targets within each of the outcome areas and for each of the drivers.

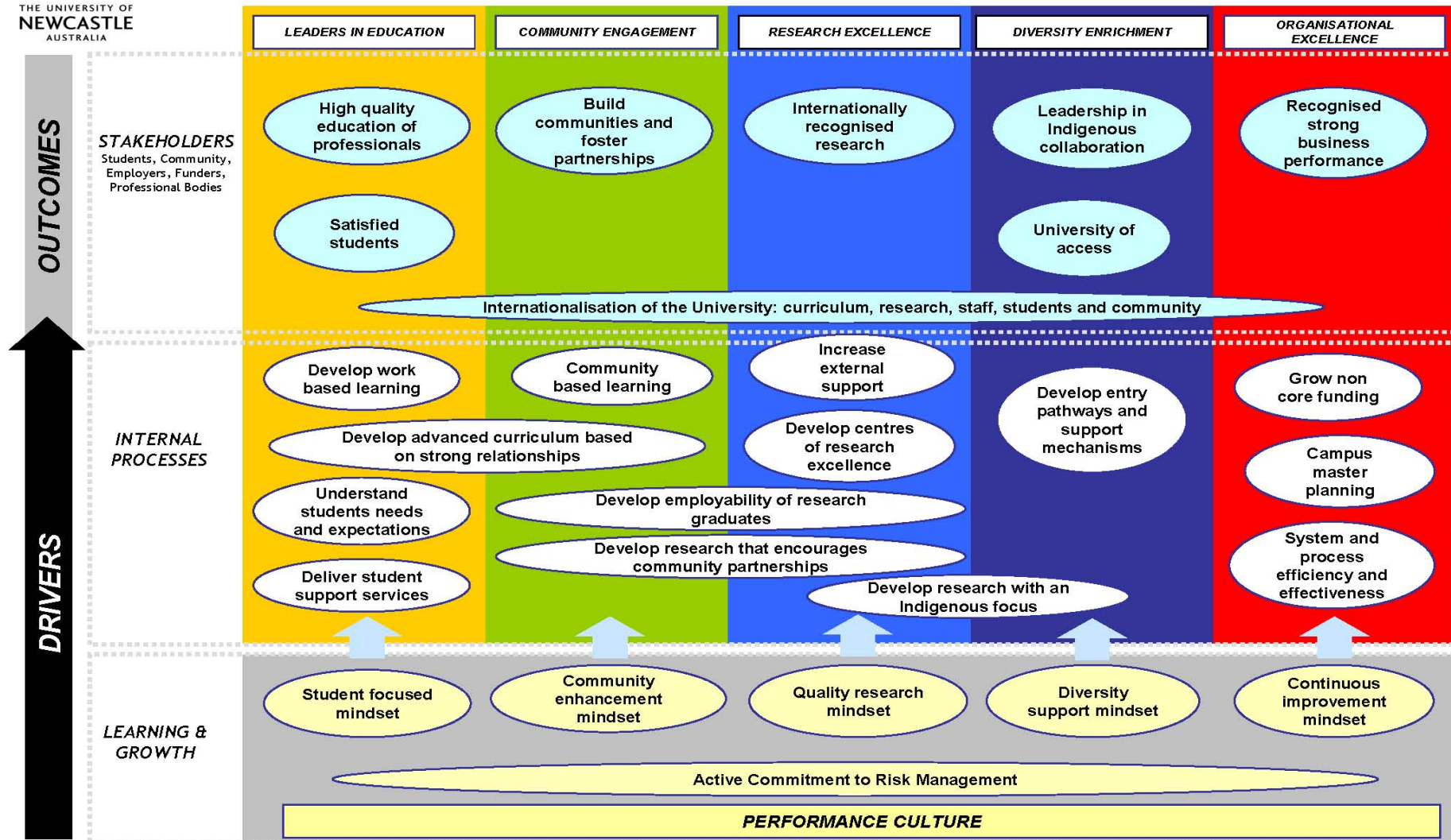


Figure 1: University of Newcastle Strategy Map

The Strategy Map illustrates the cause-and-effect relationships between the drivers (such as learning and growth and internal processes) and the desired outcomes. Some drivers (eg. risk management) and outcomes (eg. internationalisation) span several priority areas. Some outcomes have been included in the map where they are implicitly rather than explicitly described in the Strategic Plan (eg. ‘University of access’ and ‘satisfied students’). It is important that we have a clear understanding of what each of the key outcome areas mean. For example, we are committed to high quality education of professionals. What does this mean and how do we measure it? What does ‘success’ look like? A framework for monitoring and reporting against the plan has been developed and is described in the next section.

