



Issues Report

On Costing within Australian Higher Education Institutions

Prepared by: Steve Robertson, Principal
Geoff Applebee, Partner
Richard Bernasconi, Executive Director
Nathan Forshaw, Consultant
Gary McKay, Consultant

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1. Executive Summary

The policy changes announced in the 1996-97 Budget and subsequently are leading to a more competitive environment and increased opportunity for Australia's universities to diversify funding sources. In this environment, it is becoming increasingly important that universities have in place robust arrangements for fully and accurately measuring the costs associated with their various activities.

Service organisations have traditionally managed their operations through budgetary control of cost centres¹. Universities have a similar tradition of managing operations through budgetary control of cost centres, such as Faculties, Schools and Departments. Financial performance is measured by comparing actual and budgeted results. As in the majority of service industries, most of the costs of a particular university cost centre come from resources that have been committed in advance. This has led to university management not having accurate knowledge of the costs of the services they provide or the cost of different student types enrolled.

This deficiency in accurate cost information was of little concern to universities operating in a relatively non-competitive environment. There was little pressure to lower costs, improve efficiency or eliminate unprofitable courses or units of study. As such, there was little demand for accurate cost information in relation to course, units of study or students. This, in turn, led to relatively simple financial systems within universities. In light of the recent cuts in government funding, the increasingly competitive environment and the numerous other challenges that are currently facing the sector, universities must have accurate and precise knowledge of all their costs. Universities are facing increasing pressure to convert to competitive entities. This requires accurate and timely cost information on all of the universities activities.

The information gathered from our university visits and the survey responses revealed that most universities would like additional costing information. This costing information would be utilised to assist the decision making process within the university, to identify financial anomalies within university budgets and strategies and to assist with pricing decisions with regard to the services and activities the university offers. Cost information that will enable the university to achieve their strategic and financial goals includes information on:

- Course costs;
- Unit of Study costs;
- Student costs;
- Research costs;
- Consultancy costs;
- Overhead costs / Support activity costs;
- Course development costs;
- The cost of alternative delivery methods;
- Activity costs / Activity Unit costs;
- The cost of new products and services;
- The cost of commercial operations; and

¹ Kaplan, R.S., and Cooper, R., "Cost and Effect - Using Integrated Cost Systems to Drive Profitability and Performance", 1998, Harvard Business School Press, Boston, Massachusetts.

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- The full costs of Faculties.

The benefits that such costing information will provide include:

- providing a more credible basis for pricing of university courses, units of study, university services, research and consultancy;
- will facilitate accurate internal charging;
- will assist with resource allocation decisions;
- will facilitate a more strategic approach to determining the variety of courses and services universities provides;
- will accurately highlight where cross-subsidisation occurs;
- will enable contribution or profitability reports to be generated;
- will facilitate benchmarking within universities and throughout the sector;
- will allow break even analyses to be conducted; and
- will facilitate a reduction in idle capacity.

Perhaps the most prominent and persistent challenge of implementing an improved costing methodology, is dealing with and overcoming cultural resistance.

Even though some people in the sector that we spoke to are already working with costing in some way or are advocating changes in this direction there may be significant cultural resistance from some universities or some parts of universities.

We believe that, regardless of which costing methodology is adopted, that a clear education and communication program needs to be created to assist in the development and implementation process. This education program would need to address all key issues in being able to use good quality cost information (such as being more accountable for financial decision making in a reduced funding environment), not just talk about the technical aspects of the costing methodology being used.

Many costing systems are simple in concept, but can be complicated and costly to implement successfully. Many reported failures involved with implementing new costing systems are attributable to shortcomings at the planning and design stages of the project.

Another important factor influencing the success of a costing project is the impact on behaviour within the organisation. As costing systems can change the way in which performance and activities are measured, its implementation can have major implications for the way people carry out their work functions. This often means that the introduction of a costing can be controversial and difficult. However, experience with managing organisational change suggests that such problems could be overcome by establishing effective channels for communication and staff training and education.

The survey document indicated that there is a tremendous need and desire for more detailed and accurate cost information within the Higher Education Sector. This was also captured by the following quotations by some of university's Vice Chancellors.

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“Costing information is generically very important, but totally depends upon the fineness of the meat. The use of the information is much more important. Why? Because knowledge is power.”

“No one knows the cost of international students, it is all based on market share. No one knows the cost.”

“There is huge cross subsidisation in Australian Universities across faculties and courses.”

It would appear that by improving a university’s understanding of its cost information, a university will be better placed to select appropriate levels of output and set prices to maximise profitability. This information can make a significant contribution to strategic decision making, particularly with regard to future options for growth and diversification.

2. Scope

The policy changes announced in the 1996-97 Budget and subsequently are leading to a more competitive environment and increased opportunity for Australia's universities to diversify funding sources. In this environment, it is becoming increasingly important that universities have in place robust arrangements for fully and accurately measuring the costs associated with their various activities.

This study is to develop in close consultation with interested universities a sound costing methodology. Universities may choose to adopt, modify or reject the methodology developed to their own assessment of its usefulness to them. There is no intention that any methodology will be imposed on any university, whether they participate in the study or not.

The study will not deal with pricing, although good costing practices can be utilised as inputs into pricing decisions and negotiations. The costing methodology that is developed is also not intended to be used as a basis for funding allocation.

It is proposed that the study will have two stages, this represents the first stage.

1. The first stage will involve the preparation of a discussion document on the issues to be addressed (this deliverable).
2. A "strawman" or high level costing methodology will then be developed and distributed to the university participants.

Both the discussion document and the "strawman" costing methodology will be presented to a workshop attended by the participating universities. The outcomes of the workshop and a proposal from the consultant for a second stage will be reviewed by the steering committee and a decision made on whether and, if so how, to proceed to the second stage.

The second stage will include the testing of a methodology in participating universities. Access to any data collected during this stage will be restricted to the contributing institution, the Department (DEETYA) and the consultant. The data collection will be part of this study only. It is not intended that the department (DEETYA) will collect such data on a regular basis.

3. Current State

3.1. Insights from the visits

One of the key elements of this study was a 1 day visit to 11 universities. These universities were selected by the project's steering committee with the intent of ensuring that the full range of university types are covered. The universities chosen were as follows :

- Murdoch University
- Curtin University of Technology
- James Cook University
- The University of Western Australia
- University of Southern Queensland
- Royal Melbourne Institute of Technology
- Macquarie University
- The University of Newcastle
- University of South Australia
- Monash University
- Griffith University

During these visits a series of interviews were conducted with a wide range of senior university academic and staff members regarding the key issues being faced by the Higher Education sector in relation to cost management. Some of the areas that were discussed during these interviews included:

- what cost information currently exists within the university ;
- what cost information may be desirable in the future and how will this benefit the university ; and
- what will be required to deliver this “future state” costing information and what barriers will need to be overcome.

In all 138 people were interviewed on either an individual or as part of a small group of 2 or 3. This represents an average coverage of 12 people per university visit.

3.1.1. Diversity

There is a considerable degree of diversity between Australian Universities. This diversity stems from differences in heritage, vision, mission, core competencies courses and student body.

There is a diversity of university culture amongst the universities Ernst & Young visited for the purpose of this study. For instance, whilst the majority of academic staff in certain universities placed considerable value on their scholarly tradition, some were more receptive to financial accountability than others. A culture that opposes financial accountability and neglects commercial reality will suffer in an increasingly competitive environment.

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Factors that distinguish Universities include the degree to which they are involved in research, and the kind of research that is conducted, the volume of international students studying at the university, the number of distance education students enrolled at the university the courses the university offers and the methods of delivery they employ.

3.1.2. Importance of costing information

The University visits revealed resoundingly that costing information is vital to the Higher Education Sector in light of the recent changes to the sector and the challenges it faces in the future. Challenges currently facing the sector include:

- . cuts in Federal Government funding;
- . the rising costs of employment;
- . greater competition for local and overseas students;
- . escalating demands from key stakeholders;
- . rapid developments in technology;
- . further deregulation of the sector;
- . a constantly changing environment and choice of service delivery;
- . globalisation of the education market;
- . the increasing commercial focus of universities;
- . the current Asian economic crisis; and
- . the utilisation of scarce resources; and managing the escalating social and economic change.

In order to combat these challenges Higher Education Institutions should introduce a consistent and accurate costing methodology that will provide comprehensive cost data on all the services and activities that the University currently provide. Accurate cost information will facilitate improvements in strategical and operational decisions. Based on the information captured during our visits and the findings of the survey we can conclude that most universities currently do not have adequate information on costs to make accurate strategic and operational decisions or meet the challenges of the future.

The Higher Education Sector currently lacks a sound costing methodology that is able to produce accurate costs of all the university's operations. A costing methodology that is consistent throughout all Faculties, Departments and Schools is absent in the majority of universities. Many Faculties, Schools and Departments within the same university employ different costing methodologies. This creates a wealth of problems as the University is unable obtain precise costing information due to the absence of a uniform costing platform.

Universities recognise that they need to be more commercial in their outlook if they are to overcome the challenges facing them. To this end, some universities have implemented projects that aim to provide the university with the costing information they require. These projects include the development of an Activity Based Costing (ABC) methodology to be utilised within the university.

3.2. Insights from the survey

A costing survey was distributed to Higher Education Institutions and was designed to focus on cost management information as opposed to traditional financial cost accounting within Australian Higher Education Institutions.

The survey consisted of 22 questions, nine of these focused on the current state of cost information within participating university (what current cost information existed), and thirteen focused on the future state of cost information within the participating university (what they would like to have in the future).

The survey was mailed on 4 June 1998 to each of the nominated university representatives from the 33 participating Universities, and to date 31 responses have been received.

The majority of the respondents were Directors of Finance and their equivalents, however there was substantial input from Vice Chancellors, Pro Vice Chancellors and other members of staff.

The answer to each question was consolidated and an average response identified for all participating universities. The questions were analysed using a 5 point Lichert sliding scale and some Yes/No questions.

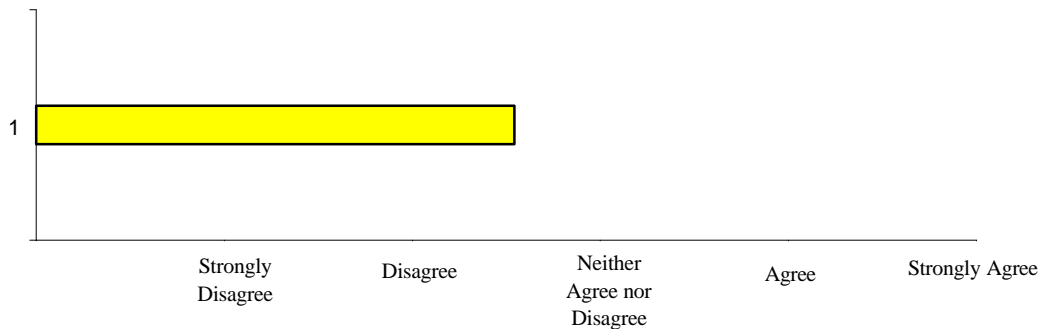
3.2.1. Current State

Without accurate costing information it can be assumed that a university will not be able to make fully informed decisions regarding the courses and services it has to offer. Figure 1 below illustrates this issue, highlighting that university financial directors and other executives involved with decisions making perceive that there is insufficient information within their existing management systems. Again without this cost information it is difficult to accurately forecast budgets and other operations within the institutions.

The data acquired suggests that Australian Higher Educational institutions are indeed recognising the need for costing by course, unit and discipline in regards to both the day to day evaluation of courses and also the allocation of budget funds. However, it must be emphasised that there is also a range of non-cost information such as quality, reputation, policies and non-financial strategic aims that also need to be taken into consideration. These different types of non-cost information, coupled with accurate costing information should be used in conjunction with each other to construct accurate and efficient budgetary and strategic decisions.

