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Service Costing in General Government Sector Agencies

OFFICE OF FINANCIAL MANAGEMENT

Policy & Guidelines Paper

Contents:

Preface

Information on the costs of delivering specific Government services is expected to play a more important role in the management of the State finances.

In an environment of upward pressure on expenses and constraints on revenues, agency managers must focus on achieving value for money in the delivery of Government services. These pressures are similar to those faced by private sector managers who are looking more often to the finance function to provide more comprehensive information to support decision-making and overall cost management.

In November 2006 the Government released the State Plan: A New Direction for NSW, which included new decision making structures to drive delivery of the Government's priorities. A key commitment is the development of a Performance Management and Budgeting System for implementation in the 2008-09 Budget.

The new system will strengthen linkages between the planning, funding, monitoring and reporting elements of the performance management cycle. This means aligning budgets and business plans with State Plan priorities and targets; quantifying service costs and performance indicators to enable the Government to monitor performance; and providing a common framework for reporting agency performance.

The system will build on the Results and Services Plan (RSP), which all Budget dependent (and selected non-Budget) General Government agencies are required to prepare as part of the Budget process.

The RSP is the primary mechanism for shifting discussions in the Budget process away from incremental funding issues towards examining the full range of services provided by agencies, and their current and expected future costs. To support such discussions, agency budgets will need to be based on service costings developed using detailed data and a robust methodology.

The aim of this Policy & Guidelines Paper is to assist General Government agencies develop a better understanding of their activities and services, and the assumptions underlying current and expected future service costs. It sets out guidelines for better practice, and it is expected that agencies and NSW Treasury will use the RSP process as a means to improve approaches to costing, as well as the quality of costing information, over time.

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Executive Summary

Why is service costing important in the Budget process?

In November 2006 the Government committed to developing a new Performance Management and Budgeting System to assist in delivering the State Plan: A New Direction for NSW. The new system will build on the existing Results and Services Plan (RSP) methodology.

All Budget dependent and selected non-budget dependent General Government agencies are now required to prepare a RSP. The RSP is a brief, high-level service delivery and funding plan that shows what an agency plans to achieve with its current resources. It also includes information on the costs incurred by the agency in providing its services.

The RSP is designed to facilitate a more strategic discussion between an agency and Treasury about the agency's future funding needs. To support such discussions the agency and Treasury need a good understanding of expected future service costs and the assumptions on which these expectations are based (e.g. expected changes in input costs, expected future demand for services and expected changes in service delivery efficiency).

What is service costing?

Service costing involves the provision of information to managers about the cost of the services produced by their agency. This service costing information will vary depending on the management decision to be made. Service costing information includes:

- The **full cost** of a service, which includes both **direct costs** (employee and other costs that can be traced directly to the service) and **indirect costs** (such as corporate services and building costs that must be allocated to the service). Use of this information includes supporting the allocation of resources during the planning process, monitoring ongoing service delivery performance and benchmarking service delivery costs with other service providers.

- The **marginal cost** of providing more services or the **avoidable cost** of not providing a service. Use of this information includes setting prices for user charges.[1]

- The costs of the **activities** and **processes** performed to deliver a service. Use of this information includes identifying and realising opportunities for delivering services more efficiently.

Service costing systems, which provide service costing information, complement the responsibility centre based costing systems that most agencies currently employ. These responsibility centre based systems focus on the costs of functional areas such as individual operating units or branches of the agency. They are important for cost control (ensuring that costs remain within budget) but do not support many types of decision-making (such as the most appropriate service delivery strategy) or effective cost management.

[1] *Guidelines for Pricing for User Charges (TPP01-2, June 2001)*

Cost management involves detailed analysis of service delivery costs. It includes mapping the processes involved in service delivery, determining the costs of those processes and understanding what causes those costs to be incurred. This information is used to eliminate wasteful activities in the service delivery process.

Why is service costing important to agencies?

Agency managers are under pressure to achieve value for money, which includes the efficient delivery of Government services. There is always upward pressure on expenses: e.g., in the short term from Public Sector Wage Agreements and in the longer term through changing demographics. There are also constraints on revenues e.g., the tax burden needs to be constrained to maintain a competitive economy.

These pressures are similar to those faced by private sector managers, driven by globalisation and technology. In response to these pressures, senior and line managers look to the finance function to provide more comprehensive information to support better decision-making and cost management[2].

Service costing information assists agency managers to answer questions such as:

- What are the most appropriate service delivery strategies?
- How do we reduce costs without adversely affecting service delivery?
- How do we increase the quantity or improve the quality of services within current funding levels?
- What price should we charge for user pays services?

[2] This response is described in the publication by KPMG Consulting and The Institute of Chartered Accountants in Australia, *The New CFO* of *the Future: Finance Functions in the Twenty-First Century (2001)*.

1 Service Costing in the General Government Sector

1.1 The Financial Management Framework

The Financial Management Framework for the General Government Sector[3] (the Framework) seeks to improve Government service delivery through:

- A Budget process that achieves better allocation of resources and value for money (resource allocation); and
- better management of the Government's asset and resource base (resource management).

The Framework advocates a shift in focus from the funding provided to agencies to:

- Activities of agencies, and the impact these have on the community; and
- the way agencies manage service delivery.

Accurate and relevant information on the costs of services is essential to support this shift in focus. The Government will need to have accurate information on the costs of services to determine the best mix of services.

1.2 Results and Services Plans

NSW Treasury Circular 06/22 *Results and Services Plans* requires all Budget dependent and selected non-Budget dependent General Government agencies to prepare a RSP. The RSP is a high-level service delivery and funding plan prepared by an agency to support decision making by the Standing Cabinet Committee on the Budget (Budget Committee). Consistent with the Financial Management Framework, RSPs are designed to achieve:

- better resource allocation by providing financial and non-financial information in a consistent format;
- better resource management by agreement on a funding plan over the budget and forward estimate period; and
- improved reporting within the government and to external parties by focusing on the quality of performance information.

The RSP is a vehicle for articulating agencies' expectations of service delivery performance, rather than just Budget compliance. The foundation of the RSP as a planning tool is an agency's description of the 'cause and effect' links between services and results. A **service** is the 'end product' provided by the agency for external consumption (e.g. to users or recipients, the community, or another government agency). **Results** are the impacts on the community that the Government seeks to achieve through its services. These should be consistent with the Government's priorities as set out in the State Plan.

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[3] In December 2000, Treasury released the Financial Management Framework (TPP 00-4). The Framework consolidated previous financial management reforms and introduced new initiatives to improve value for money in government service delivery.

Defining results assists agencies to make decisions on the strategies they should follow and the services they need to deliver.

