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MEASURING PERFORMANCE USING A BALANCED SCORECARD

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ABSTRACT

The Balanced Scorecard is a strategic management tool which uses an organisation's vision and strategy to develop organisational goals and targets together with a profile of key measures that will indicate whether or not these goals are being met. The scorecard can be used as a planning tool, to set strategic targets, align strategic initiatives and to drive organisational change.

Within the scorecard, measures are grouped together using a number of perspectives. The Kaplan and Norton model uses the following perspectives:

- Financial
- Customer
- Internal Business Process
- Learning and growth

For each perspective, measures of past performance (lagging) and measures relating to the factors (drivers) which will determine future performance (leading) are identified. Both quantitative and qualitative measures are included. The identification of both lagging and leading measures enables cause and effect relationships within an organisation to be mapped.

This paper outlines Curtin's use of a balanced scorecard approach to developing a *Strategic Framework*. A number of elements are critical to the success of the framework, and many of these are already in place or are evolving. Current processes and initiatives are being reviewed to determine how they could be used within the context of the framework.

MEASURING PERFORMANCE USING A BALANCED SCORECARD

BACKGROUND

Robert Kaplan and David Norton first described the balanced scorecard in the Harvard Business Review in 1992 (Kaplan & Norton, 1992). They published a number of journal articles on the scorecard in the following years. However, it was the publication of Kaplan and Norton's book "Translating Strategy into Action: The Balanced Scorecard" in 1996 which brought the model firmly into the limelight (Kaplan & Norton, 1996). Since then the balanced scorecard has been a regular topic for articles in the Harvard Business Review, Journal of Strategic Performance Management, Management Accounting and other key business and management publications. In addition articles relating to the application of the scorecard to specific fields are appearing in specialist journals, for example, information systems, health, hospitality, health and safety.

As implementation of the scorecard has increased the type of article published has evolved from descriptions of the scorecard and its envisaged application to the emergence of specific case studies and analyses of the factors impacting on the success of the scorecard's implementation. Consequently there now exists a broad range of published material relating both to the theory of the scorecard and its application in practice.

A framework, based on the balanced scorecard, requires an organisation to articulate the strategies that will be used to achieve its vision. The framework applies a balanced scorecard approach to all levels within an organisation. This enables objectives at all levels to be linked to overall strategy. A strategy is a set of hypotheses about cause-and-effect relationships. A measurement system should enable the relationships among objectives in various perspectives to be explicit. Thereby they can be managed and validated. A chain of cause-and-effect relationships should be evident across perspectives.

Many organisations develop strategy by external environmental scanning to identify new and emerging markets, international and community opportunities, then identifying the critical internal business processes to be enhanced or put in place to deliver the required products and services. Other organisations compete by exploiting their unique capabilities, their resources, and the competencies and expertise of their staff. A framework for strategic and operational planning should be developed, which can accommodate either approach, as well as a range of possible scenarios for the future (Liston, 1999). In addition, a range of performance dimensions and short- and long-term interests should be considered.

This paper presents the balanced scorecard approach being used by Curtin University of Technology in Western Australia to enhance its planning and review framework. A number of elements are critical to the success of the framework. Many of these are already in place at Curtin or are currently evolving. Current processes and initiatives have been reviewed in order to determine how they could be used within the context of a balanced scorecard framework and are being re-engineered as necessary. The balanced scorecard approach should enable Curtin to build on the strengths of current processes rather than replace or unpick them completely. Such a proposal could be de-stabilising in the current climate of change in higher education.

WHAT IS A BALANCED SCORECARD?

The Balanced Scorecard is a strategic management tool geared to the achievement of organisational goals. The scorecard uses an organisation's vision and strategy to develop organisational strategies and targets together with a profile of key measures that will indicate whether or not these goals are being met.

Thus the scorecard can be used as a planning tool, to set strategic targets, align strategic initiatives, provide a framework for a comprehensive management and measurement system and to drive organisational change. The achievement of targets can be monitored using the measures outlined in the scorecard. As well as being a strategic tool the scorecard provides a comprehensive and visible representation of an organisation's goals, targets and measures that can be used to communicate the strategy to everyone within an organisation.