Building a Framework for Monitoring and Reporting

The strategy map facilitates our framework for reporting, whereby responsibility for each driver and outcome is allocated to a leader and is associated with actions, performance measures, targets and responsibilities. There are eight key outcome components and 21 driver components in our Strategy Map. A one-page document has been drafted for each of these 29 components.

An example of the one-page reporting template that we are moving towards is provided in Figure 2, based on the ‘High Quality Education of Professionals’ component (under the ‘Leaders in Education’ priority area). The first step in the process has been to define what ‘high quality education of professionals’ means in a concise manner. Given this, we have then proposed six key outcome measures. We have collected data for a number of these outcome measures and we are currently reviewing our key targets and responsibility areas. We are setting challenging, measurable but realistic stretch targets.

A. High Quality Education of Professionals				Lead : DVC(A)
Leaders in Education	Community Engagement	Research Excellence	Diversity Enrichment	Organisational Excellence
<i>This means that the University of Newcastle will -</i>				
A.1	Ensure high academic standards of curriculum and assessment			
A.2	Encourage academic staff development			
A.3	Support the teaching-research nexus			
A.4	Act on student feedback			
<i>Outcome Measures -</i>			<i>Target</i>	<i>Resp</i>
A.5	Employability of graduates			
A.6	Starting salaries of graduates			
A.7	Student satisfaction			
A.8	Percent of academic staff with peer reviewed publications and/or grants			
A.9	Number of accredited programs			
A.10	Attendance at staff development courses			

Figure 2: Sample reporting template for key performance indicators

The framework aims to further develop the linkages between strategic and operational plans, budget allocation and decision-making. Key aspects include:

- integration of plans in terms of timing, resourcing, monitoring and reporting
- plans should be realistic, achievable and capable of being resourced
- performance reporting based on relevant, current data and incorporate tools such as key performance indicators (financial and non-financial), trend analysis and benchmarking

We need to continually monitor and adjust our performance to achieve our strategic objectives. Emerging issues in the higher education sector, such as those reported in the Review of Higher Education released in December 2008, and the Government response “Transforming Australia’s Higher Education System” require us to reconsider our positioning and direction in the sector (Bradley, 2008; Commonwealth of Australia, 2009). Our Strategic Plan will be assessed annually as part of the planning, budgeting and

reporting cycle to determine whether its direction, targets and measures remain appropriate in light of new opportunities, threats and changes in the external environment (Kaplan & Norton, 2008).

Assessment of Position and Priorities

The one-page Strategy Map has allowed the University to communicate its vision and priorities and to provide a regular update to the University and the Council on progress against the Strategic Plan, using a traffic light approach to outline areas where goals are being achieved (green), in danger of not meeting target (orange) or where the target will not be met (red). A grey colour indicates where measures are still under construction and goals and targets have not yet been set or monitored. The colour-coded Strategy Map was discussed at the Senior Leadership Workshop in February 2009 and agreement was reached on key priority areas. Following the workshop, areas coded orange or red have become the focus for discussion and action at many levels throughout the University. A report on strategies underway to improve performance in key areas was discussed by Council at its meeting in May and ongoing reports are showing trends over time in progress in key strategic areas. The Strategy Map is also being used as a visual aid in the planning, budgeting and reporting cycle and particularly to provide focus for the operational planning process for 2010.

What Actions Have We Taken And Have They Been Successful?

By colour-coding the Strategy Map we identified several areas for attention during 2009. In particular, the Senior Leadership Team agreed that having a better understanding of the student experience and student expectations and improving student satisfaction was a priority area. We noted that response rates to the Australian Graduate Survey (AGS) had been relatively low for the Graduate Destination Survey (GDS) component and particularly low for the Course Experience Questionnaire (CEQ)/Postgraduate Research Experience Questionnaire (PREQ). We also noted that although many student surveys had been conducted over recent years, there was not a consolidated mechanism for responding to the feedback and informing students of the outcomes of their feedback.