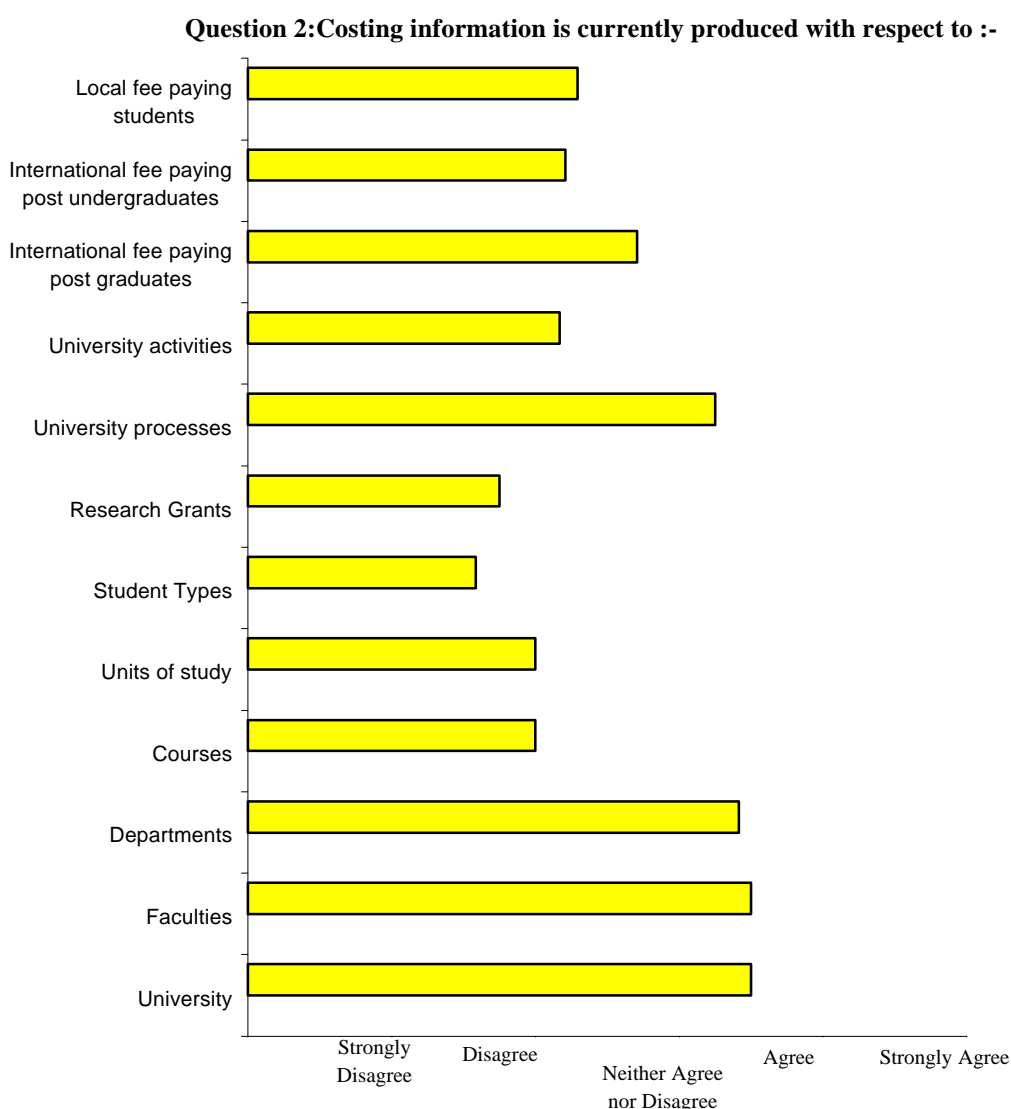
Figure 1

Question 1 - The existing financial management systems within your university provide enough data for cost management puposes.



There are numerous activities and services in which this costing information can be compiled, activities and services ranging from the costing of faculties to the costing of international fee paying students. Figure 2 illustrates some of the activities that are being costed.

Figure 2

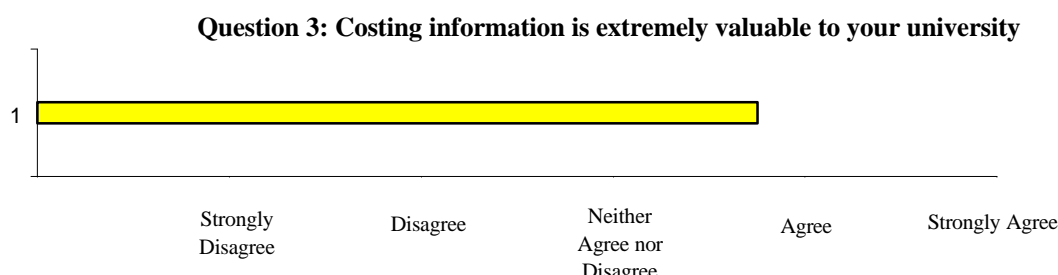


As it can be seen from Figure 2, the belief is that there is an absence of useful costing information. The most obvious of these are units of study, courses, student types and research grants.

The survey responses to this set of questions clearly suggests there is insufficient costing information available to the universities. Although universities also recognise that there is a risk involved with costing everything. The risk is the cost of implementing the cost management system will outweigh the financial benefits that will be derived.

Figure 3 illustrates this, indicating that costing information is considered valuable to universities.

Figure 3



The survey also reveals that of all the universities surveyed :

- **100 %** currently produce financial information on a monthly basis;
- **75 %** have adopted financial management methodologies as opposed to cost management methodologies that have been in place for the last 5 years; (Question 5)

This is likely to be reflective of both the normal financial reporting requirements of each university and their statutory reporting requirements. Another possible reason for this is changes in government policies and the more competitive nature of modern day universities.

- **33%** have developed or implemented specialised cost management software during the past 5 years; (Question 6)
- **13%** have a performance management framework that incorporates either ABM or balanced scorecard; (Question 7)
- **13%** have a comprehensive documented set of costing policies; and (Question 8)
- **52%** Agree that measurable activities are presently used to determine the achievement of university goals. (Question 9)

As you can see from the results above, only one third of universities have developed or implemented some specialised cost management software during the last five years or more. This may be the reason why some universities are considering or actually employing new software information management systems at present. One of the major issues was that the institutions realised that the information produced by these systems is vital to enable key strategic decisions to be made.

On the whole the survey revealed that currently universities do not produce sufficient amounts of costing information in particular areas. These main areas being :

- Courses;
- Units of Study;
- Student types; and
- Research grants.

4. Future State

4.1. Insights from the visits

The information gathered during our university visits revealed that most universities would like additional costing information. This costing information would be utilised to assist the decision making process within the university, to identify financial anomalies within university budgets and strategies and to assist with pricing decisions with regard to the services and activities the university offers. Cost information that will enable the university to achieve their strategic and financial goals includes information on:

- Course costs;
- Unit of Study costs;
- Student costs;
- Research costs;
- Consultancy costs;
- Overhead costs / Support activity costs;
- Course development costs;
- The cost of alternative delivery methods;
- Activity costs / Activity Unit costs;
- The full cost of new products and services;
- The full cost of commercial operations; and
- The full costs of Faculties.

It should be noted that it may not be feasible or desirable to produce information pertaining to all the costs listed above within a particular costing methodology.

A description of these costs and the benefits that will derived from their capture is located on the following pages. This description includes an indicator as to whether the costing information will assist with a university's strategic decisions, operational decisions, or both.

Desired Cost Information		
<p>4.1.1 Course Costs</p> <p>Course costs refer to the cost of providing a particular course of study at the university, for example a Bachelor of Economics degree course or a Graduate Diploma in Insurance. These costs include the salaries of academic and support staff, overhead costs, such as power and buildings, course development costs and support costs which include administration and library costs.</p> <p>Particular courses may not be cost effective, however, they be consistent with the university’s strategic direction. Precise costing information will allow the university to make informed decisions regarding the courses it decides to offer.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> •highlight the real cost associated with the provision of different course types; •will enable contribution or profitability reports by course type to be generated; •will highlight where cross-subsidisation occurs; •will allow for break even analyses to be conducted; •enable accurate determination of the volume of students required for course viability; •facilitate a more strategic approach to determining the variety of courses provided; •facilitate accurate internal charging; •assist in accurate assessment of the volume of resources required; and •assist with resource allocation decisions. 	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>

Desired Cost Information		
<p>4.1.2 Units of study costs</p> <p>A detailed costing account of a unit of study such as a microeconomics unit module in a business degree or a causation unit in a Law Degree, can be instrumental in gauging the volume of resources being consumed by different faculties or schools within a university. The cost of a unit of study includes academic and support staff salaries, the cost of overheads and the development cost of the unit.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> ●allow resources to be allocated effectively; ●will enable contribution or profitability reports by unit of study to be generated; ●will deliver an accurate account of cross-subsidisation between faculties, schools and departments; ●will facilitate accurate internal charging; ●provide measurements for business process improvement; ●will enable break even analyses to be conducted; ●will highlight the real cost associated with the different provision of different units of study; ●will allow for benchmarking to be performed; ●will enable cost benefit analyses to be conducted; and ●high level apportionment of funding and resources to where it is needed. 	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>

Desired Cost Information																			
<p>4.1.3 Student costs:</p> <p>Our university visits revealed that most universities would like more detailed information regarding student costs. Student costs will differ for each student types. Student types include international postgraduates and undergraduates, domestic DEETYA funded postgraduates and undergraduates, domestic fee paying postgraduates and undergraduates and students studying by correspondence to mention a few.</p> <p>A student cost can be described as the accumulated price of all resources and services that any particular type of student consumes over a full academic year.</p>																			
Benefits	Classification																		
<p>All Student Costs</p> <ul style="list-style-type: none"> •highlight the real cost associated with different student types; •enables contribution or profitability reports by student type to be generated; •allow break even analyses to be conducted; •assist with allocation of resources, including academic’s time; <p>Fee Paying Students, including International</p> <ul style="list-style-type: none"> •provide information to assist with marketing decisions and direction •assist with decisions regarding the setting of fees; •facilitate efficient allocation of resources; •facilitate a strategic approach for targeting and recruiting international post graduates; and •assist in determining the volume of students by type required for course / unit of study economic viability. 	<table border="1"> <thead> <tr> <th style="text-align: center;">Strategic</th> <th style="text-align: center;">Operational</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input checked="" type="radio"/></td> </tr> <tr> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input checked="" type="radio"/></td> </tr> <tr> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input checked="" type="radio"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> <tr> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input checked="" type="radio"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="radio"/></td> <td style="text-align: center;"><input type="radio"/></td> </tr> <tr> <td style="text-align: center;"><input type="radio"/></td> <td style="text-align: center;"><input checked="" type="radio"/></td> </tr> </tbody> </table>	Strategic	Operational	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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Desired Cost Information		
<p>4.1.4 Activity Costs / Activity Unit Costs</p> <p>An activity may be defined as a unit of work that is performed within an organisation. It is a description of the work that goes into the organisation and consumes resources. For example, an activity is a process that converts resources into outputs. Examples of activities include lecturing, enrolling a student, loaning a book from the library. Activity costs represent the cost of a particular activity. For example the cost of loaning a student a book or lecturing a unit of study.</p> <p>Activity Unit Costs denote the cost per unit of various activities performed within the university. For example, the cost of ‘enrolling students’ once costed could be divided by the number of students enrolled to arrive at a unit cost.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> •will identify how activities consume costs; •will identify high cost activities; •improve commercial awareness and understanding of staff; •allow for efficient allocation of resources; •facilitate reduction in idle capacity; •able to assess the performance of individual units of production; •ensure usage of services is related to the full costs of producing the services; •assist with budgeting decisions; •is part of the process of identifying costs of courses, units of study and students. •facilitate benchmarking within the institution and with other universities from one period to the next; •facilitate goal of attaining best practice; •assist staff understand their role within a more commercial environment 	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<input checked="" type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input checked="" type="radio"/>

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Benefits	Classification	
<ul style="list-style-type: none"> •accurately cost different service delivery channels (eg chalk and talk or internet); •assist with analysis of university processes and identify opportunities for process re-engineering; •facilitate more accurate internal charging; •provide consistency on costing throughout the university; and •identify causes of changes in costs (cost drivers). 	Strategic	Operational
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Desired Cost Information																	
<p>4.1.5 Research costs</p> <p>The types of research undertaken within the university includes:</p> <ul style="list-style-type: none"> • government funded research; • industry funded research; and • academic research. <p>It is essential that universities understand both the direct and indirect cost components of all these research types.</p>																	
Benefits	Classification																
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<ul style="list-style-type: none"> •will allow for cost benefit analyses of performing research to be conducted, •provide credible basis for research pricing; •facilitate the efficient allocation of resources to research; •will provide credible information to support negotiations with research funders; •lead to an improved academic understanding of commercial pricing; •will assist with budgeting decisions; and •highlight the profitability of the various research projects. 																	

Desired Cost Information																							
<p>4.1.6 Consultancy costs</p> <p>Academic staff may offer their services as consultants to industry. To derive an appropriate fee for their services they require accurate knowledge of the costs involved. These costs include the cost of the academic's time, the university's resources, overhead costs which include building space and power, and the cost of support activities.</p> <p>By factoring all the infrastructure costs into the costs of consultancy, the true cost of consultancy will be derived. This will lead to an improved costing of courses and units of study as the infrastructure cost of consultancy will no longer be incorporated into their prices.</p>																							
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<ul style="list-style-type: none"> •assist with resource allocation; •prices will reflect the true consultancy costs; •flow on effects - university product prices (courses / units of study) will reflect their true costs; •improve commercial awareness and understanding of staff; •will provide credible information to support negotiations with external clients; •facilitate accurate internal charging; •will assist with budgeting decisions; •facilitate accurate assessment of the economic viability of consultancy; •ensure compliance with competitive neutrality; and •highlight the true cost of academics performing this activity. 																							

Desired Cost Information															
<p>4.1.8 The full cost of new products and services</p> <p>Higher Education institutions are constantly creating new products and services in order to gain a market advantage over other universities.</p> <p>These include the introduction of new units of study and courses, new service delivery channels, new support infrastructure and new commercial activities. The identification of the full cost of delivering these new products and services is critical in today's competitive environment.</p>															
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<ul style="list-style-type: none"> •provide credible data to assess the financial viability of new products and services; •facilitate the accurate assessment of resource requirements and their allocation; •will highlight where cross - subsidisation will occur; •will allow for assessment of internal charging; •will facilitate break even analyses; and •enable assessment of the real cost that will be associated with new products / services. 															