Within the scorecard measures are grouped together using a number of perspectives. The Kaplan and Norton model uses the following perspectives:

- Financial
- Customer
- Internal Business Process
- Learning and growth

These perspectives represent the balance required to satisfy external stakeholders/customers/clients and internal performance related to core business processes and innovation as well as learning (staff development and culture) and growth (continuous improvement). Some organisations focus their financial perspective on growth in the short-term and use the other three perspectives to act as the value drivers to ensure there is sustained competitive performance in the long-term. Other organisations, including most tertiary education institutions, focus on the customer/client (students) perspective and the financial perspective is seen as a resource – or a constraint! This is particularly so in the current climate of reduced government funding and an increasing need to find alternative sources of revenue. Keeping a balance between the four perspectives is becoming more important as more astute students are increasingly being forced to purchase courses, and the market is becoming more de-regulated.

Focussing on the established vision and strategy, management must ask the following questions:

- To succeed financially, what results must we produce for our stakeholders? (e.g. shareholders, governments, councils, funding bodies)
- To achieve our vision, what products and services should deliver to satisfy our customers? (e.g. lowest cost, best value for money, highest quality)
- To satisfy our stakeholders and customers, how should we deliver our products and services? (e.g. in which processes must we excel)
- To achieve our vision, what organisational culture do we need that will ensure staff sustain our ability to change and improve the delivery of our products and services to the satisfaction of our stakeholders/ customers/clients? (e.g. staff development programs, incentives and rewards).

Furthermore, the measures must be balanced between outcomes (past results) and inputs that drive performance and demonstrate rates of change. So the scorecard that is developed should contain a balance between objective, readily quantifiable outcome measures (e.g. cost ratios, market share, revenue) and subjective measures of drivers of performance such as motivation of employees and customer satisfaction.

Thus, for each perspective measures of past performance (lagging) and measures relating to the factors (drivers) which will determine future performance (leading) are identified. Both quantitative and qualitative measures are included.

The identification of both lagging and leading measures enables cause and effect relationships within an organisation to be mapped. For example, if a tertiary education institution improves the quality and effectiveness of the marketing of its courses this will increase student demand and ensure that income is generated.

USING A BALANCED SCORECARD APPROACH IN TERTIARY EDUCATION

Tertiary education institutions are complex organisations. If they are to create the future that will keep them relevant, they must also respond successfully to massive external change. Dynamism is as important as its past achievements, indeed probably a better guide to future performance. Those institutions that combine high achievements with extensive evidence of dynamism and rates of change are likely to be successful. This leads directly to consideration of the choice of appropriate performance measures (or metrics). In this regard, there is a business axiom that you can't change what you don't measure. A corollary to this is what you measure is what you get.

There is much information available regarding choice of performance metrics in innovative enterprises. But all too often, outputs (or outcomes) are used as the only measure of performance. While such *lagging* indicators do provide a measure of past performance, properly considered performance measures can also be one of the most powerful drivers of change. Thus, in addition to the lagging indicators, we also need *leading* measures of the drivers of future performance. Some *learning* measure of the rate of change of performance is also required to assess the effectiveness of any strategies implemented to drive change. Within a strategic planning framework, change must be driven in some particular direction and so there should also be a direct link between the metrics and the strategic plan of the tertiary education institution.

It is time that the tertiary education sector looked at the approach that

- a) incorporates all of the above, and
- b) has been found to be very effective at driving performance.

The Balanced Scorecard approach of Kaplan and Norton meets both. A framework using a Strategy Map leads to development of a set of metrics naturally linked to the strategy. An example of the resultant metric matrix is shown in Figure 1:

Figure 1: The Balanced Scorecard Metric Matrix

PERSPECTIVE	Lagging (outcomes)	Leading (performance drivers)	Learning (rate of change)
<i>Financial</i>			
<i>Customer/ Stakeholder</i>			
<i>Internal Processes</i>			
<i>People/Culture</i>			

Thus, for greatest effect in managing for performance, what is required is a suite of cross-supporting metrics linked directly to the strategy of the tertiary education institution and addressing past performance, the drivers for future performance and the rate of improvement. The optimal suite will probably be unique to any particular tertiary education institution, given the diversity of strategies, the state of development and mix of activities of different institutions. A subset of the metrics can certainly be used to benchmark performance of some particular aspect of an institution's performance with others (e.g. Human Resources with a range of other organisations, aspects of teaching and learning assessment procedures across institutions, course specific aspects with like courses in similarly focussed institutions). However, while they are an essential part of any internal performance management system, such metrics are not designed for cross-sectoral comparison in general, and

should not be contemplated as a means of deriving a *league table* or used in allocation of resources across the sector.