Agencies must include in their RSP the planned cost of each service group. A service group is a number of services grouped together in a meaningful way for the purpose of keeping information in the RSP at manageable levels.

Agencies will be required to report to NSW Treasury on the actual costs of service groups compared with Budget (the frequency of such reporting will be agreed on an individual agency basis).

Agencies will not be required to assign costs to results, as the achievement of results is normally dependent on the services delivered by more than one agency as well as a range of factors beyond the control of Government. The most useful level at which cost information can support resource allocation across the General Government Sector is the **service group level**, as this enables the Government to gauge the cost of pursuing its desired results via the delivery of services.

Providing information at the level of individual services is too unwieldy for the high level RSP. NSW Treasury, however, expects that information on services costs will be used by agencies for internal management purposes and will be available to Treasury if required.

1.3 Internal Management

A service costing system is an important aid in complying with an agency's accountability obligations and supporting the effective management of the agency. For example, accurate costing information and analysis is essential to assist managers of General Government Sector agencies to:

- make resource allocation decisions as part of the strategic and business planning processes;
- achieve productivity savings required by the government without adversely affecting the level or quality of service delivery;
- enable compliance with the *Guidelines for Pricing for User Charges (TPP01-2, June 2001)*; and
- ensure that user charges are set in accordance with the commitments made by the Government under National Competition Policy.

What is an "appropriate" system will vary between agencies and will be influenced by factors such as the size and complexity of an agency's operations.

2 The Role of Costing in the Management of an Organisation

All managers, whether in private or public sector organisations, need information about costs to manage.

They need costing information to:

- adequately plan the delivery of services;
- monitor and control service delivery against a plan; and
- make decisions concerning the nature of service delivery.

2.1 Planning

Planning is concerned with setting objectives for the organisation and determining the means by which those objectives will be achieved. A budget is an entity's detailed financial plan.

Budgets are usually developed on a responsibility centre basis, i.e. budgets are allocated to departments, business units, directorates etc. Service costing information, which may cut across cost centres, is important for a good planning process.

The Executive Government, when developing the State Budget (i.e. planning where to apply its available funds), will ask questions such as:

- are the beneficial impacts on the community of a government service greater than the cost? If not, why do we continue to provide the service?
- Is funding an agency to provide a particular service the most effective method of achieving the Government's objectives?

Agency managers, when formulating their service delivery plans, will ask similar questions:

- what is the most appropriate strategy to deliver our services (e.g. should the services be produced in-house or contracted to an outside service provider; if produced in-house, what is the most appropriate delivery process?)
- How can we meet the expected demands on our services in the future?

The Government and agency managers need good information and analysis on the costs of the agency's services in order to be able to answer these types of questions.

2.2 Control

Control systems are required to ensure that the agency is proceeding in accordance with its plans (including its budget) and that its objectives are being achieved.

Control is exercised through the maintenance of performance measurement systems that compare actual performance against planned performance. Performance can be defined both in terms of financial and non-financial performance indicators. Cost control is normally exercised by agencies on a responsibility centre basis, i.e. managers of functional areas such as business units, directorates, branches, etc are held accountable for meeting the budget of that functional area.

Better practice organisations, in both the private and public sectors, have developed costing systems that not only **control** costs but also provide information to reduce costs. Costs are analysed to identify the causes of costs and unnecessary activities are identified and eliminated; this is **cost management** rather than merely cost control.
Cost management is addressed in more detail in Chapter 8, *Cost Management*.

2.3 Decision Making

There is an increasing expectation among managers in both the private and public sectors that the role of financial personnel should extend beyond simply accounting for expenditure to a more value added role that supports agency decision making[4]. In particular, financial information should be increasingly used to inform decisions about service delivery.

Much of this value-added work is in the area of cost management. This Paper addresses issues such as activity based management and associated cost management approaches. Agency managers also need to be supported in making decisions such as:

- what price, if any should we charge for our goods and services?
- Should we purchase a new asset or refurbish an old one?
- Should we continue to perform a certain function in-house or should we contract it out?

Decision-making is addressed in more detail in Chapter Nine, *Costing for Decision Making.*

[4] For example, as articulated in *The New CFO of the Future: Finance Functions in the Twenty-First Century* by KPMG Consulting and The Institute of Chartered Accountants in Australia (2001).

3 Costing Systems in Service Delivery Organisations

3.1 Costing Systems in General Government Sector Agencies

Most General Government Sector agencies assign costs to **responsibility centres**. These are functional areas of the agency such as a branch, a division or a business unit. Many General Government Sector agencies do not employ a **service costing system.**

A service costing system assigns costs to an organisation's services. Such a system is more commonly referred to as a **product costing system** in the management accounting literature. In this paper "service costing" is used as the term better represents the deliverables of General Government Sector agencies.

The reasons for the current lack of service costing systems in the General Government Sector may include:

- agencies have traditionally been held accountable for the inputs consumed, measured on a cash basis. Accounting systems have been geared to meet these accountability obligations;
- comparative cost-benefit analysis of programs has not been a general feature of government operations; and
- services are provided "free" or on a heavily subsidised basis and therefore there is no need to determine service costs for price setting purposes.

In a typical General Government Sector agency planning process, individual responsibility centre managers put up budget bids for their areas. These bids are the building blocks of the agency's budget development process. The final agency budget is disaggregated into individual responsibility centres.

Information on the costs of responsibility centres (branches, divisions and business units) is important for **planning** and **control** purposes. One major cost control mechanism is to make responsibility centre managers accountable for the resources under their control.

Information on service costs is essential for other aspects of planning and control. For example, information about the costs of responsibility centres of the agency, or the total costs of the agency, cannot be used to answer questions such as:

- Are the benefits from the services provided greater than their cost to produce?
- Are these services produced efficiently?
- Which services should be provided, given the scarce resources that are available to fund them?
- What price should be charged for the service (where relevant)?

In order to address these questions, agencies need to know the costs of the services that are being delivered. While accurate service cost information will not in itself answer these questions, it provides the starting point for further analysis.

Information on the costs of responsibility centres alone is also not particularly useful for service **cost management** or to support **decision making**.

3.2 Costing Systems in other Service Businesses

Product costing systems are well developed in manufacturing companies but are less common in service sector companies. General Government Sector agencies are not unlike many service organisations in the private sector. Reasons for this situation include:

- manufacturing companies need to cost accurately their products to value inventories on hand at the end of the year. This valuation directly impacts on the cost of goods sold and therefore profit. Product costing is, in effect, mandated by Australian Accounting Standards.
- Some service organisations are required to provide a full range of services (e.g. professional accounting or legal firms, medical practitioners) and cannot determine their product mix. In addition they may have little influence on prices (which may be determined by market forces or government regulation). Therefore, it is not cost beneficial to collect information on product costs.
- In some organisations, every product is unique and therefore a product costing system is complex to administer.
- In some service organisations, there are high levels of overheads which are difficult to allocate to individual services in a meaningful manner.