Desired Cost Information		
<p>4.1.9 Costs of alternative delivery methods</p> <p>There are a now multitude of different methods of teaching, which each have a different costs associated with them. Different delivery methods include direct contact, which includes lectures and tutorials, distance education including by correspondence and the internet and education that involves clinical or laboratory study. Each of these methods of teaching have different costs associated with them which will vary according to the course or unit of study.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> •assist in the costing of particular delivery methods with courses and units of study; •assist with resource allocation decisions; •allow for assessment of economic viability of different delivery methods; •provide information that will assist with strategic decision making; •will allow for break even analyses to be conducted; •will highlight where cross - subsidisation occurs; •will provide credible information to assist with capital expenditure decisions; •allow for accurate internal charging; •highlight the real cost associated with different delivery methods; and •allow for benchmarking within the institution and across the sector of delivery methods. 	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Desired Cost Information		
<p>4.1.10 Fixed and variable costs</p> <p>Fixed costs are expenses that do not change over a particular period, despite fluctuations in the level of activity. They are generally independent of the level of output. By contrast, variable costs are expenses that are, uniform per unit, tied to output and are generally independent of the time period.</p> <p>Examples of fixed costs within the university include the cost of rent and academic salaries for the period. An example of variable costs is the cost of producing university exam results. The cost is dependent on the number of student sitting examinations in the period, whilst the unit cost (the cost per student) does not fluctuate.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> • assist staff understand their role within a commercial environment; • facilitate efficient allocation and use of resources; • will allow for accurate internal charging; • will highlight where cross subsidisation occurs; • facilitate reduction in idle capacity; • provide information to assist with capital expenditure decisions; and • will highlight the real cost associated with all university activities and services. 	<input type="radio"/>	<input checked="" type="radio"/>
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Desired Cost Information		
<p>4.1.11 Direct/Indirect costs</p> <p>Direct costs refer to expenses that are readily identifiable with a particular activity or unit, and can be directly and easily attributed to the activity with a high degree of accuracy. For example, the cost of the salaries of examination staff. Indirect costs are expenses which benefit common or joint objectives but cannot be easily identified with a particular activity or unit. An example includes the cost of university support services that are not traceable to individual disciplines or activities.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> • assist with the efficient allocation of resources; • allow for reductions in idle capacity and improved efficiency; • facilitate accurate internal charging; • identify areas of cross subsidisation; • identify areas that may require process re-engineering; • provide measurements for business process improvements; • will facilitate benchmarking throughout the university and across the Higher Education Sector; • will facilitate the distribution of funds and resources to where they are required; and • will promote consistent, accurate cost information throughout the institution. 	<input type="radio"/>	<input checked="" type="radio"/>
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Desired Cost Information		
<p>4.1.12 The full cost of Commercial Operations</p> <p>Today many universities are involved in commercial activities for the purpose of providing additional funds to the university. These activities may include commercial real estate or enterprises. As such accurate cost information of these areas is vital for the university to determine the economic viability of commercial operations.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> • provide credible cost data to assist with pricing decisions; • provide accurate cost information to assist with decisions regarding the university’s strategic direction; • provide cost information to support break even analyses; • will highlight the real cost associated with commercial activities; • improve staff understanding of their role within a commercial environment; • will assist with budgeting decisions regarding commercial operations; • assist with allocation of resources to commercial operations; and • will assist with assessment of economic viability of commercial operations. 	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

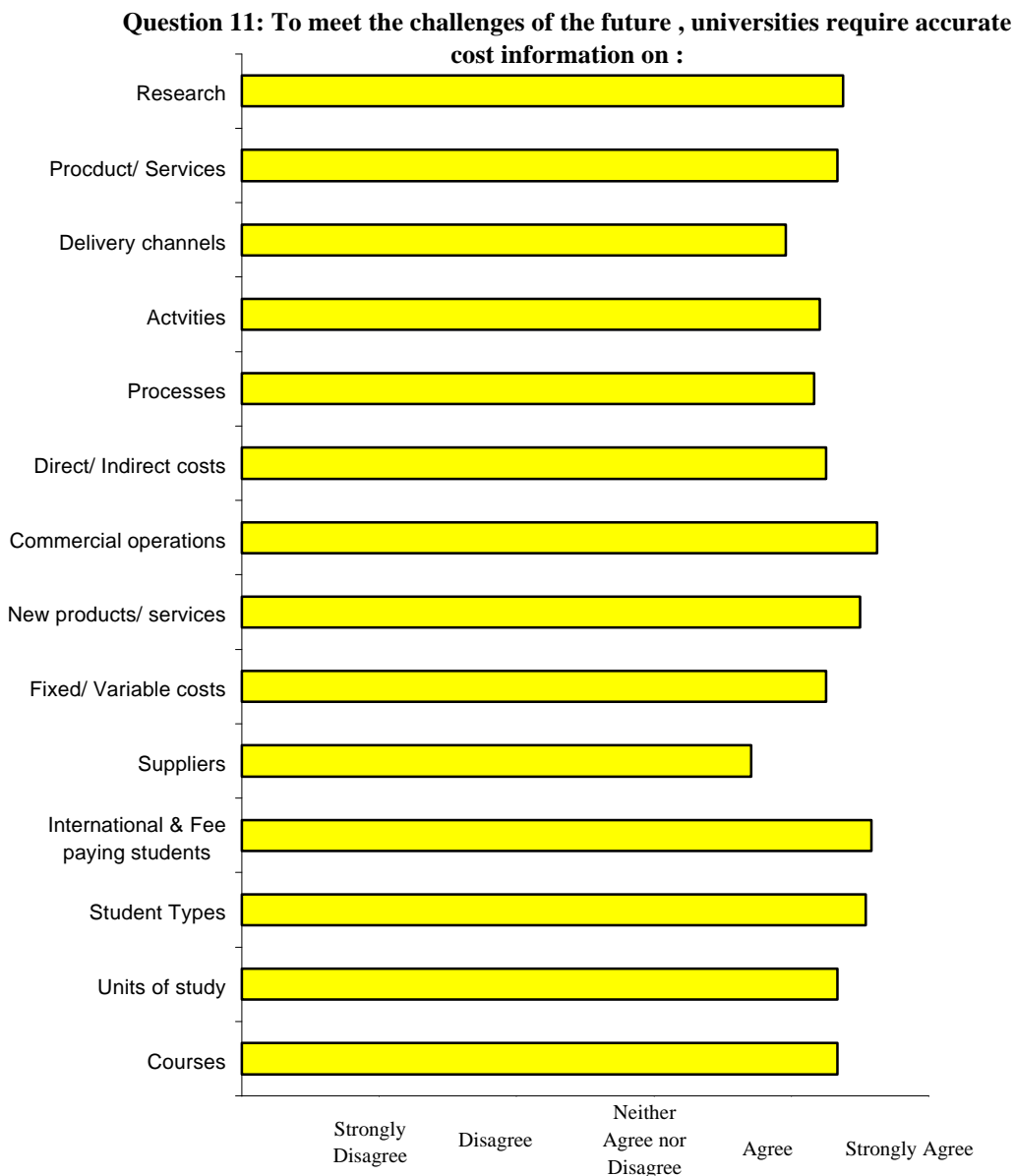
Desired Cost Information		
<p>4.1.13 Full Cost of Faculties</p> <p>The Full Cost of Faculties represents all the direct and indirect costs that a particular faculty accrues throughout the financial year. Full costs include all resources that are used on the production of a unit of output or service, for example, a course or unit of study that the faculty provides. The costs of associated capital, such as building rental, depreciation and the cost of support activities are also covered by full costing. Our university visits indicated that universities do not always capture the full cost of faculties.</p> <p>Costing in this manner will allow Faculties to understand the full costs associated with the products or services that the Faculty provides.</p>		
Benefits	Classification	
	Strategic	Operational
<ul style="list-style-type: none"> ●will highlight the real costs associated with all faculty activities and services; ●will assist the faculty and university with strategic decision making ●will allow for efficient resource allocation; ●will assist with faculty budgeting decisions; ●will facilitate reduction in idle capacity; ●will highlight where cross subsidisation occurs; ●will improve commercial awareness of faculty staff; ●will allow for break even analyses to be conducted; ●will provide credible information to assist with capital expenditure decisions; and ●allow for accurate internal charging; 	<input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input checked="" type="radio"/>

4.2. Insights from the Survey

Future State

Figure 4 clearly suggests that universities require more accurate cost information on certain services particularly, research, commercial operations, new products and services, international and fee paying students, student types, units of study and courses. Although universities appreciate the need for more information on certain activities and services at present, the respondents are indifferent to any change on the accuracy and detail of cost information in the future (Question 10).

Figure 4



Issues Report on Costing within Australian Higher Education Institutions

It was also ascertained from the survey that:

- **94%** of universities agree that enhanced costing information can be used as a tool that facilitates improved decision making. The remainder of universities neither agree nor disagree in this matter; (Question 12)
- **87%** of universities agree that enhanced costing information is required to support the attainment of their strategic goals. Only 3% of respondents disagree in this matter; (Question 13)
- **90%** of universities agree that budgetary decisions require accurate and comprehensive cost information from all their undertakings. Only 4% of respondents disagreed;(Question 14)
- **81%** of universities agree that improved information technology will help acquire accurate cost management information. Only 6% of respondents disagree; (Question 15)
- **77%** of universities agree that new cost management tools and techniques are required to identify financial anomalies within budgets and strategies. Only 3% of universities disagree with this issue; (Question 16)
- **90%** of universities agree that deeper analysis of their processes, activities and cost drivers is required. No universities disagree with this matter; and (Question 17)
- **87%** of universities agree that a change in cultural attitude will enable accurate cost information to be produced. Only 6% of universities disagree. (Question 18)

Figure 5 indicates that the common consent of opinion regarding any changes to the cost management system within the university should be implemented using surveys, either monthly or quarterly or by using ad-hoc technical estimates captured via workshops and interviews.

Universities however do not regard the use of time sheets as an appropriate data collection tool. This may be due to the complex academic culture prevalent in universities. It could also be due to costing being a political process and that people at all levels are fearful of the outcomes that might eventuate from such knowledge.

Universities also suggested that the following data collection techniques would be valuable for cost management purposes :

- Space utilisation studies;
- Estimates using available data;
- Estimating preparation time for teaching subjects;
- Identifying cost drivers;
- Supervisor assessment;
- Surveys (annual); and
- Priority based budgeting.

Figure 5

Question 19 - How appropriate are the following data collection techniques for the university

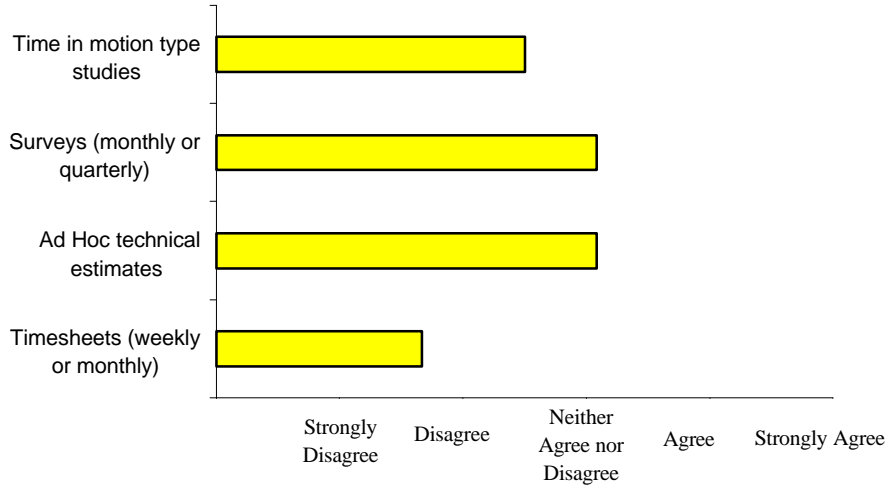


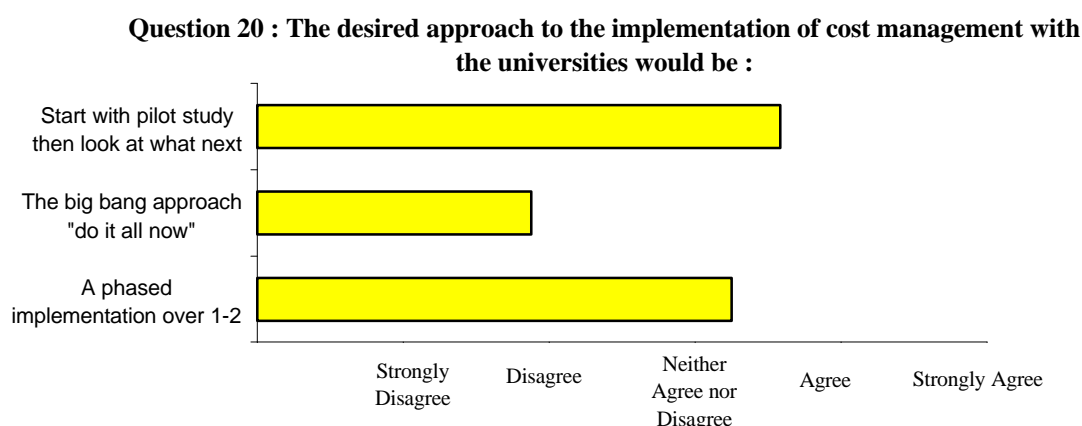
Figure 6 illustrates that the universities see a pilot study of a new cost management system over a period of 1-2 years as the most desired approach. Although universities regard costing information important not only in budgetary decisions but also in strategic planning they are also aware of the fact that many academics will not be willing to change. The survey revealed that (Question 21) :

- 42% consider that a costing methodology would not be accepted within the university;
- 29% think that it will be accepted, with the remainder undecided in the matter.