Consequently, judicious benchmarking can be undertaken in relation to a set of metrics using lagging, leading and learning indicators. A comprehensive suite may be chosen tailored to any particular tertiary institution's circumstances. A fully developed set of benchmarks should have carefully identified criteria, and definitions to ensure they are used in the intended context. Self-assessment against the criteria will provide executive staff with comparative data of past success, the information needed to for improvement, and a realistic appreciation of how well the institution is moving towards its goals and vision. It will sharpen the distinction between inputs and outputs and also make clear the further important distinction between outputs and outcomes (McKinnon and Walker, 1999).

DESIGNING METRICS

The development of a proper portfolio of organisational performance metrics has proven to be the most difficult aspect of the Balanced Scorecard approach. It requires deep and perhaps unprecedented re-examination of the vision, strategy, and mission of a tertiary education institution. The relationship between customers/clients and the institution's own survival needs will have to be considered.

One way to address the issue is to answer the question if we could create any metrics we wish, what *instruments* or set of metrics would senior executives prefer to see to help them to make better strategic decisions? Ideally, these instruments would have the following 12 features:

- 1 Leading indicators: forecast future trends inside and outside the institution
- 2 Objective and unbiased
- 3 Normalised - so they can be benchmarked against other agencies
- 4 Statistically reliable - small margin of error
- 5 Unobtrusive - not disruptive of work or trust
- 6 Inexpensive to collect - small sample sizes adequate
- 7 Balanced - qualitative/quantitative, multiple perspectives
- 8 Appropriate - measurements of the right things
- 9 Quantifiable - for ease of aggregation, calculation and comparison
- 10 Efficient - can draw many conclusions out of data set
- 11 Comprehensive - show all the significant features of agency's status
- 12 Discriminating - small changes are meaningful.

STRATEGIC FRAMEWORK DEVELOPMENT AT CURTIN

Objective

To develop a comprehensive strategic framework which can be applied to all levels and areas of the University and which focusses all levels and areas on a particular strategy for achieving the University's Vision.

Priorities

Devise a plan for developing and implementing the framework at all levels within the University, including:

- Developing the framework: top down approach
 - a) Development of a corporate framework which will provide a broad template for all other frameworks
 - b) Development of a framework for Teaching and Learning, Research and Development and other major central functions around Curtin's value statements i.e. an international outlook, community responsiveness and responsibility, and innovative applications of technology.
 - c) Development of frameworks at operational level (Divisions, Schools and Vice-Chancellor's operational units).

- Determining how the importance of developing operational frameworks will be communicated and marketed.
- Considering how key processes might be developed/re-engineered so that they reflect and underpin the framework approach e.g. Program and Planning Review, Annual Reports/Reviews, Functional Reviews. What processes need to be reviewed/reconsidered in order to promote enthusiasm for the framework?
- Determining the current position and current stakeholder/client views.
How do we know where we are now? e.g. how do staff/students/stakeholders/clients view their relationship with Curtin now?
Do we really know?
How will we find out what they really value/need?
- Developing policies to influence behaviour and underpin University commitment to the strategy (in particular, how staff can be brought on board, staff development needs, incentives and sanctions).
- Developing targets -Key strategic priorities for 1999-2001, already in place, including targets.
- Developing measures.

Quantitative

Currently the measures available to the University are largely lagging in nature and are not necessarily focussed on the key data requirements. Further consideration of requirements is needed to identify the key information that Curtin needs in order to determine whether the Vision is being achieved, whether the strategy is effective, and if not why not.

Qualitative

Defining the strategy for obtaining regular qualitative data e.g. student/staff/client satisfaction - what should be collected, at what level, how, who analyses it and how? What is already in place?