Nevertheless, the increasingly competitive environment faced by service organisations in the private sector is driving the development of service costing systems in these organisations.

4 Costing – Basic Concepts

This section explains the basic concepts of cost accounting. The following sections demonstrate how the basic concepts can be applied in practice in a General Government Sector agency.

4.1 What are Costs?

Costs are the resources that are used to achieve a particular objective.

The costs incurred by a general government agency include:

- employee related expenses
- other operating expenses
- maintenance
- depreciation.

Costs can be classified and measured in different ways to meet the particular information needs of managers. These classifications include:

- direct and indirect costs;
- controllable and uncontrollable costs; and
- fixed and variable costs

An analysis of costs allows us to calculate:

- fully distributed costs
- avoidable costs; and
- marginal costs.

Each of these is addressed in more detail below.

4.2 Cost Objects

A **cost object** is the item that needs to be costed. Organisations set up costing systems to provide this information. These systems accumulate the costs attributable to the cost object in question.

Different costing systems have traditionally measured the costs of the following cost objects:

- Responsibility centres (e.g. Departments, branches, business units);
- products or services (e.g. In the case of general government agencies services may include regulation and compliance, community education etc); and
- specific projects (e.g. the cost of fulfilling a specific contract).

More modern costing systems extend this range to include cost objects such as:

- activities (an activity is a "thing that gets done," as part of the process of producing a good or service, such as "paying creditors"); and
- suppliers and customers (in the case of general government sector agencies the cost of servicing particular groups of clients).

4.3 Cost Drivers

A **cost driver** is the factor that causes costs to be incurred. For example, the level of activity or volume of services rendered will cause the total cost of the cost object to change.

For example, the cost driver of a client service department could be the number of client requests for information (i.e. the factor is a request by the client).

Cost drivers can occur at different levels. For example, service costs might increase over a period of years as a result of increasing demand. The proximate cost driver would simply be the increasing level of service being provided. There would also be a number of underlying drivers, such as changing economic conditions, or changing welfare eligibility conditions.

4.4 Direct and indirect costs

A **direct cost** is a cost that can be directly **traced** to a cost object in an economically feasible (i.e. cost beneficial) manner.

For example, the salary (cost) of an employee who works entirely on the production of one service is a direct cost of producing that service (cost object). The cost of employees working on more than one service can be traced to these services using a time recording system.

An **indirect cost** is a cost that cannot be directly traced to a cost object in an economically feasible manner. It is allocated to the product using a **cost allocation base**. This cost allocation basis should reflect the way in which the underlying resources are consumed. If the cost allocation basis selected is inappropriate, this can result in cost distortions and ultimately, impaired decision-making by users of this cost information.

For example, corporate support functions such as human resources, IT and finance, are essential to produce services. It may not, however, be possible or economically feasible to trace such costs to individual services.

The costs of the corporate support of an agency may be allocated to the operational divisions based on the head count in each of these divisions.

One of the major issues in costing is how to allocate overheads to cost objects, such as services. The process is explained and demonstrated below in Chapter Five, *Service Costing - A Guide* and in Appendix A: *Hypothetical Case Study – Service Costing.*

It is important to note that the same cost can be both a direct cost and an indirect cost depending on the cost object. For example, the salary of the financial controller of an agency would be:

- a direct cost of the finance department (a responsibility centre); and
- an indirect cost of each of the agency's services.

4.5 Controllable and uncontrollable costs

A controllable cost is a cost that a manager can directly influence. For example, the employee related costs of a branch would normally be controllable by the branch manager.

An **uncontrollable cost** is a cost that a manager cannot directly influence. For example, the cost of the corporate services allocated to a service is not generally controllable by the service manager.

The adoption of more sophisticated costing systems and analysis (e.g. activity based costing and management) should result in a greater proportion of costs becoming controllable.

For example, an activity based analysis may reveal that one branch is creating a lot more work (and therefore cost to the agency) for the human resources department than another branch with a similar head count.

Achieving benefits from this type of analysis requires, in most cases, changes to behaviour. Changing behaviour is a difficult process and needs consideration of specific strategies to manage such changes effectively.

4.6 Fixed and variable costs

A **variable cost** is a cost that changes in response to the level of activity or as its cost driver changes. For example, an increase in the demand for "meals on wheels" services (the cost driver) will result in an increase in the supply of food and hence supply costs.

A **fixed cost** is a cost that does not change in response to the level of activity or changes in the cost driver. For example, the increase in demand for "meals on wheels" services may not increase the costs of running the head office.

The scale of the change in the cost driver is important in assessing fixed and variable costs. For example, the agency's kitchens may accommodate a small increase in demand but a new kitchen would need to be built to accommodate a larger increase. The cost of the kitchen infrastructure is fixed for a small change but variable for a larger change.

Time is an important factor in determining whether costs are fixed or variable. A long timeframe makes it more likely that a cost will be variable. For example, accommodation costs may be fixed in the short term (e.g. the agency is locked into a property lease agreement) but will be variable over a longer period. The lease agreement will eventually expire and the agency can occupy accommodation with a different capacity.

The analysis of the relationship between cost drivers and costs (i.e. **cost behaviour**) can be complex. The analysis of cost behaviour is very important when measuring the impact of change, e.g. in the development of forward estimates which reflect expected changes in demand for future services.

4.7 Full cost attribution and avoidable costs

Full cost attribution is the identification of all costs incurred by an agency on the cost object; this includes all direct costs and indirect costs. These costs are also referred to as **fully distributed costs**.

For example, the cost to the agency of providing a service includes both the direct costs (employee and other costs that can be traced directly to the service) and indirect costs (such as corporate services and building costs that must be allocated to the service).

Fully distributed costs are used when we need to know the "true" or full costs incurred by an agency. This includes reporting of service costs to NSW Treasury and undertaking benchmarking studies (benchmarking is addressed in Chapter Eight, *Cost Management*).

Avoidable costs are those costs that would be avoided if a good or service is not produced. Avoidable costs are typically used to make decisions about future courses of action, e.g. to decide whether to contract out a particular activity.

For example, an agency has received an offer from an outside service provider to deliver a service at a price of $90 per unit. The agency has calculated that it currently costs $100 per unit (measured on a full cost attribution basis) to produce the service in-house. It appears that it is $10 per unit cheaper to contract with the external provider to deliver the service. The agency, however, may not be able to capture these savings, particularly in the short term.