This could be due to the apprehension of cultural change that may need to occur during its implementation.

Universities also consider the need to develop sound accurate and measurable costs as extremely important and fundamental in complying with the national competitive neutrality policy (CN).

Figure 6

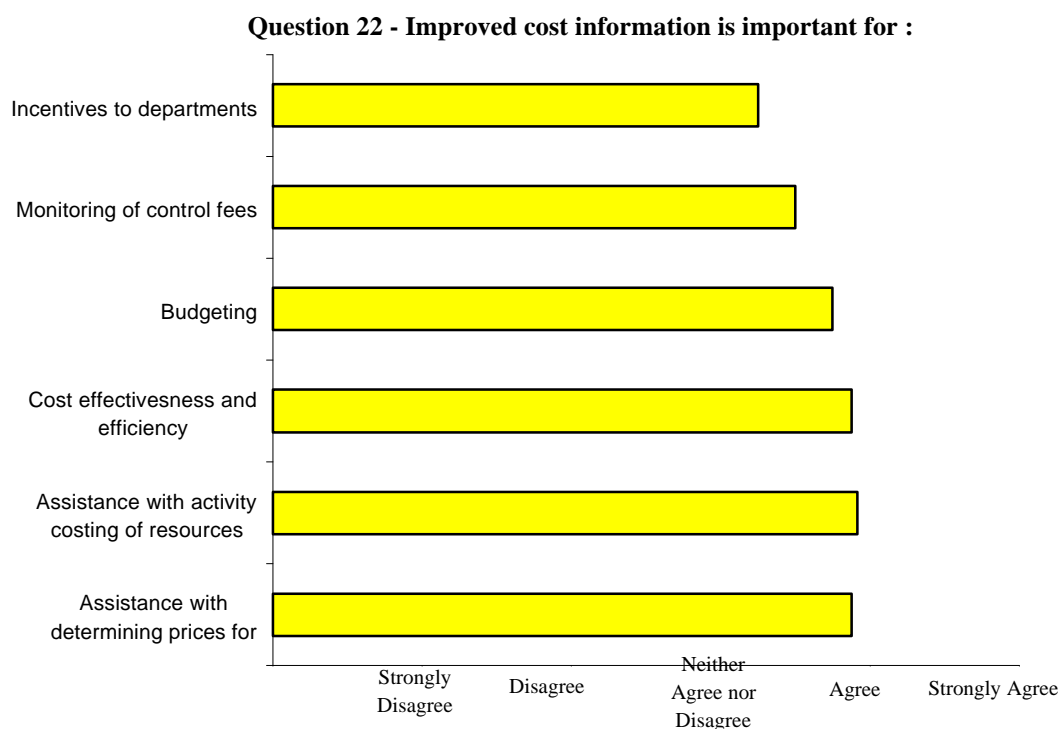


There was agreement throughout all universities that improved cost information regarding services, consumed resources, budgeting, control fees and incentives was important and it was also suggested that the following information tools should be considered; (see Figure 7)

- Performance indicators;
- Purchase and develop decisions; and
- Compliance with regulations.

The results suggest that universities see great advantages in a system that is not only financially viable but one that can be used for strategic and operational benefits and that cost information acquired should enable the institution to undertake projective forward planning and directives of universities for 3 - 5 years.

Figure 7



Another problem that universities thought should be addressed is how to apportion costs for facilities that are not fully utilised. For example, if a course required use of a wind tunnel for experiments and the wind tunnel is only used a few hours a week, is it reasonable to contribute significant cost of owning, maintaining and operating the wind tunnel to this course when there is a spare capacity on the wind tunnel that could (possibly) be used for other purposes ?

One further issue brought up was how universities should handle activity, infrastructure or facility costs when that activity, infrastructure or facility is used for mainstream academic and commercial purposes.

Overall the survey reveals that the universities see the need for changes in regards to budgeting and strategic planning. It can be interpreted from the results that there is an overwhelming majority of universities recognising that significant changes are required in many areas. The main areas being :

- The retrieval of enhanced costing information;
- Cultural attitudes within staff in universities; and
- Cost management tools.

5. Views on the way forward

5.1. Costing practices within overseas universities

As part of this study into costing methodologies in the Higher Education Sector, research was conducted regarding best practice cost management within overseas Higher Educational Institutions (HEI's).

HEI's have until recently overlooked developing systems that provide legitimate and precise data for preparing and controlling their activities. However, due to the increasing demands from overseas governments for universities to strive towards high levels of efficiency, university policies regarding cost management have had to change. Consequently managers have been looking to new costing tools to judge how they can still monitor a tight budget whilst providing the same calibre and quality of service.

The basis of this literature search was centred around international HEIs with particular regard to the implementation of new costing methodologies within Universities. Three sources of information were identified as a potential source of information these being the Internet, the library service and personal contact.

An e-mail was sent to individuals that were connected with costing studies within Higher Education to see if they had any knowledge of recent cost studies within the sector. Most of the contacts made were from British Educational Institutions, although academics were contacted in the United States and Southern Asia.

With HEI's now having fierce competition in regards to enrolling students they are beginning to take cost management issues more seriously. The sudden impact of new funding methodologies within the United Kingdom once the Dearing Report was published made cost management issues more pressing.

The Dearing Report was chaired by Sir Ron Dearing, who, in conjunction with the National Committee of Inquiry into Higher Education produced the report. The report proposed a challenging and realistic agenda for the development of Higher Education in the UK over the next 20 years in the United Kingdom and caused many Higher Educational Institutions to re-evaluate their methodologies regarding costing.

Consequently, as a result of the implications of the Dearing report, several Higher Educational Costing studies were commissioned. Possibly the largest study completed to date was undertaken by the Scottish Higher Education Funding Council (SHEFC). The purpose of the study was to suggest methods which could help institutions meet their objectives. These methods were comprehensive and accurate costing methodologies. In all, 10 pilot institutions were included within the study. Within these institutions there was a full range of costing methods, from the very simple to quite complex.

One of the conclusions of this study was that most institutions have calculated indirect cost rates for research contracts, but some of these are based on very broad assumptions. It appears that few managers within institutions know the full costs of their external contracts calculated.

Issues Report on Costing within Australian Higher Education Institutions

It seems by this reason alone that Funding Councils within the United Kingdom recognise that there is a need for a more in depth method of calculating costs and consequently arriving at accurate full costs. A response given to the Dearing Committee regarding its recommendations agrees with this stating that *“to secure more realistic indirect costs, universities need to be confident about the full costs”* .

Universities historically have not been particularly cash conscious as they have been financially well provided. Funding pressures in the United Kingdom, however are changing their attitude and cost management is fast becoming a major issue in most institutions.

A survey completed in 1993 by Cropper and Drury, found that most institutions within the UK showed some interest in profit. Compared with the old school of thought, new universities analysed profits to a greater extent, knowing that government funding was depleting and salaries were on the increase.

The report went on to state that 56 per cent ² of British Universities used the direct cost method of calculating profit and that although this method was simple to use, it gave no clear identification of what overhead is consumed by each activity. It also stated that only 21 per cent of Universities preferred this method of determining the cost of running degree courses compared to 35 per cent favouring full cost methods and 27 per cent believing that activity based costing was the most appropriate method.

One cost study completed by Mike Mitchell (School of Business at Oxford Brookes University) indicates similar findings. The study undertaken concentrated more on Activity Based Management as a methodology, with promising results. The methodology generated benefits for the university such as an improved awareness and understanding of cost issues within the university . Such a benefit was also suggested by SHEFCE during similar studies that they undertook.

When governments are slowly tightening their funding budgets institutions need to look at cutting costs for them to be able to run as a profit making body. Teale agrees stating that universities *“are being faced with the scenario that if they price too high, they risk losing sales to a competitor institution; if they price too low, they may lose money”* ³ . This is happening in all Institutions all over the world. The tightening of these budgets was possibly one reason as to why the Dearing Report was commissioned back in 1996.

In order to make informed and precise financial decisions organisations require detailed and accurate information regarding their costs. How can institutions arrive at these rational decisions? Teale suggests that *“one way of obtaining that information would be to implement an activity based costing system”*. ⁴

Teale undertook an activity based costing study at the University of Lincoln and Humberside and concluded that if a cost study of this nature was implemented within Universities it could provide a positive contribution towards cost management.

² Cropper, P.; Drury, C. “Management Accounting practices in Universities”, CIMA, Feb 1996 - page 2

³ Teale, M. W - “The Micawber Mystery : Cost Management in Higher Education”, <http://www.teale.demon.co.uk/abcHE.htm>, Jan 1998

⁴ Teale, M. W - “The Micawber Mystery : Cost Management in Higher Education”, <http://www.teale.demon.co.uk/abcHE.htm>, Jan 1998

Port and Burke also chose Activity Based Costing as a cost management tool for their own study due to its ability to help academic managers understand the main factors that influence cost, unlike the more traditional cost management tools that just confuse costs with a mass of details.

They go on to state that "*knowledge of the relevant costs of different courses, and the factors that influence those costs, is a very powerful management tool*"⁵ - a service that activity based costing supplies.

The literature found suggests that due to the rapidly changing higher Education sector, and the ever increasing pressure to exact maximum benefit from scarce resources, universities have to adopt new cost management procedures in order to gain a 'competitive advantage'.

It appears that cost management tools within the education sector helps academics to better understand those factors that influence the costs of teaching as a whole, and the cost of individual courses.

Mike Mitchell states that once cost awareness has been fully initiated within education, the sector will be "destined to become the key users of such methods as ABC". If this is the case, and if it is true that "*Universities worldwide share common functionality*", then could it be that we are seeing the emergence of Activity Based Costing within Higher Education as a common costing methodology ?.

5.2. Alternative Costing Approaches

The three costing approaches considered with respect to the provision of more useful costing information for universities are outlined below. The first two approaches refer to marginal and full costing. The third and fourth approach represent traditional approaches to cost management within service sector organisations. The third approach, that of activity based management, is currently receiving significant attention across the Higher Education sector globally and also within commercial service organisations, including banks and telecommunication companies.

5.2.1. Direct cash costs by department

This approach to costing involves segmenting the institution into specialised units (eg faculties or schools) . All of the direct costs of each running the specialised unit (such as salaries, travel and materials) are captured on a monthly basis within the general ledger. The finance system monitors, by cost type, performance of each unit by comparing the actual cost incurred with the budgeted cost.

5.2.2. Allocating overheads to service departments

This approach is an extension of the "direct cost by department" model. All the direct costs of running each specialised unit are still captured and reported on a monthly basis, however the

⁵ Burke, J.; Port, Dr J - "Why Higher Education must learn its ABC", Public Finance and Accountancy, 15 September 1989. page 13

institution also elects to allocate the overhead costs (such as electricity, water, telephone, insurance, maintenance and occupancy) to the “front” line service departments.

5.2.3. Activity based management

The activity based management approach to cost management breaks down an institution into activities. An activity describes what an institution does - the way time is spent. Activity based management occurs in two major phases. First, you determine the costs of significant activities. Then you assign the cost of these activities to “cost objects” such as courses and student types. This approach also involves attributing all the overhead and support costs down to the predetermined cost objects.

5.3. Preliminary Assessment of the Relevance of the Various Costing Approaches

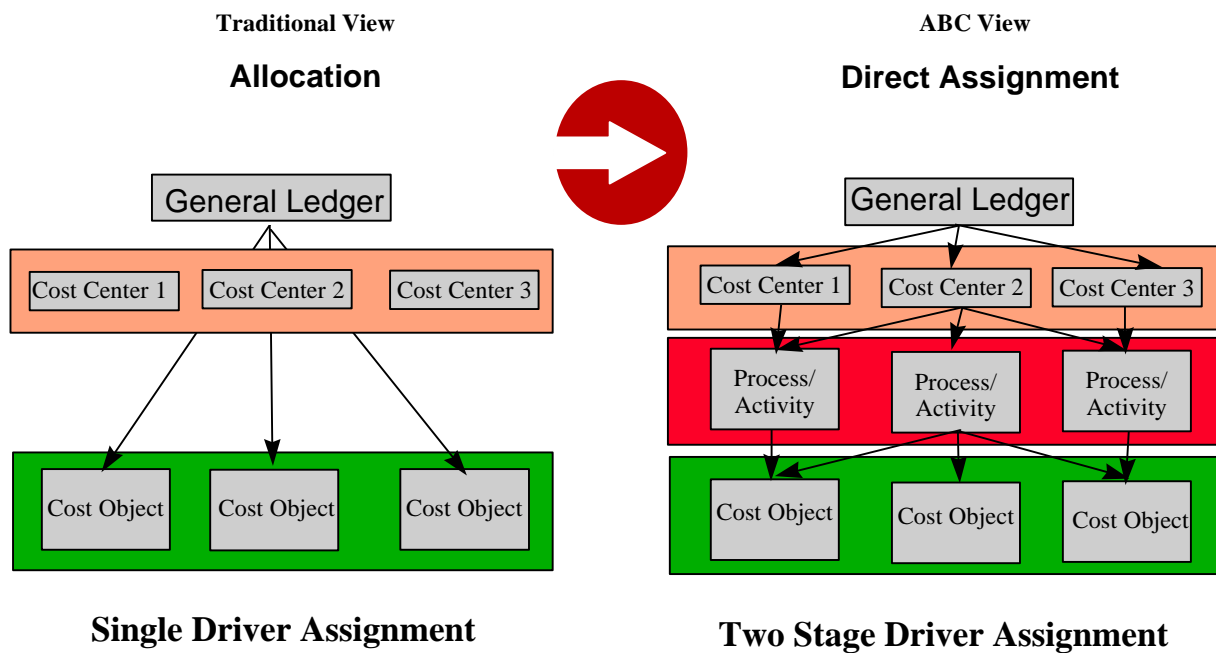
Traditional cost management systems often allocated service overhead costs to services or departments primarily to distribute the overhead for financial reporting purposes. In many service organisations however the distribution of overhead was seen to be unimportant or irrelevant.