Curtin's Vision

To be a world class university of technology

Looking ever forward through:

- internationalisation
- responsiveness and responsibility in relation to
 - student needs
 - employer expectations
 - community/industry links
 - ethics and social justice
- innovative uses of technology

Curtin's Strategy

<p><i>Building Partnerships</i> with:</p> <ul style="list-style-type: none">• staff• students• employers• industry• international links• Governments and other stakeholders <p>(Definition of building: careful selection - strategic for partnership nurturing/fostering/maintaining managing/improving)</p>
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Desired Culture

<p><i>Learner (partner)-centred</i> - T&L, R&D:</p> <ul style="list-style-type: none">• Listening (to students and partners)• Forging Partnerships with students - for life (international, national and local)• Building affiliations (through partners overseas and individuals)• Emotional attachment experience - alumni• Affiliations & alliances (Curtin Community Life Project)• Sponsoring/mentoring• Maintaining partnerships• Action-oriented (proactive and responsive)• Strategic decision making• Accountability of managers - performance management
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Adopting a strategy of strategic partnerships has taken into account the issues which can be fatal in successful partnering:

- Tribalism among groups with a common cause
- Departmentalism or insular naval gazing
- Hidden agendas
- Miscommunication of information
- Lack of trust – perhaps related to past actions (Lendrum, 1998)).

Therefore a number of groups are meeting to openly discuss Curtin's culture; how the value propositions around partnering will be accepted, and identifying barriers to implementation of the framework at all levels.

Barriers to Implementation

- i. Ineffective communication of the Vision (Vision)
- ii. Misalignment of incentives and goals (People)
- iii. Capital allocation and discretionary funding based upon short-term budgets rather than long-term strategies (Resources)
- iv. Performance review and feedback based upon short-term results rather than long term strategy (Management).

Barriers relating to Curtin:

Vision Barrier

- communication (at all levels)
- multiple forums
- repetition
- two-way communication
- leadership
- rich and lean

Action:

- *Road shows*
- Roll out plan
- Timelines
- Budget
- Pilots

People Barrier

- Goals and incentives tied to long term strategy
- What are goals and incentives? (\$\$, promotion, ?)
- Budget - strategy and performance components (existing/new) *Major driver*
- Individual versus team incentives
- Relationship to Program and Planning Review and Annual Reviews
- Relationship to functional review (replacement by continuous improvement)
- Individual scorecards - cornerstone of competency development (relation to professional portfolios?)

Resource Barrier

- Capital allocation and discretionary funding based on long-term strategy rather than short-term budgets
- New budget model must be linked to the strategic map
- Amount in each component (fully implemented by 2003/4):
 - capitation
 - performance
 - strategic