The issue is whether it can actually avoid paying $100 per unit. Suppose that $15 of the $100 is unavoidable in the short term; e.g., the $15 relates to the service's share of the agency's building costs. If no other use can be found for the vacated building space the agency would continue to incur the $15. The avoidable cost is only $85 per unit in the short run and therefore the agency would lose money by contracting out the service. The use of avoidable costs is explained in more detail in Chapter Nine, *Costing for Decision Making*, below.

4.8 Marginal Costs

Marginal cost is the cost of producing another unit of a product or service. It is used to measure the impact of change. This includes calculation of the cost impact of increases in the demand for an agency's services. Marginal costing is demonstrated in Chapter Six, *Service Costing – Measuring Change.*

Marginal cost and avoidable cost are related concepts as they are both about the calculation of the effect of change. However, marginal cost is the cost impact of changing output by one unit while avoidable cost is the cost impact of not providing a service. Marginal cost is unlikely to be constant for each unit of service provided. Therefore, marginal cost is unlikely to be equal to the avoidable cost divided by units of output.

4.9 Costs versus Benefits

The principal rule for collecting information on costs is that it is only worth doing if the benefits from the information's use exceed the costs of collecting it. The costs include:

- staff time collecting and preparing the costing information;
- acquisition and maintenance of computer equipment and software; and
- operational managers' time spent interpreting and using the data.

The benefits of service costing include better information for planning, control and decision making in the agency as was discussed in Chapter Two, *The Role of Costing in the Management of an Organisation*.

5 Service Costing – A Guide

5.1 Relationship between Service Costing and Budget Aggregates

A Budget funded General Government Sector agency presents its operating statement in the Budget Papers in the format set out in Table 5.1, below.

Table 5.1: Budget Paper 3 Operating Statement

	$'000
Expenses Excluding Losses -	
Operating Expenses -	
Employee related	147,000
Other operating expenses	55,000
Depreciation and amortisation	17,000
Total Expenses Excluding Losses	**219,000**
Retained revenues	17,000
Net Cost of Services	**202,000**

These amounts are prepared on an accrual basis and are consistent with the financial statements prepared under an Australian Equivalents to International Financial Reporting Standards (AEIFRS) and the monthly financial information submitted to NSW Treasury (although the latter reporting is in much more detail).

The aim of the service costing is to determine the full cost to the agency of producing a service.

The total cost of all agency services equals the total costs incurred by the agency, as measured on an accruals basis. This is *Total Expenses* as reported in the Budget Papers and financial statements prepared in accordance with Australian Accounting Standards.

In the service costing approach *Total Expenses* is analysed by service cost, rather than the traditional line item reporting, as demonstrated in Table 5.2 below.

Table 5.2: Total Expenses Analysed by Services

	$'000
Service A	151,550
Service B	33,350
Service C	28,400
Service D	5,700
Total Expenses	**219,000**

In the operating statement in Table 5.1, *Retained Revenues* are deducted from *Total Expenses* to determine the Net Cost of Services, which is the major accrual based aggregate currently monitored by Treasury.

Retained Revenues should not be deducted from service costs. It is important to know the total cost of providing a service. Retained Revenues are taken into account when determining how the services should be funded, e.g. by user charges or by an appropriation from the Consolidated Fund, so for this it is also important that retained revenues can be attributed to individual services.

5.2 Service Costing – A Step by Step Approach

Set out below is a simple step by step approach to the estimation of the service costs of an agency. The section should be read in conjunction with *Appendix A, Hypothetical Case Study – Service Costing.*

The service costing approach described below is very simple. It involves using information on costs at the whole of agency level and of functional areas to calculate the costs of services and/or service groups.

The broad range of costing systems that are possible is addressed in section 10.4, *Service Costing Systems in General Government Sector Agencies*.

The approach set out below can be used to:

- calculate the estimated costs of each service or service group for inclusion in a Results and Services Plan or the Budget Papers;
- track and report on actual service or service group costs periodically.

Once service costs have been accurately determined, this information can be used as an input to a range of policy decisions.

Step One: Specify all services produced by the agency

A **service** is the 'end product' that an agency produces for consumption outside the agency (by the community or another Government agency).

Services have an external focus and therefore agencies are required to identify the goods or services delivered to their clients, rather than focusing on the functions that they perform (such as finance or IT).

Guidance on specifying services is provided in the NSW Treasury Working Paper, *What You Do and Why – An Agency Guide to Defining Results and Services* and in Information Sheets issued annually for the Budget process.

Step Two: Trace all direct costs to the services

A **direct cost** is a cost that can be directly traced to a cost object in an economically feasible manner.

There are several ways in which direct costs can be traced to services. These include:

- Direct monitoring

  The actual use of resources in the delivery of the service is measured on an ongoing basis. For example, salary and wages costs can be traced to individual services through the use of timesheets. Similarly, motor vehicle costs can be traced using a logbook. This approach provides the most accurate service costing information but can also be expensive to set up and maintain.

- Sampling

  The use of resources can be sampled over a period of time. For example, employees could maintain timesheets for a sample period. The proportion of time spent on each service by each employee can then be used to estimate service costs.

  This approach is obviously cheaper than direct monitoring but will only work when the use of resources in the sample period reflects the use of resources during the application period.

- Estimation by management

  Costs are allocated to services based on the judgement of management. This is the cheapest method but also clearly the most subjective.

Step Three: Allocate indirect costs to the services

An **indirect cost** is a cost that is essential to the delivery of a service but cannot be directly traced to the service in an economically feasible manner.

Indirect costs (commonly also referred to as overheads) include:

- corporate services such as IT, human resources and finance;
- building costs; and
- executive management.

Indirect costs of a service can be **allocated** to the service using a **cost allocation basis**. Common cost allocation bases include:

- number of full time equivalent staff involved in the delivery of a service - to allocate indirect costs such as corporate services; and
- floor space taken to deliver a service – to allocate indirect costs relating to occupancy (maintenance, depreciation, lease costs).

A more sophisticated method of allocating overheads to service costs is Activity Based Costing (ABC).
This method is addressed below in Chapter Seven, *Activity Based Costing.*

The choice of cost allocation bases will in many cases provide incentives to managers. The cost allocation base used will determine the means by which managers are able to reduce costs assigned to their services. Those designing the costing system will need to be aware of these incentives and ensure that the cost allocation bases encourage the efficient and effective delivery of services.

Step Four: Add the Direct and Indirect Costs for Each Service

The total service costs comprise the direct costs traced to the service and the indirect costs allocated to it.

5.3 Monitoring of Service Costs

Results and Services Plans must include information on the cost of service groups and, where appropriate, agencies should be in a position to provide costings of key services. Increasingly NSW Treasury will seek information on how actual service or service group costs are tracking against budget to assess how the agency is performing against its plans. The frequency of reporting of such costs will be determined on an individual agency basis.