The common trend for many of those service organisations who chose to allocate overhead costs was to do so on some high level, and often arbitrary, measure such as revenue, labour costs, number of employees or direct costs. An example of this in the Higher Education sector would be allocating the costs of the student services department to all faculties on the basis of the number of EFTSU's.

Traditional costing systems that allocate costs via a one step process (costs directly to products, services or customers) using a several simplistic allocation methods often produce inaccurate and misleading information.

Traditional costing systems fail to understand that the range of activities performed within an institution are what causes costs to exist and that each of these activities are driven by unique, as opposed to simplistic, characteristics. By contrast, activity based management systems focus on the activities performed to produce or service cost objects. The contrasting perspective's are illustrated below.

How ABC differs from current Cost Management Systems



Issues Report on Costing within Australian Higher Education Institutions

In the example mentioned above one of the major activities performed within the student services department is “conducting student counselling sessions” at a cost of \$50,000 (first semester only), incorporating salaries (\$35,000), occupancy (\$10,000) and consumables (\$5,000). During the first semester 500 counselling sessions have been undertaken with individual students, the student types that took advantage of this activity were international students - undergraduate (300 sessions), DEETYA funded - undergraduate (100 sessions) and fee paying post graduate students (100 sessions).

Assuming this particular university had 10,000 EFTSU’s in the first semester. The traditional costing approach would have failed to;

- capture the cost of the activity (\$50,000);
- understand the activity cost driver (number of counselling sessions);
- highlight the unit true cost of the activity (\$100 per session) ;
- accurately assigned this cost to the various student types: undergraduate (300 sessions), DEETYA funded - undergraduate (100 sessions) and fee paying post graduate students (100 sessions); and
- understood which student types were consuming this activity [undergraduate (\$30,000), DEETYA funded - undergraduate (\$10,000) and fee paying post graduate students (\$10,000)].

Today service organisations, such as universities, need costing systems to perform three primary functions;

- financial reporting for management and statutory purposes ;
- understanding the costs of activities, products, services and customers ; and
- providing feedback and insights to management on what causes costs.

Activity based management appears to be the only tool that currently is able to deliver information to service sector organisations that satisfies the last two of these primary functions. It is able to achieve this through;

- determining an institution’s major processes and activities ;
- determining the activity cost and activity performance ;
- determining the output and output measure ;
- tracing the activity cost to various cost objectives such as services ,courses and students ;and
- evaluating process/activity effectiveness and efficiency.

Issues Report on Costing within Australian Higher Education Institutions

Based on the three costing approaches discussed previously it is worthwhile evaluating the potential relevance of each approach against the cost information sought by the sector (based on the outcomes of the visits and survey).

Beneficial cost information	Direct cash costs	Allocation of overheads	Activity based management
1. Student costs	Limited relevance	Moderate level of relevance and accuracy	Will provide the most accurate measure
2. Course costs	Limited relevance	Moderate level of relevance and accuracy	Will provide the most accurate measure
3. Unit of study costs	Limited relevance	Moderate level of relevance and accuracy	Will provide the most accurate measure
4. Research costs	Moderate level of relevance and accuracy	Highlights the full cost of research	Highlights the full cost of research
5. Consultancy costs	Provides little or no insight	Provides little or no insight	Reports the cost of performing this activity
6. Overhead and support activity costs	Provides little or no insight	Moderate level of relevance and accuracy	Reports the cost of performing various activities
7. Course development costs	If set up as a cost centre will capture the direct costs	If set up as a cost centre may capture all the costs	Can highlight the full cost of undertaking this activity
8. The cost of alternative delivery methods	Provides little or no insight	Provides little or no insight	Can highlight the cost of alternative delivery methods
9. Activity costs and activity unit costs	Provides little or no insight	Provides little or no insight	Reports the cost of performing various activities
10. The cost of commercial operations	If set up as a cost centre will capture the direct costs	If set up as a cost centre may capture all the costs	Can be established to report these costs
11. The full costs of faculties or schools	Shows only the direct costs	Could be structured to provide the full cost of faculties	Could be structured to provide the full cost of faculties

5.4. ABM in Higher Education

In light of the increasingly commercial outlook that universities are adopting, it may be viable to introduce an activity based management methodology that will link the costs of the products they provide, such as courses, research and consultancy, to the revenue they receive from their customers. It is through understanding this linkage and the relationship between customer type, pricing, resource allocation, capital expenditure and the like, that universities can make strategic decisions regarding the student type it should target, the courses and units of study they should provide, the most suitable delivery method and the appropriate mix and allocation of resources required to achieve their strategic goals and objectives.

Service organisations have traditionally managed their operations through budgetary control of cost centres⁶. Universities have a similar tradition of managing operations through budgetary control of cost centres, such as Faculties, Schools and Departments. Financial performance is measured by comparing actual and budgeted results. As in the majority of service industries, most of the costs of particular university cost centres come from resources that have been committed in advance. This has led to university management not having accurate knowledge of the costs of the services they provide or the cost of different student types enrolled.

This deficiency in accurate cost information was of little concern to universities operating in a relatively non-competitive environment. There was little pressure to lower costs, improve efficiency or eliminate unprofitable courses or units of study. As such, there was little demand for accurate cost information in relation to course, units of study or students. This, in turn, led to relatively simple financial systems within universities. In light of the recent cuts in government funding, the increasingly competitive environment and the numerous other challenges that are currently facing the sector, universities must have accurate and precise knowledge of all their costs. Universities are facing increasing pressure to convert to competitive entities. This requires accurate and timely cost information on all of the universities activities.

Activity Based Management is considered to be an appropriate costing methodology for the university sector as a large proportion of their costs are indirect and they require a minimal amount of direct materials. The high overheads and diversified product and service lines of many Higher Education institutions makes them appropriate environments within which to apply ABM. It is considered that ABM can provide at least three important benefits to a university, namely: more accurate cost information, closer insights into the costs of production and better information concerning the strategic consequences of business decisions.

ABM is likely to be most appropriate in complex and highly diversified organisations that have high support overheads and operate in highly competitive environments. These features characterise many universities operating in Australia and elsewhere. In such institutions, ABM can perform an important strategic planning role, particularly in providing information for product-mix and pricing decisions. ABM can furnish university executives with information which enables them to identify unprofitable courses and students and thereby, to achieve efficiency gains.

⁶ Kaplan, R.S., and Cooper, R., “*Cost and Effect - Using Integrated Cost Systems to Drive Profitability and Performance*”, 1998, Harvard Business School Press, Boston, Massachusetts.

For organisations such as universities “there is almost a complete separation between decisions to incur costs and the decisions by customers that generate revenues.”⁷

Having accurate knowledge of how much each cost centre within a university spends, by type of expenditure, reveals nothing of how much it costs to produce and deliver university products that may be derived from a myriad of cost centres. An activity based management system can gauge the amount of resources that are consumed by individual cost centres and customers, and by the activities and processes that deliver the products to customers. This process will identify the true costs of producing and delivering services to the university’s customers.

Cost information can be utilised within universities to assist with three broad classes of managerial decisions:

1. Managing customers and products;
2. Configuring the delivery of those products; and
3. Budgeting the organisation’s supply of resources.

5.4.1. Managing Customers and Products

Universities offer a diverse range of products. These include a multitude of different courses and units of study. Each product consumes a different quantity and variety of the universities resources. Universities should constantly assess the economics of these products and make decisions with regard to price, quality, product development or discontinuance. Accurate cost information is vital to such decisions.

Universities must also focus on the economics of their customers, that is students and industry. This is particularly important given the challenges that the sector currently faces. The costs of university courses are often determined by the type of students enrolled. For example, an international student may consume more resources than a domestic student. By analysing the costs associated with different student types utilising an ABM methodology, an accurate assessment of course profitability may be derived. Current costing practices may disguise the difference in profitability that may arise as a result of the student type enrolled.

Given the current Higher Education environment, many universities are investing a considerable amount of resources in marketing campaigns to attract overseas students. Given the cost of such campaigns, overseas students may appear to be unprofitable. Universities should group their students into types, that is international and domestic, postgraduate and undergraduate. An ABM system is able to calculate the cost and profitability of students by type. Thorough knowledge of the costs associated with different student types will enable universities to make informed decisions regarding student types to be targeted and those to be de-emphasised. An ABM system will allow university management to implement a profitable segmentation strategy.

⁷ Kaplan, R.S., and Cooper, R., “*Cost and Effect - Using Integrated Cost Systems to Drive Profitability and Performance*”, 1998, Harvard Business School Press, Boston, Massachusetts.

5.4.2. Configuring the Customer Service Delivery Chain

By understanding the preferences of their various customers, a university can customise delivery methods to suit student preferences. For example, remote universities may implement internet education to satisfy the needs of a segment of their student body.

In order to understand the costs associated with different delivery methods, the university may implement an ABM type methodology.

As universities rely on their student body for revenue, any decision regarding courses, unit of study or delivery methods must be linked to student preferences and the cost involved in fulfilling these preferences.

Universities will make accurate, strategic and operational decisions when they combine activity based costs with information regarding the preferences and attributes of the myriad of student types.

5.4.3. Budgeting the Organisation's Supply of Resources

An ABM model that links university spending to the supply of resources to university activities and then to the demands of university products and customers, will enable decisions regarding the allocation of resources. The absence of an ABM model will prevent university management from linking resource allocation decisions to the demands and requirements of products and customers. An ABM system will allow spending in university cost centres to be linked to the demands of the products they supply by the projected volume and mix of products and students.

5.4.4. Application

There are three key stages in the implementation of an ABM system. First, the institution must identify the key activity groups for each of its major business operations and underlying processes. The major operations of a university are: teaching and research. Each process comprises a set of activities which provides the focus of an ABM system. For instance, the activities involved in teaching include: class preparation, student tuition, face to face delivery and marking/assessment. Second, the institution will need to cost those activities according to the resources which they consume. Third, the institution will attribute the overheads for each activity group to cost objects (such as course and students) using the key cost drivers. For example, the key driver in undertaking "marking/assessment" may well be the number of students being "market/assessed".

The degree of cost attribution at the product or service level is dependent upon the sophistication of accounting information required from the ABM system. For example, attributing costs to broad product lines (such as a accounting course) is easier and less expensive than costing individual products (for example accounting 1). The more detailed a university's classification of outputs will thus determine the nature and extent of the costing function under ABM. Hence, an overly detailed costing process will inhibit the efficiency and cost effectiveness of the model.

Nevertheless, by improving understanding of its cost information, a university is better placed to select appropriate levels of output and set prices to maximise profitability. This information can make a significant contribution to strategic decision making, particularly with regard to future options for growth and diversification. Unfortunately, the measurement of Higher Education sector output and assessment of productivity is fraught with difficulty. But while a course may be a proxy for a unit of output, the fundamental feature of the production function of a university is to provide services to students over the duration of that course. By tracing the resources consumed in servicing student types to lines of business, product groups or individual products, the cost of those activities may be linked to output. In this way, managers are likely to be better able to assess corporate productivity using ABM generated information.

5.5. Technology

Generally Higher Education institutions have in place financial systems that provide accurate and timely cost information for each division or department. The current financial software that is utilised by the Higher Education sector includes; Oracle, Finance 1 and Peoplesoft. This financial information is captured and reported via the usage of a detailed chart of accounts.

In view of the complexity of the chart of accounts, the diverse financial software tools that are utilised and the need for a flexible costing tool we would suggest that universities not elect to “imbed” any complex cost attribution within their general ledger. Hence, we would suggest that for universities seeking to attribute costs to processes/activities and then down to courses and student types that this be done in some specialised software tool outside the general ledger.

The types of attributes that the costing software would need to possess includes:

- import and export functionality, particularly with downloading financial data from the general ledger ;
- ability to capture and report on actual and budgeted costs ;
- ability to capture and report on fixed and variable costs ;
- ability to capture and report multi-dimensional views of cost data ; and
- audit trail of all cost attribution's.

The options available to the sector to capture and report detailed cost information will require either (a) the development of a specialised piece of costing software for the Higher Education sector or (b) the selection of an off the shelf costing package.

5.6. Guiding Principles

Ernst & Young posed the question of “What guiding principles should the project team follow when developing a costing methodology for use within the Higher Education Sector?” The response revealed that universities would like the methodology to be of a simple, flexible and adaptable and to be of a consistent manner. Furthermore, the methodology should not be resource intensive. It should provide demonstrated benefits to all parties. The methodology should be able capture the full costs of the university.