Management Barrier

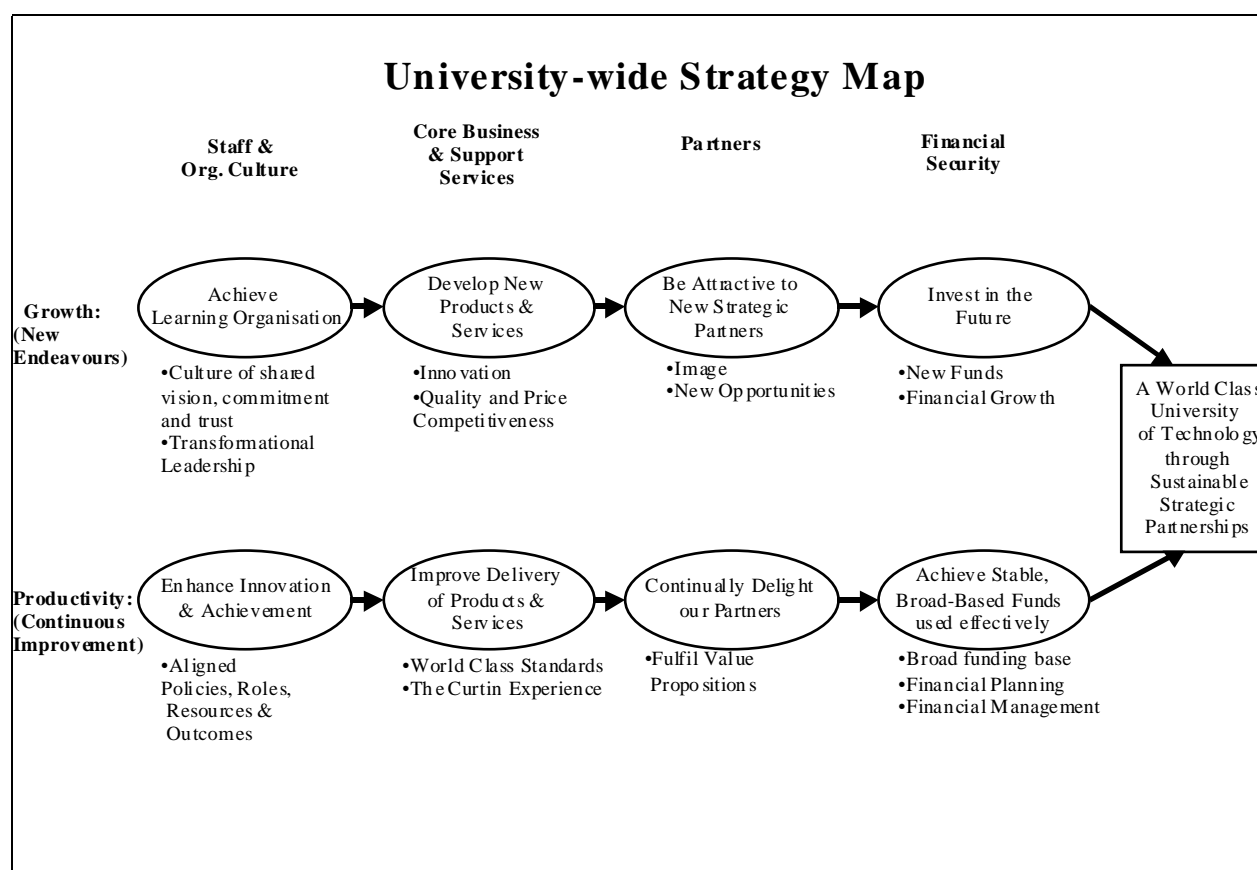
- Feedback and review should concentrate on evaluation of effectiveness of long-term strategy rather than short-term performance.
- % of time in such reviews?
- Double loop review/planning *Action*
- Analysis of cause-and-effect correlations.

Performance Indicators

- student opinions
- climate for staff
- creation and maintenance of partnerships (creating a cycle of employment of graduates, industry links enhanced, return to study, i.e. emotional attachment).

Once all of these issues had been addressed, senior management developed a Strategy Map for Curtin, to provide information from which to construct a framework for planning and developing balanced scorecards for core business (Teaching and Learning and Research and Development) in the first instance, then throughout Curtin. The Strategy Map is in Figure 2.

Figure 2: Curtin's strategic framework



CASE STUDY: A BALANCED SCORECARD FOR RESEARCH AND DEVELOPMENT AT CURTIN UNIVERSITY OF TECHNOLOGY

The scorecard for Research and Development (R&D) is being developed based on Curtin's work with consultants AD Little International Inc. (Little, 1998). The AD Little model draws on the work by Kaplan and Norton.

Objectives

Four objectives for R&D metrics have been identified:

- Facilitate performance management of R&D - at macro and micro levels
- Facilitate allocation of R&D infrastructure and strategic projects
- Strengthen Curtin's profile via marketing and promotion
- Meet compulsory reporting requirements (DETYA and State Government).

Goals and Principles

High level goals and guiding principles for measuring R&D activity at Curtin were formulated as follows:

- Driving behaviour
- Improving management and desired outcomes
- Increasing research output
- Addressing disadvantages and rewarding desired behaviour
- Linking to (strategic) direction
- Linking to Human Resources' outcomes
- Changing staff attitudes to involvement in both teaching and research
- Linking rewards to effort - especially for solutions to problems

- Driving Research Performance Index, to ensure the reward and recognition of diverse activities
- Driving desired behaviour e.g. collaboration with external groups.

Perspectives

For R&D at Curtin we have developed perspectives which relate to those of Kaplan & Norton:

Kaplan & Norton

Financial

Customer

Internal Business Growth

Learning and Growth

Curtin R&D

Staff and organisational culture

Core business and support services

Partners

Financial Security

Using the R&D model:

Partners

What types of relationships does Curtin need to develop to achieve the Vision?

What types of relationships do partners want?

What criteria do partners use to judge these relationships?

On what criteria would Curtin like to be judged?

How will these relationships be developed?

How will these relationships be managed?

How can they be measured?

What targets should be set?

Financial Benefit

If the Vision is achieved how will Curtin look to stakeholders?