Treasury Budget Control will continue to be exercised at the whole of agency level (net cost of services and Consolidated Fund). It is recognised that some flexibility is needed to transfer resources between service groups to allow agencies to achieve their desired results in the most efficient and effective manner.

NSW Treasury is more concerned about understanding the cause of cost variations. This provides the basis for a meaningful discussion with agencies on their performance. NSW Treasury does not want to create an environment in which, for compliance purposes, agencies feel obliged to report minimal variances at the service group level; this is unlikely to be achievable in practice.

Skill will be needed to analyse service and service group costs. For example, agencies with basic service costing systems may only report on a quarterly basis, and so will apportion actual quarterly costs across its service groups in the manner demonstrated in Appendix A of this Policy Paper.

Where an agency's service production is cyclical in nature (e.g. January is a quiet month), the cost per unit of service may change from quarter to quarter even though there is no change in the underlying efficiency of the agency. This is because the agency incurs similar overhead costs each quarter. In quarters with lower than average service delivery the unit cost will be higher because the same overhead costs are apportioned over a smaller number of services.

Agencies with more sophisticated service costing systems can smooth service costs to more accurately reflect the true underlying costs, and therefore efficiency, of production.
Costing systems are addressed in Chapter Ten, *Costing Systems*.

5.4 Standard costing

Standard costing is a costing approach that traces costs to services using standards (i.e. budgeted amounts) for input prices and quantities, rather than actual amounts. **Standard cost variances** are calculated to account for the differences between the standard costs and actual costs.

Standard costing is fairly complex and mostly used in a manufacturing environment. It is beyond the scope of this paper to address standard costing in any detail. More information can be found in any of the management accounting textbooks referred to in the bibliography.

Standard costing is relevant for General Government agencies because some of the principles of standard variance analysis can be used to analyse budgetary performance, where information is available about the cost and quantity of an agency's services. The total variance between the budgeted service costs of the agency and the actual service costs can be separated into:

- a price variance – the extent to which the variance was caused by differences between budgeted and actual input prices (e.g. Wage rates);
- a volume variance – the extent to which the variance was caused by differences between the budgeted and actual quantity of services produced; and
- an efficiency variance – the extent to which the agency was more or less efficient than planned.

Appendix B, *Hypothetical Case Study – Budget Variance Analysis* includes an example on how information on the cost and employee numbers involved in the production of services (measured in terms of the quantity produced) can be used to analyse Budget variances.

Standard costing can also be used to smooth out potential cyclical variances as described in 5.3, *Monitoring of Service Costs*, above.

6 Service Costing – Measuring Change

The previous section on service costing set out the principles for calculating the full cost of an agency's services. Calculation of full cost requires a determination of the **direct costs** and the **indirect costs** of the service; the former are **traced** to the service and the latter are **allocated.**

Sometimes it will be necessary to determine the effect of changed circumstances on the costs of services. For example, an agency may have to amend the volume of services it plans to provide because of Budget constraints. In addition, agencies will need to assess the impact of changes in the future volume of services to develop meaningful information for their Forward Estimates.

When assessing the impact of changes in the agency's **cost drivers** (e.g. demand for services) it is necessary to understand **cost behaviour**, in particular knowledge of **variable costs** and **fixed costs**.

A **variable cost** is a cost that changes in response to the level of activity or as its cost driver changes.

A **fixed cost** is a cost that does not change in response to the level of activity or changes in the cost driver.

The analysis of costs by fixed and variable is demonstrated in the following simple example.

An agency produces 3,000 units of a service at a cost of $500 per unit, i.e. a total cost of $1,500,000. The cost structure is set out in Table 6.1, below. The employee related expenses and the other operating expenses are considered to be variable costs. The corporate overheads are fixed in the **short run**.

In the **short run** certain costs such as buildings and plant and machinery will be fixed. These items cannot be readily bought and sold. They are subject to long term planning and funding decisions.

In the **long run** the capacity of the agency can be changed and therefore all costs are potentially variable.

Table 6.1: Service Cost Structure

	Total $	**Unit Cost $**
Employee related expenses - Variable	900,000	300
Other operating expenses - Variable	150,000	50
Sub-total Variable Costs	*1,050,000*	*350*
Corporate overheads (depreciation, corporate services, etc) - Fixed	450,000	150
Total Cost	**1,500,000**	**500**

The agency is required to provide an additional 500 units of the service and has to determine the cost.

The answer depends on whether the extra 500 units can be produced within the agency's current infrastructure. If the extra services can be accommodated, then the extra cost is simply the variable cost per unit. This is $350 multiplied by 500 units, which equals $175,000.

The unit cost of the service will decrease from $500 per unit to $478.57 (total cost of $1,675,000 divided by 3,500 units).

If the extra 500 units cannot be accommodated within the agency's current infrastructure then the cost of the extra units will be higher.

For example, in order to meet the additional demand the agency has to purchase new equipment that has price of $500,000 and a useful life of five years. The new equipment therefore adds $100,000 p.a. to the cost structure of the agency.

The total extra cost of the 500 units will be $275,000 which comprises $175,000 (500 units at $350 per unit) in variable costs and $100,000 in "fixed costs."

The unit cost of the service will increase from $500 per unit to $507.14.

The above example assumes that the extra demand for services is permanent and that the new equipment will be utilised over its five-year useful life.

If the extra demand is temporary, or if there is significant under utilised capacity in the new asset, it may be much more cost effective to meet the demand by means other than purchase of new equipment. This could include renting extra capacity or contracting out the production of the extra units.

This type of issue is addressed in Chapter Nine, *Costing for Decision Making*.

7 Activity Based Costing

7.1 Introduction

The step by step approach to service costing, set out in section 5.2, describes how:

- direct costs are traced to services; and
- indirect costs are allocated to services.

Appendix A contains a worked example of the approach. The example describes a situation for a General Government Sector agency where the direct costs are primarily salary and wages, which are accurately traced to individual services using a time recording system. Provided that the time recording system is reliable, no improvement can be made in the accuracy of the direct costs attributed to individual services.

The indirect costs are allocated to services using allocation bases such as head count or floor space. There is a broad assumption that these allocation bases reflect the resources that each service is actually consuming.

In the case of indirect costs there may be scope for increasing the accuracy of the indirect costs attributed to individual services. For example, in section 5.2, a head count was used as the base to allocate corporate overhead costs to individual services. This approach is commonly adopted in practice.

The head count approach may not accurately reflect the actual corporate overhead costs that are incurred in the production of individual services. For example, the production of one service may cause much more complex industrial relations issues than another service. This complexity generates a significant amount of work for the corporate services division.