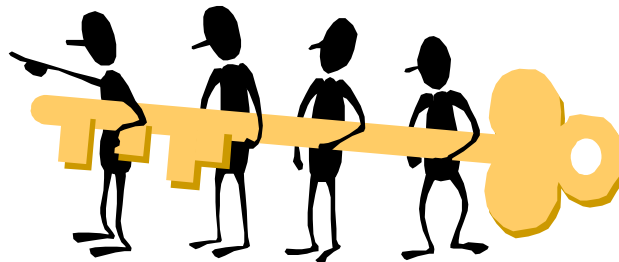
As previously mentioned, many universities stated that they would like to implement benchmarking within their respective universities and across the sector. The costing

methodology should facilitate this through providing the sector a common costing platform from which to operate.

In order to achieve the full benefits of implementing a cost management process, universities must ensure that certain enablers are in place. Hence, a set of best practices (Guiding Principles) have been developed from research into the establishment of measures, setting of targets, and reporting and evaluation of performance.

5.6.1. Gain Strong Management Sponsorship

Strong sponsorship reflects commitment from the very top of the organisation to the cost management process and, as such, is requisite to its institution. While implementation of the cost management process is rewarding, it involves a great deal of effort, learning, and change within an organisation, particularly with regard to the organisation's focus, communications, roles, and responsibilities. Active and visible sponsorship from senior management drives the organisational commitment essential to facing these challenges.



5.6.2. Create a Continuous Cost Management Process that is *Flexible*

The cost management process, including the development of Cost Management measures, communications, and rewards, must possess the inherent flexibility to adapt to ongoing changes in an organisation's strategy and business environment. Within the meaning of flexibility, the process of cost management must also allow for active coordination with other corporate processes, such as planning. Co-ordination will ensure that all actions taken to execute strategy reflect the priorities of the university and are measured effectively.

5.6.3. Actively and Continuously *Communicate* Enterprise Objectives

Active communication throughout a university is critical to an effective cost management process. Communication is an ongoing circular activity that begins with senior management, which broadcasts to the university the university's strategy and supporting information such as the institution's objectives, critical success factors, competitive environment, and job economics. Continuous communication of this information creates a constancy of purpose within the university; each employee knows not only the overall university goals but also understands how his/her efforts contribute to those goals. Whilst schools and faculties within a university may pursue different objectives, their goals should be consistent with the overall goals of the university. Without effective communication the attainment of a university's goals may not be achieved.

5.6.4. *Monitor* Results at Specific, Regular Intervals

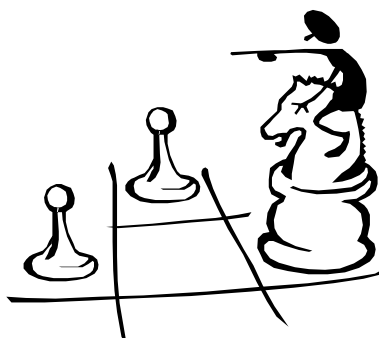
At least quarterly, management should formally assess the organisation's progress on:

- 1) action plans and the Improvement Portfolio;
- 2) the achievement of targets; and
- 3) the reaching of milestones.

The periodic assessment is a forum not only for reviewing cost performance at a point in time but also for identifying emerging issues and problems early. The assessment also provides valuable information with which to make necessary changes to plans, targets, and, potentially to university strategy.

5.6.5. Deploy *Technology* to Support the Cost Management Process

Easy access to information enables the cost management process to operate in an effective manner. Whether it is to catalog information, provide cost information for measures, or report progress, a technological system will enable the success, flexibility, and communication of the cost management process.



5.6.6. Align the corporate Culture with the Cost Management *Process*

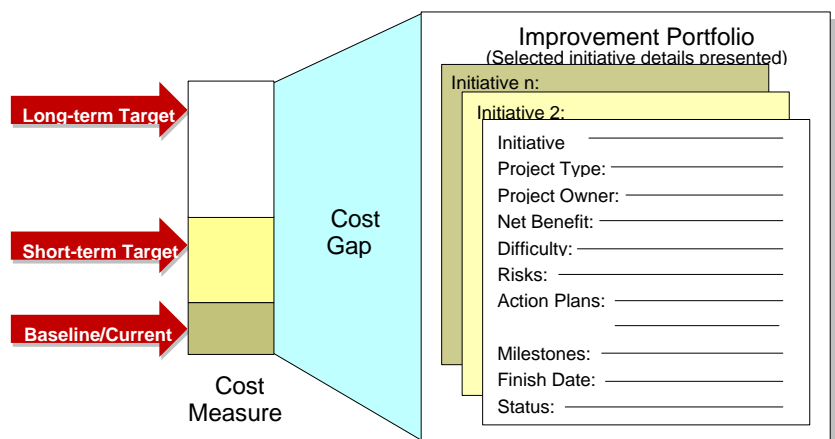
In any organisation, to fight the culture (the beliefs, behaviors and values of a university) and implement a process or system that is not aligned with that culture inevitably means failure. A university therefore, must carefully craft a culture that supports the objectives of the cost management process. Active communication and strong management sponsorship, which were discussed previously, assist management with creating such a culture.

5.6.7. Develop and Maintain an *Improvement Portfolio*

The Improvement Portfolio outlines the core initiatives an organisation will undertake to achieve its targets. Included in the Portfolio for each initiative are a project description and definitions of such items as:

- 1) project owner(s);
- 2) human and capital resources required;
- 3) detailed action plans;
- 4) project benefits and costs, both tangible and intangible;
- 5) dependencies with other projects; and
- 6) a time frame for implementation.

The Portfolio should be maintained regularly to reflect new initiatives and modifications to existing ones.



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5.7. Commonwealth Competitive Neutrality

“Competitive Neutrality (CN) requires that government business activities do not have net competitive advantages over their private sector competitors simply as a result of their public ownership.”⁸ CN intends to ensure that resources utilised for public expenditure are deployed efficiently. It will also assist the public sector present cost information in a manner that is comparable to the private sector.

CN is applicable in the Higher Education Sector. Given the recent cuts in Commonwealth funding and the myriad of challenges that the sector currently faces, commonwealth funds must be utilised in the most efficient manner possible. Furthermore, by increasing the financial accountability of universities, universities will need present their cost information in a manner corresponding to that of the private sector.

The fundamental principle encapsulating CN is that government business activities should not enjoy net competitive advantages over private sector competitors as a result of their public ownership. Implementing CN within the Higher Education sector requires identify their costs and add CN components where necessary.

The implementation of CN within the HE sector has been co-ordinated by the HE task force and an approach emphasising transferring and the adoption of simple and appropriate pricing principals has been endorsed by MCEETYA and COAG. A working party is currently developing pricing principals to assist universities.

Further information can be obtained from Dr Tom Karmel, Higher Education Division, DEETYA (02) 6240 9653.

⁸ Commonwealth Competitive Neutrality - Guidelines for managers, 1996-97, Australian Government Printing Service.

6. Challenges

6.1. Cultural resistance

Perhaps the most prominent and persistent challenge of implementing an improved costing methodology, is dealing with and overcoming cultural resistance.

Even though some people in the sector that we spoke to are already working with costing, particularly ABC/ABM, in some way or are advocating changes in this direction, there will be significant cultural resistance from some universities or some parts of universities.

All universities have been and are still undergoing and dealing with change. Those universities that are successful at dealing with change are more likely to recognise and address the critical importance of employee resistance to change. Kanter⁹ identifies in social and psychological terms the specific sources of such resistance:

Loss of control : Too much is done *to* people, and too little is done *by* them.

Too much uncertainty : Information about the next steps and likely future actions is not available.

Surprise, surprise! : Decisions are sprung full-blown on people without preparation.

The costs of confusion: There are too many changes occurring simultaneously.

Loss of face : The declaration of a need for change makes people feel they appear ineffectual.

Concerns about competence : People wonder about their ability to be effective.

More work : Change requires more energy, more time and more meetings.

Ripple effects : Change in one area of an organisation may disrupt other, unrelated plans.

Past resentments : A legacy of distrust based on unkept promises or unaddressed issues.

Real threats : The change brings genuine pain or loss.

In order to successfully implement an improved costing methodology across the sector appropriate Change Management strategies need to be developed to consider and address the types of issues outlined above.

⁹ Rosabeth Moss Kanter, *When Giants Learn To Dance*, (NY:Simon and Schuster), 1989.

6.2. Misunderstanding of the Cost Management Information Needs

Many Academics, Managers and staff already have a clear understanding of the need for appropriate cost information. This has been obvious from their feedback and input into this paper. However, we believe that there are significant elements across all areas of the sector where the need for appropriate cost information is not yet understood. If people within the sector fail to understand the need for better cost information they are going to struggle to use current or improved cost information.

These managers have not been exposed to the appropriate use of useful cost information in an accountable management position or decision making environment like many of their peers. So when they are asked questions as to what sort of costing information they use or require, and what benefit would it be, they may be at a disadvantage because they do not understand the informative nature of good costings or how to use it to help them become better managers. This disadvantage would be accentuated in those universities whose Financial Services support departments were overloaded in processing transactions and not available to provide effective decision support skills to their internal customers.

We believe that, regardless of which costing methodology is adopted, that a clear education and communication program needs to be created to assist in the development and implementation process. This education program would need to address all key issues in being able to use good quality cost information (such as being more accountable for financial decision making in a reduced funding environment), not just talk about the technical aspects of the costing methodology being used.

6.3. Gathering Data

An organisation implementing a new costing methodology needs to clearly understand that extra effort and resources will be required to gather the data and prepare appropriately for that task. This may be a one off or a continuous exercise and may involve the development of feeder systems and associated procedures to collect data. An organisation implementing a costing methodology needs to clearly understand this and prepare.

Care must be exercised when determining the scope of the system and the level of detail that is going to be required to ensure that unnecessary data is not collected. Remember that one of the real strengths of a costing system is that the organisation is able to access more useful information (for example on activities) that can assist in the decision making process. The aim of the costing methodology is not to create a huge monster database which can not be used effectively.

The challenge is to make sure that the advantages obtained from a costing methodology are not weakened by the development of an environment where enormous amounts of data and information is captured with little benefit gained.

This challenge must be addressed when the costing system is being designed. Decisions made as to the number of activities or cost objects have implications as to how much data has to be captured. Similarly some data collected in a costing system may not need to be at such a detailed level as information collected for, say, the annual report.

Achieving the right balance of information required in a costing system is a fundamental objective during the design stage. Gathering inappropriate amounts of data and information is one of the major reasons why some organisations become bogged down in the development of their costing methodology.

6.4. Lack of Resources

There are several factors that determine the resources that are required to develop and maintain a costing model. These include:

1. The level of detail required. That is the number of resource cost pools, activities and cost objects. For example, some of the universities would have a database of at least 5000 subjects, 30,000 students and 5000 staff. This could add up to a significant model to develop, gather data for and to maintain.
2. The complexity of the organisation. For example, the nature and extent of teaching and research, the size of a university, the infrastructure requirements, the degree of diversity and services provided, the processes that exist within and the systems and technology that is employed.
3. The current data tracking and manipulation capabilities of the institution. This includes the degree of automation and reporting flexibility currently within the organisation.
4. The practical experience of staff assigned to developing and maintaining a costing system. Staff business and financial experience is a key element but so is the involvement of all sections of the university. The development of a costing system is not just an accounting or finance function. It is critical that all parts of the university are actively involved and supporting the implementation. Many implementations in other sectors are led by non Accounting managers.

It is therefore important that key consideration be given to the amount of time and resources that may be required to develop and implement any new costing system.

6.5. Perception of External Interference

Some of the comments and opinions from our visits, questionnaires and surveys that are reproduced below indicate that some universities or areas of individual universities have a fear of losing their independence, of being asked to do extra unnecessary work, or of being diverted from their core activities in teaching and research. Some typical questions were:

“What is DEETYA going to do with this information?”

“We have already undertaken a lot of changes and achieved progress, and we are not being asked for more information, so why should we worry about providing more?”
- Management Accountant

“Our university is unique and we will always need to be recognised as having special needs?”

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“We want to benchmark but don’t want other organisations reviewing the basic data or comparing individual university performance without taking into account unique differences and strategies. How can we maintain confidentiality?”

“What are the benefits to our individual university of adopting an improved costing methodology?”

These types of questions and comments show that there is a real or perceived fear that an improved costing methodology will bring about too much external interference to individual universities with little or no benefit gained. It is therefore prudent to ensure that an effective communication program is maintained and further developed to allow for discussion amongst university peers and external parties.

6.6. Management Commitment

A vital element of any costing program is a high degree of senior management commitment and sponsorship. The Harvard Business Review states that in their opinion, delegating the implementation of a costing system to accountants is a mistake. Rather, they suggest that senior executives from all areas of the organisation become actively involved from the start and continue to maintain that commitment. For example, at Chrysler corporation, their operating committee of senior executives took the responsibility for tracking and guiding their costing program on a regular basis¹⁰.

Senior management commitment is essential due to the fact that a new costing methodology is a major organisational change program. Without strong management sponsorship and leadership, the program may flounder. Management must convince employees that the new costing system can succeed and that it is worth the effort.