Who are the stakeholders? Government, community and industry groups?

What are the criteria primarily used by stakeholders to judge Curtin's performance?

What should we measure?

What targets should be set?

Staff and organisational culture

What type of culture needs to be developed?

How will this be achieved?

To achieve the Vision what types of relationships with staff should be developed?

What types of relationships are valued by staff?

How will these be developed?

How will these be managed?

What do we need to measure?

What targets should be set?

Core business and support services

What internal processes are needed to support and drive the different types of relationships?

What factors determine client satisfaction with processes?

How can their effectiveness be measured?

What targets should be set?

Current Position

R&D high level goals and guiding principles can all be related to building relationships:

- Driving behaviour
- Improving management and desired outcomes
- Increasing research output
- Addressing disadvantages and rewarding desired behaviour
- Linking to (strategic) direction
- Linking to Human Resources' outcomes
- Changing staff attitudes to involvement in both teaching and research

- Linking rewards to effort - especially for solutions to problems
- Driving Curtin's Research Performance Index, to ensure the rewarding and recognition of diverse activities
- Driving desired behaviour e.g. collaboration with external groups.

The Balanced Scorecard developed after considering all of these factors, and in light of the University's Strategic Map, is in Figure 3.

Figure 3: Curtin's R&D Balanced Scorecard

	<i>Staff and Organisational Culture</i>	<i>Core Business and Support Services</i>	<i>Partners</i>	<i>Financial Security</i>
Key Objectives: Growth	<ul style="list-style-type: none"> *Increase the numbers of staff engaged in R&D activities. *Enhance reward opportunities for R&D activities *Promote shared R&D vision 	<ul style="list-style-type: none"> *Develop new R&D products and services *Develop R&D support infrastructure (equipment, technical support, staff development, internal grants) 	<ul style="list-style-type: none"> *Attract new strategic partners by enhancing the University's R&D image and generating new R&D opportunities 	<ul style="list-style-type: none"> *Develop new and growing sources of R&D funding
Key Objectives: Productivity	<ul style="list-style-type: none"> *Ensure that R&D roles are aligned with the partnership strategy and the Vision. *Enhance capacity for innovation and achievement in R&D *Encourage staff to increase their R&D activities 	<ul style="list-style-type: none"> *Continually improve the delivery of R&D products and services *Ensure that the portfolio of R&D related schemes operate to maximum effect by effective monitoring and review. 	<ul style="list-style-type: none"> *Fulfil the expectations of R&D partners 	<ul style="list-style-type: none"> *Achieve a stable, broad based supply of R&D funding. *Ensure that R&D funds are used to maximum effect by effective financial planning and management.
Measures	<ul style="list-style-type: none"> *Professional portfolio *Staff view on the extent to which R&D activities are encouraged and supported. *Staff view on the extent to which innovation and creativity in research are encouraged and supported. *Capacity to attract "top" R&D people and for "top" research institutions to pick up our people. 	<ul style="list-style-type: none"> *Quality of access to R&D information *Quality of postgraduate students recruited *Number of new products and services developed *R&D a key component of promotions policy *\$\$ spent on infrastructure, equipment, technical support, staff development. 	<ul style="list-style-type: none"> *R&D Partner acquisition R&D partner retention R&D partner satisfaction *Quality of external R&D opportunities R&D brand effectiveness R&D market penetration 	<ul style="list-style-type: none"> *% of total R&D funds allocated to performance and strategy *Diversity of R&D funding sources *Effectiveness of use of R&D funds

	<i>Staff and Organisational Culture</i>	<i>Core Business and Support Services</i>	<i>Partners</i>	<i>Financial Security</i>
	*R&D leadership effectiveness *Staff motivation survey *R&D productivity *Effectiveness of R&D development programs (e.g. Postdoctoral fellowship scheme)	*Effectiveness of University R&D initiatives/schemes.		
Targets				
Key Strategic Initiatives	*Develop of dynamic staff R&D development programs, assess and monitor *Develop R&D leadership development programs *Increase staff participation in university R&D processes *Develop review programs to assess R&D participation and determine reward process/criteria *Develop strategies to develop and improve staff skills in key areas (including project management, problem solving & commercial skills) *Increase the numbers of staff participating in skills development programs	*Expand initiatives to stimulate research that achieves creative solutions to problems *Adopt ISO 9000 *Identify options for future R&D improvement and development within monitoring and assessment activities *Develop time-management strategies and monitoring techniques *Develop policies for assessing efficiency of new R&D programs *Develop strategic marketing for research student recruitment *Assess and develop R&D equipment, facilities & infrastructure *Improve quality of the PGR environment *Improve support mechanisms for research students	*Develop new R&D alliances *Develop and assess the quality of R&D facilities *Develop university R&D culture and ethos to ensure relevance to client needs	*Implement strategic R&D budget *% strategic R&D funding and profile of distribution *Research plans include strategies for increasing Curtin's research position *Improve relative national and international benchmarking position