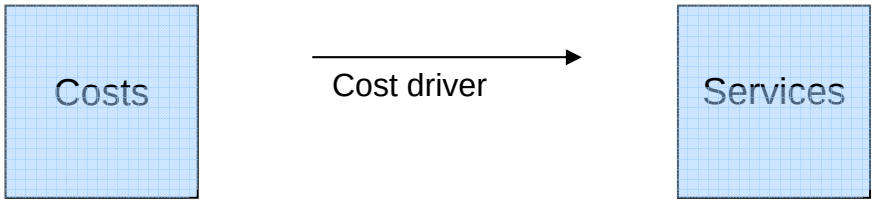
Activity Based Costing is an approach that can improve the accuracy of **indirect costs** allocated to a service. This is addressed in the following sections.

In addition to costing services, Activity Based Costing information can be used to manage costs. This is addressed in Chapter Eight, *Cost Management*.

7.2 Activity Based Costing – The Basic Approach

The "traditional" approach to allocating overhead costs in product or service costing is a one step process. Costs are allocated to products or services using a cost driver in a single step. A cost driver is an event that causes costs to be incurred.

Figure 7.1: "Conventional" Cost Allocation



This is the approach adopted in Appendix A, Hypothetical Case Study – Service Costing. In that example the cost drivers used are head count (e.g. to allocate corporate services) and floor space (e.g. to allocate building costs).

Activity Based Costing originally developed in manufacturing companies where the traditional cost driver used is "direct labour." The direct labour cost driver is used to allocate manufacturing overheads to products. These overheads include the costs of the manufacturing equipment and buildings.

Problems with this approach have emerged in recent years. These include:

- technological developments in many industries mean that capital (an overhead) now forms an increasing proportion of the total cost of a product.
  Broad estimates of a major proportion of the total cost of a product are no longer acceptable; and
- the more competitive business environment that has emerged, as a result of factors such as globalisation, means there is a need for more precision in product costing. However, operational managers often found that the cost information they received did not make sense. In particular, high volume products were often allocated higher costs than they expected, whereas low volume (and often more complex) products were costed at a lower level than was expected.

Activity Based Costing (ABC) was a response to these problems. Its purpose is to estimate more accurately the overhead costs that are consumed in the production of individual products or services.

ABC involves a two step process:

- Step One: Determine the costs of activities
- Step Two: Assign the costs of activities to services.

Figure 7.2: Activity Based Cost Allocation

Step One: Assign Input Costs to Activities

The costs are assigned to a separate **cost pool** for each **activity** using a **resource driver**. **Activities** are simply the things that are done to produce a product or service.

For example, if the service involves issuing a permit then the activities that are undertaken to issue (or 'produce') a permit may include:

- "Issue assessment criteria to process teams"
- "Allocate completed application forms to process teams"
- "Review applications using assessment criteria"
- "Register details of successful applicants on permit database"
- "Send permits to successful applicants"

(This is obviously a gross simplification, for explanation purposes, of the activities that are involved in the production of a good or service).

A **resource driver** is a cost driver used to estimate the cost of resources consumed by an activity.

Therefore, rather than allocate input costs directly to the product or service (as in the traditional approach), the costs are first allocated to the activities that are undertaken to produce that product or service.

At the end of step one, the organisation will have a list of activities and the cost of conducting each of these activities.

Step Two: Assign Activity Costs to Services

In step two, the costs of the activities are **assigned** to the service using an **activity driver.** An activity driver is a cost driver used to estimate the cost of an activity consumed by a cost object (such as a product or service).

In the example used in step one above, costs were allocated to the activity 'review applications using assessment criteria'. The organisation has to determine what causes reviews of applications to be incurred, i.e. what is the cost driver?

The cost driver for application reviews costs would probably be the number of permit applications received; the greater the number of applications, the greater the cost incurred by the organisation in reviewing the applications. The costing system allocates the costs of the activity 'review applications using assessment criteria' to individual services on the basis of the number of reviews that the service generates. The more reviews the service requires, the greater the costs allocated to the service.

In this example, the result is that more costs are allocated to services that are high volume and therefore require many applications to be reviewed. The costing system is more accurately reflecting the real cost to the organisation of particular products by analysing and costing the activities that are actually taking place in the organisation.

The product costing information produced is more credible with operational managers because it accords with their own knowledge of how the business operates.

7.3 Is Activity Based Costing Appropriate for General Government Sector Agencies?

7.3.1 Activity Based Costing for Service Costing

Activity Based Costing can be used to allocate overheads (indirect costs) to services more accurately than in more traditional accounting systems. **It cannot improve the accuracy of direct costs traced to services.**

Agencies that can obtain cost beneficial improvements in service costing information through the use of an Activity Based Costing system are those where:

- a significant proportion of total service costs are overhead costs;
- there is a diverse range of services which vary both in the volume produced and their complexity; and
- sophisticated IT systems are already in place.

Agencies are unlikely to make cost beneficial improvements from ABC where:

- direct costs are a substantial proportion of total costs; and
- overheads can be allocated to services, with a reasonable degree of accuracy, using simple cost allocation bases such as “number of employees” or “floor area.”

Compared with a more conventional service costing system the costs of implementing an Activity Based Costing System can be high because:

- initial identification and costing of activities can involve a considerable amount of time and cost;
- maintaining and updating the more complex range of data required can be costly; and
- sophisticated new it systems may be required.

Activity Based Costing is often described as “best practice” and advocated for use in General Government sector agencies. However, the degree of sophistication adopted in any costing system ought to be driven by the expected benefits i.e. an Activity Based Costing system would only be implemented where the expected benefits exceed its cost.

7.3.2 Activity Based Costing for better Cost Management

The benefits of using Activity Based Costing (ABC) for service costing will depend on the particular circumstances of the agency.

There is likely to be value for many agencies in using the principles of the ABC methodology to analyse and manage costs, i.e. for **cost management** purposes. This is addressed in Chapter Eight, *Cost Management*, below.

8 Cost Management

8.1 Introduction

Traditionally, management accounting systems in both the private and public sectors have focussed on **cost control.**

Cost control is about ensuring that costs incurred (whether measured by reference to functional areas or services) do not exceed a predetermined target, i.e. the Budget. Simply ensuring that the budget is met does not provide assurance that services are being provided efficiently.

The increasingly competitive environment in the private sector (and the equivalent need to achieve value for money in the public sector) has led organisations to look beyond cost control and towards **cost management**.

Cost management is concerned with improving an organisation's efficiency through understanding and managing the real causes of costs. It is about reducing costs by identifying and eliminating wasteful activities.

Cost management practices can assist managers to achieve Budget savings without adversely affecting the quality or quantity of services provided to the community.