6.7. A Sense of Urgency

The urgency for a change in the approach to the use of an improved costing methodology within individual universities and between universities has not been fully recognised within many areas of the sector. We feel that unless individual universities and the sector in general quickly recognises the importance of appropriate cost information for decision making purposes and acts accordingly then scarce resources will be directed into inappropriate areas and effectively wasted.

6.8. Organisation Transition

Many costing systems are simple in concept, but can be complicated and costly to implement successfully. Many reported failures involved with implementing new costing systems are attributable to shortcomings at the planning and design stages of the project.

Another important factor influencing the success of a costing project is the impact on behaviour within the organisation. As costing systems can change the way in which performance and activities are measured, its implementation can have major implications for

¹⁰ Ness, J.A., Cucuzza, T.G., “Tapping the Full Potential of ABC”, Harvard Business Review, July-August, 1995.

the way people carry out their work functions. This often means that the introduction of a costing system can be controversial and difficult. However, experience with managing organisational change suggests that such problems could be overcome by establishing effective channels for communication, staff training and education.

6.9. Some Guidelines in Overcoming Challenges

Some guidance on how to overcome some of the practical difficulties associated with the development of new costing systems.

Firstly, the organisation should set itself clear objectives. For instance, is the costing system to be used primarily as an internal cost control device, or as a basis for making external product market decisions?

Secondly, it is critical that senior executives are committed to the new costing methodology from the outset. Without this commitment, the implementation and operation of the system will not be successful.

Thirdly, sound planning and project control procedures should be put in place (including prototyping and testing).

Fourthly, adequate financial and staff resources should be assigned to the project. This will include the appointment of a competent project manager to guide and direct the development team and ensure that the project is introduced on time and within budget.

Fifthly, as a costing system has cross-functional implications, it is important that the need for the system and its objectives be communicated effectively throughout the organisation and to all staff. If necessary, consultants could also be employed as mentors to support and advise the project team during the development and implementation of the costing system. Given the complexity of the Higher Education business, consultants could play an important clarification role by helping organisations to map their activities and identify key cost drivers to assist in cost allocation.

In summary, the successful implementation of a new costing methodology is not an easy task. A new costing methodology is not a panacea for all corporate woes and it cannot by itself guarantee profitability. Most published evidence indicates that the greatest obstacles to the successful introduction of new costing systems is organisational inertia and cultural fixation.

7. Appendices

7.1. Glossary

Activity based costing (ABC) attributes full costs to cost units on the basis of benefits received from indirect as well as direct activities.

Activity based management (ABM) refers to a formal management system that: supports excellence by compelling employees to understand their activities and how they contribute to achieving strategic objectives; changes traditional management practices to emulate best practices and establish process controls to ensure consistently good performance; and supports continuous improvement by providing new insights into the customers of activities/business processes and permitting the adoption of best practices that encourages employees to add greater value to the organisation.

Actual cost means the cost incurred.

Allocate means to charge a specific cost to a cost objective.

Assign similar to attribution.

Attribution is the process of relating costs to cost objectives using cost allocation or cost apportionment.

Budget expenses are estimates of future plans.

Competitive Neutrality refers to the requirement that government business activities do not have net competitive advantages over their private sector competitors simply as a result of their public ownership.

Cost (as a noun) means the amount of expenditure (actual or notional) incurred on, or attributable to, a specified item or activity.

Cost (as a verb) means to ascertain the cost of a specified item or activity.

Cost drivers are those factors responsible for variation in the cost of an activity.

Cost pool is a group of costs that behave in a broadly similar fashion.

Cost unit is a unit of product or service, the costs of which are ascertained.

Costing refers to cost analysis or cost information performed for a specific purpose.

Course refers to the combined program of study from which a qualification can be accredited, for example, a Bachelor of Economics.

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Direct costs are expenses that are readily identifiable with a particular activity or unit, and can be directly and easily attributed to the activity with a high degree of accuracy.

Expense is something spent to accomplish a purpose.

Fixed costs are expenses which do not change over a particular time period and are generally independent of the level of output.

Forecast expense is the identification of factors and quantification of their effect on an activity as a basis for planning.

Full costing is the mapping of all costs (direct and indirect, or fixed and variable) to organisational activities.

Indirect costs are expenses which benefit common or joint objectives but cannot easily be identified with a particular activity or unit.

Marginal cost is the cost of one unit of product or service which would be avoided if that unit were not produced or provided.

Marginal costing is an accounting method in which variable costs are charged to cost units, and fixed costs of the period are written off against the aggregate contribution.

Overheads are the same as Indirect costs.

Pricing means establishing the amount to be paid in return for goods or services.

Relevant costs are expenses that are chargeable or attributable to activities, according to benefits received or some other equitable relationship, and are appropriate to a specific decision.

Student Type refers to types of students that can enrol in a particular course, for example, undergraduate, postgraduate and international students.

Time in Motion study refers to a study of a particular activity whilst that particular activity is being undertaken.

Unit of study refers to a subject, for example, Economics 101, that is combined with other subjects in order to achieve course accreditation.

Variable costs are expenses tied to output or usage and generally independent of the time period.

7.2. Abbreviations

ABC	Activity Based Costing
CN	Competitive Neutrality
DEETYA	Department of Employment, Education, Training and Youth Affairs
HEI	Higher Education Institution
SHEFCE	Scottish Higher Education Funding Council
TER	Tax Equivalent Regime

7.3. University Interview Template

DEETYA Costing Methodology

University Visit

Institution: _____

Name: _____

Title: _____

Interviewers: Steve Robertson or Richard Bernasconi

Question 1: How important is costing information to you? Why?

Question 2: What costing information, that is currently captured, do you use?

For example: activity costs, activity unit costs, student costs, course costs, unit of study costs, life cycle costing, business unit costs, service costs, transfer costs (cost of activities undertaken by some business units in support of others), teaching costs, research costs, support activity costs.

Question 3: What costing information do you require?
What are the benefits?
Do you have access to it?

Question 4: What are the unique characteristics, of your university, that we should consider when developing this costing methodology?

For example, multiple campuses, a large number of external students or heavy research components.

Question 5: What will enable the development of a new costing methodology?

For example: software, different or additional data, a committed Vice Chancellor or sponsor?.

Question 6: What are the barriers to the development of this costing methodology?

For example: the university's culture, lack of resources, commitment to the change.

Question 7: In your opinion, what is the most appropriate costing methodology? For example: your current costing methodology, accrual based costing, full costing or activity based costing.

Question 8: What are the guiding principles that the project team should follow? For example, providing demonstrated benefits to all parties, a consistent manner, simplicity, flexibility and adaptability, not being resource intensive, accrual costing or full costing.

Additional comments:

7.4. Original Tender

Overview

The policy changes announced in the 1996-97 budget and subsequently are leading to a more competitive environment and increased opportunity for Australia's universities to diversify funding sources. In this environment, it is becoming increasingly important that universities have in place robust arrangements for fully and accurately measuring the costs associated with their various activities. The intention of this study is to develop in close consultation with interested universities a sound methodology for that purpose. Universities may choose to adopt, modify or reject the methodology developed according to their assessment of usefulness to them. There is no intention that any methodology will be imposed on any university, whether they participate in the study or not. The minister agreed to the study

Informal discussions suggest that quite a few institutions consider such a methodology could be significant benefit for their management purposes and would be interested in participating in such a study.

The study will be managed through a steering committee whose first task will be to finalise the selection of the consultant. The committee will be chaired by the First Assistant secretary, Higher Education Division and will comprise persons selected with technical expertise from the Higher Education sector, The Australian society of Certified Practising accountants have been invited to participate on the committee. The Australian vice chancellor's committee has been informed of the minister's agreement and has been invited to nominate persons from the Higher Education sector who have administrative and academic backgrounds especially in accounting or economics, teaching and research. Each Higher Education institution has been advised of the study, asked to comment and invited to participate in the study.

Secretarial support to the steering committee will be provided by the Department. It will manage the selection of and contractual relationship with the successful tenderer and the relationship between the consultant, the steering committee and the institutions

It is proposed that the study will have two stages. The first will be the preparation by the consultant of a discussion paper on the issues to be addressed and how they may be approached. This paper will be presented to a workshop attended by the participating universities. The outcomes of the workshop and a proposal from the consultant for a second stage will be reviewed by the steering committee and a decision made on whether and, if so how, to proceed to the second stage.

The second stage will include the testing of a methodology in participating universities. Access to any data collected during this stage will be restricted to the contributing institution, the department and the consultant. The data collection will be part of this study only. It is not intended that the department will collect such data on a regular basis.

The steering committee will consider the recommendations for improvement to the methodology and the sector wide current cost data collected from the participating institutions.

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Further, the steering committee will determine strategies for the dissemination of the findings of the project throughout the Higher Education sector.

Planning envisages a first steering committee meeting in mid to late February 1998 to select the consultant and the workshop to be held in March or early April. The aim is to have a final report by November 1998.

Requirement

It is felt that the study should accrual based using conventional cost/management accounting methodology, however the any alternative views put by the consultant on the most appropriate approach will be considered. The department wishes to obtain professional services to:

1. Prepare an issues paper on the main issues to be addressed by the project and how they might be approached. Consultation with participating institutions will be necessary during the preparation of the paper. The paper will be considered by the steering committee and may be released to the sector
2. Organise and run a workshop to be attended by representatives from each participating institutions and the steering committee
3. Prepare a paper based on the deliberations and recommendations of the workshop. The paper is to set out the proposed methodology and project plan stage two. This will be considered by the steering committee
4. Subject to the steering committee's decision at 3 above, apply the proposed methodology in the institutions that agree to participate in stage 2. Study of time at task on particular activities by individuals or groups within the participating Higher Education institutions may be required to form the basis for some cost attribution
5. Prepare a report and, if appropriate, make recommendations based on the application of the methodology in the participating institutions. It is envisaged that the recommendations may fall into two categories - those that are general to the Higher Education sector and those that are specific to an institution. Information on the activities of a university is to be available to the university, the consultant and the department only.

As it is planned for the study to have two stages this request for tender, at this time, is seeking offers to undertake stage one only. This stage is outlined at 1 - 3 above

Evaluation Methodology

Overview of the tender evaluation

The objective of the evaluation is to identify the solution which meets the requirement of the committee and represents the best value for money. This section describes the evaluation methods to be applied to the tenderers responses.

Evaluation process

On receipt of the tenderers responses, an evaluation will be carried out in a secure area. All documentation received as part of the Tenderers responses will be treated as commercial-in-confidence and will be retained in secure facilities.

All tenderers will be kept informed of the status and outcome of the evaluation process.

The department's decision on the parameters and methodology for evaluation will be final

Tenderers may be invited to give short presentations to the evaluation team or the steering committee to clarify and expand on tendered details.

Functional Assessment

The functional assessment will determine which tenders satisfy all requirements set out in this request for tender (RFT). Those tenders which do not meet all requirements may be excluded from further consideration.

The assessment of the tenderers ability to provide timely' highly professional services will be a very important factor in the evaluation process. The proposed solution, skills and availability of specified personnel prior experience with similar studies will also be very important factors.

Financial evaluation

The financial evaluation will assess the comparative costs of all tenders that satisfy the requirements of the committee.

Where is it evident that additional benefits may accrue (ie. Where a tender exceeds requirements) the value of those benefits may be considered in assessing the total cost.

General Business Evaluation

The Departments may obtain independent financial and business reports on tenderers to determine a tenderers financial viability.

All the above information will be taken into account in the evaluation process.

Successful Tender Selection

To determine the best value for money solution, the evaluation leading to selection of the successful consultant will include consideration of, among other things

- Assessment of the Tenderers responses to attachment 1
- Contractual and tender compliance

It is **important** for tenderers to be aware that some or all of the papers lodged with the department in response to this tender will be made available to members of the steering committee. The steering committee will be involved in the final selection of the successful

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tenderer. The committee may wish tenderers to make a presentation of their proposed solution before the final selection is made.

In this regard, the committee's members will be informed that in participating in the final selection of the successful tenderer, they are acting as agents of the department and are required to respect the commercial-in-confidence nature of the information provided to them for this purpose

7.5. Universities visited and people interviewed

University Visit Interview List.