	<i>Staff and Organisational Culture</i>	<i>Core Business and Support Services</i>	<i>Partners</i>	<i>Financial Security</i>
		*Improve the responsiveness of systems e.g. time taken to respond to queries *Evaluate the impact and relationship of the vision statement to R&D strategies *Improve internal communication and information e.g. identify key R&D groups		

DEVELOPMENT AND IMPLEMENTATION ISSUES

These have been addressed to some extent in defining the barriers and discussing the difficulty of developing a balanced suite of metrics. Some other benefits and difficulties should be considered:

- Although an organisation may have a broad range of goals or objectives and measures in place, they are often not aligned or linked. The balanced scorecard approach provides a means to make the cause-and-effect relationships transparent
- Clarifying the links makes it easier to resource and support strategic goals which will drive the vision whilst identifying others which may be impeding progress
- There will be individuals who see the process as complicated and adding to an already overloaded schedule. Serious consultation and thinking around the framework which is developed will ensure a system which is easy to understand and implement is put in place
- Communication is vital. A team approach with leaders on the *road show* who have the skills to facilitate participation of staff at all levels, and who are championing the framework, will facilitate smooth implementation
- Commitment to resource those processes and practices which are critical to the success of the balanced scorecard approach is a pre-requisite. Failure to fully implement will ruin the chance to foster an organisational culture which embraces change as a positive for improvement, rather than continuing to see it as a negative necessity, or believing there will be more of the same. For example, excellent information systems are required to deal with strategic information
- Assess the current availability of information relative to anticipated needs
- Only invest in new products and processes if there is capacity, time and resources to develop staff
- Translating corporate goals and strategies into all divisional, faculty, operational unit goals and strategies requires an interpretive approach. It is not an exact science! Alignment is the key. Activities at all levels should be focussed on assisting the organisation meet its goals and achieve the vision. There is rarely a direct translation of the corporate scorecard to the individual scorecard. Nevertheless, they should always be aligned and focussed on core business.
- There should be compatibility between the performance management system and reward and remuneration at all levels
- Review at the operational level is critical and can feed back through the organisation the success, or otherwise, of the goals and strategies which are meant to be driving towards the vision

- The dynamics are not always predictable and individuals often contribute breakthrough ideas which involve an element of risk. Taking a risk or acting intuitively is sometimes surprisingly advantageous.
- Encourage everyone's heart! Ignoring signs which indicate that those who seemed to understand or to be committed are not *on board* can sometimes backfire

CONCLUSION

Curtin has taken up the challenge of linking its Vision to a key strategy of partnerships as the focus for developing a Strategic Map for Growth and Continuous Improvement. Executive management has embraced the concept and are championing it with senior managers. During 2000 the framework will be taken into teaching Divisions and Schools and through operational units in the Vice-Chancellory.

This paper has provided a brief overview of Kaplan and Norton's Balanced Scorecard which is being used as planning tool at Curtin University of Technology in Western Australia. A framework has been developed and a methodology put in place to link all planning and review mechanisms across four perspectives using a balanced suite of metrics. The result will be a clearer focus for all staff on an organisational culture which embraces change and works to improve and innovate processes and products which will delight its partners - its students, industry, professional, research, development and international collaborators, and stakeholders in government and the community. The expected results are staff and partner satisfaction, greater efficiency and effectiveness, and financial benefit through an enhanced reputation as a high quality provider of tertiary education through Teaching and Learning and Research and Development and mindful of its value statements. A Case Study on the development of an R&D scorecard for Curtin is outlined to provide a model for others implementing a similar model for measuring performance using a balanced scorecard.

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