8.2 Activity Based Management

The previous section on *Activity Based Costing* explains its use in service costing to allocate overhead costs to services on the basis of what causes a cost to be incurred. It improves the accuracy of the overhead element of the total service cost.

Activity Based Costing will not improve the accuracy of the direct cost elements of the costs of a service. These direct costs can, by definition, be traced to services (e.g. through the use of a time recording system) and do not need to be apportioned across the services.

There is significant value in applying the ABC approach to both direct and indirect costs of a service for cost management; this is **Activity Based Management**.

Activity-based management (ABM) involves using the information from an activity-based costing system to analyse activities, cost drivers and performance to reduce costs and/or improve other aspects of service delivery performance (e.g. quality).

ABM can be used as an ad hoc analysis tool. It does not necessarily need to be supported by an ongoing Activity Based Costing system. The basic steps in the Activity Based Management approach are:

- identify and cost the agency's activities;
- identify value added and non value added costs; and
- determine the causes of the non value added costs.

Step One: Identify and cost the agency's activities

It was shown above how indirect costs are allocated to activities in step one of the Activity Based Costing process to determine the costs of a product or service.

In Activity Based Management, both direct and indirect costs are traced or allocated to activities. Table 8.1 below demonstrates the results of such a process for a policy development function of an agency. The figure compares the activity based view of the function's costs with the traditional line item view of costs.

The principles for the tracing or allocation processes in Activity Based Management are broadly the same as described in 6.2, *Service Costing – A Step by Step Approach*; except that costs are traced or allocated to the activities that are undertaken to produce a service, rather than the service itself.

For example, the cost of the activity, "Prepare briefs to Minister," includes direct costs and indirect costs of the activity. Direct costs would include salary and wages costs that have been determined by employees recording the proportion of their time spent on this activity. Indirect costs, such as depreciation, are allocated to the activity using an appropriate base.

Table 8.1: Analysis of Policy Development Costs

Line Item Costs	$000	Activity Based Costs	$000
Salaries and wages	1,250	Prepare briefs to Minister	489
Other employee related expenses	220	Review and amend policy briefs	123
Property rentals	250	Prepare policy papers	1,048
Travel and accommodation	40	Review and amend policy papers	336
Consultancies	25	Advise external organisations on policy issues	194
Maintenance	100		
Depreciation	170		
Other expenses	135		
Total Expenses	**2,190**	**Total Expenses**	**2,190**

The above example is very simple and is intended to demonstrate the principles of Activity Based Management. In practice, identifying and costing activities, then going through the steps below, can be complex and time-consuming.

Step Two: Identify value added and non-value added activities

The activities identified in the ABM study are used to identify the value added and non-value added activities undertaken in the agency.

Value added activities are those activities that are essential to provide value to the service recipient or for the proper functioning of the agency.

Non-value added activities are those activities that can be eliminated without adversely affecting either value to the service recipient or the proper functioning of the agency.

Typical non-value added activities include inspection-related activities and re-working. The non-value added activities in the above example could include:

- review and amend Ministerial briefs; and
- review and amend policy papers (particularly if it involves correction and/or redoing of work).

The "*advise external organisations on policy issues"* may be value-added or non-value added depending on the nature of the advice. The activity may be value adding if the external organisations perceive value in the service. The activity would not be value adding if the advice is required to interpret unclear elements of the agency's policy papers.

Step Three: Determine the causes of the non-value added costs

In order to eliminate non-value added costs, it is necessary to identify their causes.

Cost driver analysis is used which, at its simplest level, involves asking **why** these non-value added costs are occurring. In the example above, the agency would investigate why Ministerial briefs and policy papers need amendment. The possible causes (**root cause cost drivers**) are set out in Figure 8.2, below.

Figure 8.2: Root Cause Cost Drivers

Root cause cost driver	Comment
Complexity of the brief or paper.	The more complex the brief, the more likely amendments are to be made.
Skills or background of the preparer.	The more relevant the skills and background of the preparer, the less amendments are made.
Support provided by the person commissioning the work.	The more up front advice and direction provided by the commissioner, the fewer (less) amendments are subsequently made.

The analysis above provides the basis to develop strategies that will eliminate these non-value added costs. In the example, the strategies could include:

- ensuring that the more complex projects are given to the most experienced people;
- improving staff training programs;
- improving staff recruitment processes; and
- providing more advice to the preparer at the beginning of the assignment.

It is important to re-iterate that the above example is very simple with some obvious solutions. In practice, the business processes adopted by agencies to deliver their services will comprise a wide range of activities and the analysis process described above can be very complex and time consuming.

In addition to eliminating non-value adding activities, an agency also needs to develop strategies to improve the efficiency of undertaking value adding activities. Activity Based Management helps focus the agency's attention on those activities that consume the greatest resources and therefore potentially yield the greatest benefits from improved efficiency.

8.3 Analysis of supplier costs

The ABC approach can also be used to analyse the "true" cost of dealing with individual suppliers.

A conventional costing system shows only the price of purchases from a supplier. The full cost of dealing with a particular supplier, however, is greater than just the price paid for the goods or services - it also includes the costs of ordering, receiving, inspecting, holding and return of defective goods.

The *suppliers* are made the cost object in the ABC analysis and the costs of relevant activities are assigned to individual suppliers using cost drivers that best estimate the demands that each supplier makes on the relevant activities of the agency.

For example, suppliers that require a lot of inspection time (perhaps because they have a history of poor quality) would be assigned more of the costs of an activity such as "inspect purchased material" than suppliers that generate lower inspection times.

The result of the analysis could be that the agency changes to suppliers that cost the agency the least to deal with. These may not be the same suppliers that charge the lowest purchase price.

8.4 Analysis of client costs

The ABC approach can be used to analyse the cost of servicing particular groups of agency clients. Particular clients can be grouped for particular characteristics such as type of service, geographical location, etc.

The approach would provide a better indication of the "true cost" of servicing particular clients or groups of clients and therefore better information to develop appropriate service delivery strategies.

The approach is used in the private sector where it is referred to as *Customer Profit Analysis.* In the private sector, it has been common to find that profits generated from low volume, complex-to-service clients were previously overstated whereas profits from high volume, more simple to service clients were often understated. Prices are adjusted to reflect the "true" cost of servicing particular clients.

In the public sector, the analysis may reveal, e.g., that clients at particular locations are expensive to service. It may be cheaper for the agency to pay a local business to provide the service even though, at face value, the cost of adopting this strategy appears high.

8.5 Benchmarking

Benchmarking provides organisations with ways to compare themselves with "best practice" organisations. To benefit from a benchmarking study it is insufficient to know that another organisation can provide a particular service at a lower cost; it is also essential to understand why.