Murdoch University

Professor Steven Schwartz, Vice Chancellor
Associate Professor Lawrie Davidson, Pro Vice Chancellor (International)
Professor Jeff Gawthorne, Deputy Vice Chancellor
Ms Jane Powell, Manager of Planning
Mr Colin Murphy, Business Manager
Professor John Yovich, Executive Dean of Division of Veterinary and Biomedical Sciences
Professor Alan Davison, Executive Dean of Division of Business, Information Technology and Law
Mr Glen Van Lendt, Management Accountant

Curtin University of Technology

Prof Lance Twomey, Vice Chancellor
Mr Trevor Bosley, Divisional Administrator Engineering and Science
Mr Peter Sheppard, Laboratory Manager, School of Applied Chemistry
Jeff Crocket, Head of School, Economics and Finance
Hans Keil, Administrator, Curtin Business School
Ms Vicki Williamson, University Librarian
Ms Raylene Boyle, Finance Officer
Ms Kathryn Hird, A/Prof Speech and Hearing Sciences
Mr Karl Havlik, Divisional Administrator Health Sciences
Ms Wendy Brophy, Director of Housing
Mr John Crowe, Director of Commercial Services
Mr Peter Walton, Executive Director, University Administration
Graham Cavanagh, Project Manager, Financial Review
John Griffiths, Director, Financial Services

University of Western Australia

Professor Alan Robson, Deputy Vice Chancellor
Professor Michael Barber, Pro-Vice-Chancellor (Research)
Mr David Hepworth, University Accountant
Mr Tony Gibbs, Administrative Manager, Psychology
Mr Frits Steenhauer, Manager, Accounting and Investment Services
Mr Ian Baker, Accountant - Budget Planning (A&IS)
Ms Susan Vorster, Accountant - Management Reporting (A&IS)
Professor Barry Brady, Executive Dean, Engineering & Maths Sciences
Mr Paul Higgs, Faculty Exec Officer, Engineering & Maths Sciences
Mr Peter Curtis, Deputy Registrar, Academic Services
Mr Rob McCormack, University Statistician, Statistics Office
Professor Louis Landau, Executive Dean, Faculty Medicine and Dentistry

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Mrs Susan Pike, Executive Officer, Faculty Medicine and Dentistry
Professor Bob Linder, Executive Dean, Faculty of Agriculture
Mrs Christine Richardson, Executive Officer, Faculty of Agriculture
Professor Haji Izan, Head of Department, Accounting and Finance
Professor Philip Brown, Professor, Accounting and Finance

James Cook University

Rhonda Jones, Deputy Vice Chancellor
Tricia Brand, Director Resources
Geoff Gorton, Budget & Modelling Resources
Jackey Kelly, Management Accountant resources
Kevin Chard, Vice President Administration
Julie Woodward, Director - Academic Services
Greg Stokie, Statistics and accountability - resources
Al Diamond, Faculty Executive Officer - science and engineering
Professor Robin McTaggart, Executive Dean - Faculty Law and Education
Peter Hobson, Faculty Executive Officer
Jenny Lappin, Executive Officer, Pro Vice Chancellor academic
Support Graham Aspinall, Faculty executive officer - Faculty Social Sciences
Sue Lebish, Health Life and molecular Sciences

Griffith University

Colin McAndrew, Pro-Vice-Chancellor (Administration)
Professor M. Gardner, Pro-Vice-Chancellor, Business Equity
Professor D. Lim, Dean, Faculty of International Business and Politics
John Urquhart, Director, Office of Technical Services
Ms Alison Harris, Group Resource Manager - Business Group
Ms Brigid Campbell, Management Accountant

University of Southern Queensland

Peter Swannell, Vice Chancellor
Malcolm McKay, Deputy Vice Chancellor, Research and Advancement
Maurice French, Dean of Arts
Colin Lambert, Bursar
Cheryl Jaques, Management Accountant
Sue Thomson, Senior Operating Accountant
Sue Dowling Management Accountant
Kurt Timmis, Academic Registrar
Jim Taylor, Distance Education
Henry Eastment, Associate Dean (Sciences)
Keith Crouk, Assistant Dean (Business)
Earl Stower, Assistant Dean in operations

Monash University

Mr John Mathews, Assistant General Manager - Finance
Mr Alex Forsyth, Finance/Administration Manager, Montech Pty Ltd
Mr Ken Hobbs, Faculty Manager, Faculty of Computing and Information Technology
Mr Kieran Smith, Finance and Resources Director, Faculty of Business and Economics
Mr John Levine, Assistant General Manager, (Budget and Statistical Services)
Mr Reynold Dias, Manager Budget and Client Liason
Mr Terry Masocco, Scholarship and Revenue Officer, Budget and Statistical Services
Mr Chris McCarty Assistant Financial Accountant, Accounting Services
Mr Robert Carey, Manager Accounting Services
Ms Sue Wales, Manager, Client Services & Systems, Personnel Services
Mr John Trembath, Assistant General Manager (Facilities and Services)
Mr Bob Burnet, Assistant General Manager, (Student Services)
Ms Kay Spierings, Director Planning Co-ordination and Corporate Services
Professor Richard White, Dean, Faculty of Education
Mr Ian McFarlane, Resource Manager, Department Biochemistry & Molecular Biology
Professor John Harris, Director, Distance Education Centre

Royal Melbourne Institute of Technology

Ms Ruth Dunkin, Deputy Vice Chancellor
Ms Lin Martin, A/g Deputy Vice-Chancellor (Resources)
Professor John Jackson, Dean, Faculty of Business
Mr Peter Cork, Manager, Commercial and Legal Services
Mr Vincent Harkins, Consultant, Commercial and Legal Division
Mr Tom Yardley, Executive Consultant, Resources

Macquarie University

Professor Diane Yerbury, Vice Chancellor
Professor Carrick Martin, Deputy Vice Chancellor (Administration)
Professor John Loxton, Deputy Vice Chancellor (Academic)
Professor Jack Bassett, Pro-Vice-Chancellor (Administration)
Ms Denise Osmond, Chief Finance Officer
Mr Michael Webster, Director of Financial Services
Mr Robert Kelly, Director of Buildings and Grounds
Mr Peter Freeman, Executive Officer, Research Office
Mr Jim Piper, Head of School, Maths, Physics, Electronics and Computing
Mr John Kyte, General Manager of the School of Maths, Physics, Electronics and Computing
Mr Richard Walker, Director of Macquarie Research Limited
Mr Geoff Riddell, Executive Officer of Macquarie Graduate School of Management
Mr Brian Spencer, Registrar / Vice Principal
Mr Tony Adams, Director of International Services

The University of Newcastle

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Professor Roger Holmes, Vice-Chancellor
Professor B. English, Deputy Vice-Chancellor
Mrs Christina Murdoch - Director, Financial Services
Mr Colin Irvine - Manager, Financial Planning
Ms Cathy Jenkins - Manager, Management Accounting
Prof. Les Eastcott - Pro Vice-Chancellor (Central Coast Campus)
Prof. Jenny Graham - Pro Vice-Chancellor (External Relations)
Prof. Ron MacDonald - Deputy Vice-Chancellor (Research)
Ms Cathy Jenkins - Manager, Management Accounting
Prof Margaret McMillan - Dean, Faculty of Nursing
Prof. David Finlay - Dean, Faculty of Science & Mathematics
A/Prof. Wayne McKenna - Dean, Faculty of Art & Design
Dr Bernie Curran - Director, Community and Alumni Relations
Dr Ralph Robinson - Director, Enabling Programs Unit
Mr Colin Irvine - Manager, Financial Planning
Prof. Annette Dobson - Dean, Faculty of Economics & Commerce
Mr Hugh Morgan - Accountant, TUNRA
Prof. Peter Dunkley - Head, Discipline of Medical Biochemistry
Dr All Shah - Discipline of Radiation Science
Mr Ted Croake - Business Manager, Central Coast Campus
Mr Mark Piper - IT Infrastructure Program Manager, IESD
Dr Jenny Leonard - Information Systems Program Manager, IESD

University of South Australia

Professor Denise Bradley, Vice Chancellor
Ms Jan Connolly, Executive Director: Resources
Dr Bob Sumner, Manager- Planning
Mr Bob Taylor, Director: Enterprise Development
Mr Peter Urban, Director: International Development
Professor Kym Adey, Dean, Faculty Of Education
Associate Professor Michael Rowan, Dean, Faculty of Humanities and Social Sciences
Associate Professor Bruce King Director: Flexible Learning Centre
Mr Peter Balan, Head, School of Marketing, Faculty of Business and Management
Mr Chris Jolly, Manager: Finance
Mr Daniel Flaherty, Deputy Manager: Finance

7.6. List of preliminary workshop people

The Preliminary Issues Workshop was held on Friday, 29 May 1998 at the Ernst & Young Building, 321 Kent Street Sydney.

Five participants from four Universities, together with five Ernst & Young staff were in attendance

University Participants

The University of Wollongong

David McPherson, Manager, Statistics Unit

The University of Technology, Sydney

John Cameron, Director of Financial Services

Sydney University

Charles Davidson, Director, Planning Support Office
Helen Roth, Planning Support Office

Flinders University, South Australia

Peter Bailie, Director of Administration and Registrar

7.7. Survey

Costing Survey

Name _____
Title _____
Institution _____

Background Information

This survey was developed as part of an overall study on Cost Management in the Higher Education Sector. The objective of the study is to develop, in close consultation with interested universities, a sound costing methodology that is able to fully and accurately measure the costs associated with the various activities undertaken within a university.

This survey is designed to assess the current state and future balanced cost management information within the participating universities and is designed to focus on cost management information as opposed to traditional financial cost accounting.

Financial accounting involves recording financial information and preparing balance sheets and income statements all in accordance with accepted accounting principles.

Although the financial accounting information is important for external users and for financial stewardship and control, it's value to the institution management is limited. Management need to know what their products and services cost and understand the underlying causes of costs, in order to perform the following functions.

- Develop strategic plans for the institution.
- Translate those plans into budgets.
- Make day-to-day control decisions about operations.
- Evaluate how well operations were performed and continually strive to improve performance.

Please indicate below if this survey has been completed individually or in conjunction with other university staff. If it has been completed in consultation with other staff, please identify the staff whose consultation was sought by name and title.

Yes it was completed individually No it was completed with other staff

If **no** then please state details of staff members below

Name _____	Name _____
Title _____	Title _____
Name _____	Name _____
Title _____	Title _____

Y
E

Instructions

Please indicate your choice or answer by ticking the appropriate box eg.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you have any queries when completing the questionnaire please contact **Nathan Forshaw** on (02) 92484882 or E-mail **Nathan.Forshaw@au.eyi.com**

This survey needs to be completed and returned to Mr Nathan Forshaw Level 16, Ernst & Young Building, 321 Kent Street, Sydney, NSW, 2000 prior to Monday, 15 June 1998

E
R
N
S
T

Current State

1...The existing financial management systems within your university provide enough data for cost management purposes.

Strongly Disagree

Strongly Agree

2...Costing information is currently produced with respect to :

Strongly Disagree

Strongly Agree

University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Departments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Units of Study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student types	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research grants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
University activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International fee paying post graduates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International fee paying undergraduates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local fee paying students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3...Cost information is extremely valuable to your university

Strongly Disagree

Strongly Agree

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4...The university currently produces financial information on a monthly basis.

<input type="radio"/>	Yes
<input type="radio"/>	No

5...The present generic financial management methodology employed by the university has been in place for the past five (5) years or more.

<input type="radio"/>	Yes
<input type="radio"/>	No

6...The university has developed or implemented some specialised cost management software during the past five (5) years.

<input type="radio"/>	Yes
<input type="radio"/>	No

7...The university has a performance management framework that incorporates activity based management and balanced scorecard techniques.

<input type="radio"/>	Yes
<input type="radio"/>	No

8...The university has a comprehensive documented set of costing policies and/or procedures.

<input type="radio"/>	Yes
<input type="radio"/>	No

9...Measurable activities are used to demonstrate the achievement of the university's strategic goals

Strongly Disagree

Strongly Agree

Comments :

Ernst & Young

Future State

10...In light of the current Higher Education environment, universities require more accurate and detailed cost information.

Strongly Disagree

Strongly Agree

11...To meet the challenges of the future, universities require accurate cost information on:

Strongly Disagree

Strongly Agree

Courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Units of Study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student types	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International & fee paying students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fixed/Variable costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New products/ services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct/ Indirect costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delivery channels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product/ Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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12...Enhanced costing information will facilitate improved decision making within the university:

Strongly Disagree

Strongly Agree

13...Enhanced costing information is required to support the attainment of the university's strategic goals.

Strongly Disagree

Strongly Agree

14...Budgetary decisions require accurate and comprehensive cost information from all university undertakings.

Strongly Disagree

Strongly Agree

15...Improved information technology will help deliver user friendly, accurate cost management information.

Strongly Disagree

Strongly Agree

16...New cost management tools and techniques are required to identify financial anomalies within budgets and strategies.

Strongly Disagree

Strongly Agree

17...Deeper analysis of university processes, activities and cost drivers is required.

Strongly Disagree

Strongly Agree

18...A change in cultural attitude is required within universities to enable accurate cost information to be produced.

Strongly Disagree

Strongly Agree

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19... In order to understand how much effort university staff spend on various activities how appropriate are the following data collection techniques for your university.

	Strongly Disagree			Strongly Agree		
Timesheets (Weekly or Monthly)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ad-Hoc technical estimates captured via workshops/ interviews	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surveys (Monthly or Quarterly)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time in motion type studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20... With respect to the implementation of any new cost management within the university would your desired approach be

	Strongly Disagree			Strongly Agree		
A phased implementation over a 1 -2 year period	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Big Bang approach “do it all now”	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Start with a pilot study then look at what next	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others (Please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21...A new costing methodology would be accepted by academic staff/ departments in your university.

	Strongly Disagree			Strongly Agree		
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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22... Improved cost information is important for :

	Strongly Disagree			Strongly Agree	
Assistance with determining prices for services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assistance with activity costing of resources consumed for each activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost effectiveness and efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Budgeting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring of control fees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Incentives to departments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please provide comments about this survey and/or further specific issues that you would like to see addressed in the workshops on 9/10 July

Executive Summary

7.8. References/Bibliography

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Part 2

Costing Methodology

For use within Australian Higher Education Institutions