In response to this challenge, several creative and innovative projects were established. Firstly, possible reasons for the low response rate to the AGS were investigated. Anecdotal evidence suggested that many of the graduates may not have received the survey, due to out-of-date contact details being used to send the surveys (both by mail and email). A new procedure was initiated for the April 2009 round so that all graduates attending graduation ceremonies were asked to complete a brief 'contact details' form while waiting for the graduation ceremony to begin asking for updated email, phone and postal details and details for a reliable, alternative contact (parent, relative, friend) in the event that they moved. The process was conducted by some of our student mentors who established a good rapport with graduates and gave three clear take-home messages: the AGS is an important survey; watch out for it; complete it when it comes. The outcome was impressive with a significant increase in response rates. Having a current email address for the graduates resulted in a large number completing the AGS online. We set up an Access database to assist with scheduling the follow-up calls and reporting on the outcomes. We employed students to assist with the telephone follow-up and tracking of non-respondents. This provided valuable work experience for students and the graduates seemed to interact well with the students. The April 2009 round was completed in a far shorter time period than in 2008, with reduced costs and higher response rates. A comparison of response rates in the April 2008 round and the April 2009 round is shown in Table 1.

Table 1: Response rates to the AGS (GDS, CEQ/PREQ) in April 2008 and April 2009 for the University of Newcastle

	Response rate April 2008 (n=4717)	Response rate April 2009 (n=4927)
GDS (includes telephone completions)	54.9%	63.6%
CEQ/PREQ (no telephone completion permitted) and GDS	33.6%	53.6%

A second area where we changed our procedures in 2009 was the content and administration of our student feedback surveys. Recommendation 4 in the Australian Universities Quality Agency (AUQA) Audit Report on the University of Newcastle in 2008 recommended that the University initiate a review of the questions and design of the various instruments for student feedback and consider the inclusion of some open-ended questions (AUQA, 2008). A revised survey of courses (units of study) was administered online in Semester 1 2009 to all students for all courses. The survey consisted of six multiple choice items and two open-ended questions where students could provide feedback on the best aspects of their course and aspects where improvements were needed. Almost 10,000 students across 1236 courses responded yielding an overall response rate of 43%, with the highest response rate for a single course being 86%. Almost two-thirds (62%) of students who responded provided open-ended comments about their courses, with 16,030 comments on the best aspects of the course experience and 14,611 comments on where improvements were needed. Reports on the multiple choice questions were uploaded for staff and students early in Semester 2. Open-ended comments were analysed by using qualitative analysis software CEQuery and supplemented by manual coding using Excel. The coding categories were developed by using the 5 main domains and 26 sub-domains from the CEQuery coding manual (Scott, 2005, pp. 55-58) and adding another 10 sub-domains to capture some specific areas raised by students.

Summary reports of the comments on courses were distributed to Heads of Schools and Faculty Pro Vice-Chancellors in September 2009 for action. In general we found that students like their teachers, they see relevance and value in the courses they take, and prefer assessments that actively engage them in learning. They generally think their courses are well resourced, and that they are well supported with their study. The teaching qualities which they most appreciate and which they believe most assist them to learn include:

- organisation
- an engaging teaching style
- interactivity
- providing challenge
- subject expertise
- clarity in the presentation of information
- approachability and manner
- accessibility within and outside of lectures/tutorials
- concern for student welfare and learning
- passion for the subject and for teaching
- feedback to students about their learning and progress

Students commented favourably when assessments:

- were scaffolded in terms of difficulty, and therefore developmental
- provide genuine and enjoyable learning experiences
- are valid, that is related to the learning outcomes of the course being studied
- had clear requirements and criteria
- were carefully designed to support learning and the delivery of the curriculum
- provided formative and summative feedback

Courses that students think are well designed provide:

- flexibility
- opportunity to apply learning
- relevance to learning/career goals
- integrated and managed elearning (Blackboard/Lectopia)
- logical delivery of curriculum
- integration between lectures, tutorials and laboratories

Staff in the Centre for Teaching and Learning are working with Heads of Schools and academic staff to help address issues that students have raised and ensure that we are continuously improving our courses. Most importantly, we are making sure that we let students know that their feedback is being acted on and

telling them about the changes we are making to address their suggestions. Follow up surveys in 2010 will evaluate whether the experience of students has improved, particularly in those courses that scored less well.

Conclusion

The Balanced Scorecard and strategy maps are tools to help measure and monitor performance in organisations and can be adapted for use in higher education institutions. These tools promote the message that 'you can't manage what you can't measure' and 'you can't measure what you can't describe' (Kaplan & Norton, 2004). The measurement of internal drivers of performance and outcomes in higher education and clear specification of standards and external reference points has greatly improved in recent years and is an area of focus for AUQA. Monitoring and reporting capability within universities has developed substantially, in part due to management information systems that link administrative datasets with academic measures and indicators. Using performance management tools such as those described in this paper and others, we can meet the challenge of connecting operational excellence with our strategic priorities and vision and encourage a performance culture and student-centred focus within our universities.

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