In order to understand why, agencies need to have a good understanding of the costs incurred in the processes and activities involved in the production of their services.

8.6 Target Costing

Target costing involves setting a target cost for a product or service and then developing it within that target. The technique is widely used by Japanese companies who examine competitors' products and then estimate the production cost necessary for viable entry into the market. The product engineers try to design and produce a product within the cost target.

Activity based costing information is essential for target costing. An organisation must understand the activities that are required to produce a product or service before it can identify those costs that can be reduced or eliminated to meet the cost target.

In the General Government Sector, target budgeting has been in operation since 1989. Through the forward estimates process, agencies are given rolling forward year expenditure ceilings that are intended to assist the Government to keep control over the growth in Budget expenditure and facilitate forward planning in agencies.

Target costing is a possible tool for some agencies to assist in developing services that meet the needs of its stakeholders and can be provided within the forward year Budget targets.

9 Costing for Decision Making

9.1 Introduction

This section addresses the use of information on costs to support the decision making of operational managers. Such decision making can occur both during the planning process and as the agency undertakes its ongoing operational activities. The section includes examples of such decisions.

The nature of the cost information prepared for decision making tends to differ in emphasis from that prepared for financial reporting purposes. Cost information for decision making tends to involve:

- a focus on future costs rather than actual costs (although a good knowledge of past cost behaviour is essential to be able to estimate future cost behaviour);
- the determination of the effects of change on costs (e.g. the effect of no longer doing something) rather than the full cost to the agency; and
- consideration, in some cases, of the time value of money.

9.2 Contracting out (make or buy)

Managers in private or public sector organisations often required to consider whether certain elements of their business would be better contracted out to a third party. This can include:

- contracting out functional areas such as corporate services;
- buying in certain elements of the production process; and
- contracting out the provision of a complete service.

The following simple example demonstrates the costing principles to support a contracting out decision.

An agency is considering contracting out the provision of a service that it currently produces in-house. The annual cost to the agency of producing this service is $460 per unit. The elements of this cost are set out in Table 9.1, below.

Table 9.1: Total Costs of a Service Unit

Service costs	**$**
Variable costs	
Employee related expenses (avoidable)	300
Other operating expenses (avoidable)	90
Fixed costs	
Depreciation (unavoidable)*	40
Corporate services (unavoidable)*	30
Total costs	**460**

* These costs are unavoidable in the short term. In the longer term, these assets may be saleable and corporate services may be operated at a reduced scale.

The agency has conducted a benchmarking study with a private sector organisation. The study revealed that it costs the private sector organisation only $420 per unit, including a return on the owners' capital, to produce the same service.

The benchmarking study clearly indicates that the agency should closely examine its processes to determine why its benchmarking partner can produce the service at lower cost.

It does not necessarily mean that it would be cost beneficial in the short term to contract out the provision of the service. The relevant costs to look at in making this decision are not the full costs of producing the service but the **avoidable costs**.

Avoidable costs are those costs that would be avoided if a good or service is not produced.

In the above example the agency will still incur in the short term the same building and corporate service costs whether the service is produced in house or not. The only costs that are avoidable in the short term are the variable costs, i.e. employee related expenses and other operating expenses.

The agency would pay $420 per unit to the external provider but only avoid $390 per unit. Therefore, contracting out would cost the agency in the short term an extra $30 per unit. However over the longer term, contracting out may be beneficial from a cost perspective if higher costs in the short term are offset by longer term savings.

In a benchmarking exercise, the agency needs to know the full cost of providing a service, not the avoidable costs. This includes both the direct costs of the service and its share of the agency's indirect (overhead) costs.

9.3 Pricing

Agencies that sell goods or services in competition with the private sector or other government suppliers are required to price them on a competitively neutral basis.

Competitive neutrality requires the elimination of competitive advantages or disadvantages that arise solely through the ownership status of an entity. Its purpose is to ensure that goods and services across the economy are produced as efficiently as possible. This may not be the case if, e.g., public sector entities have lower costs simply as a result of their public ownership.

The commitment to implement competitive neutral pricing as part of the National Competition Policy reform agenda was reaffirmed during the Council of Australian Governments' meeting in February 2006.

Agencies are required to set the price of a good or service, sold in a competitive market at a level that at least covers the long run **avoidable cost** of its production.

The reason for this is that any price above avoidable cost will generate a positive cash flow and is therefore considered to be an economically efficient decision for an agency to make.

The costing approaches described in this paper so far are concerned with the costs actually incurred, or likely to be incurred in the future, by the agency.

In setting user charge prices under Competitive Neutrality, agencies are also required to estimate the additional costs that the agency would incur if it were in private ownership.

These estimated additional costs include:

- the cost of capital that would be incurred if an agency had to fund its own assets through borrowings or equity from the owners; and
- taxes and other charges which apply to the private sector but not to public sector entities.

Competitively neutral pricing is described in more detail, with worked examples, in the Treasury Policy and Guidelines Paper, *Guidelines for Pricing of User Charges*[5].

9.4 Capital Expenditure Evaluation

Agencies are often faced with making decisions that have a financial impact over a number of years. For example, the agency may provide transport facilities as part of its service delivery strategy and is faced with the prospect of replacing its ageing bus fleet.

In evaluating the replacement options, it is inappropriate to simply buy the buses with the lowest purchase price. The agency needs to consider a whole range of issues including the following:

- is it cheaper to lease or buy the buses?
- What are the ongoing costs of running the buses over their useful life (eg fuel costs, maintenance costs, staff training, etc)?
- What is the reliability record of the various alternatives (i.e. what is the chance that the buses may break down and what are the financial and service quality impacts of such an occurrence)?

To assess properly the cost to the agency of the various alternatives it is necessary to consider the full cost of the asset over its life cycle; referred to as **life cycle costing**. The total cost includes acquisition costs and all subsequent support costs.

In this particular example, the analysis process can also be referred to as **capital expenditure evaluation** or **capital appraisal**.

Capital appraisal is a specific application of life cycle costing. Life cycle costing can be used in other circumstances, e.g. in determining the full cost of producing a new product or service from initial planning and design to the ongoing costs of production.

[5] *Guidelines for Pricing of User Charges (TPP 01-2 – June 2001)*

In evaluating which option has the lowest whole of life cost, it is important to consider not only the amount of the cash flows under the various options but also their timing. There needs to be a consideration of the **time value of money**.

To understand the concept of the time value of money it is relevant to ask the question: would an agency prefer to spend one dollar today or in one year's time?

The answer is clearly that it would prefer to spend the dollar in one year's time. If we assume that interest rates are currently 10% pa, the agency would only need to set aside $0.91 now to have the one dollar available in a year's time (it will earn $0.09 interest during the year).

The $0.91 is the **present value** of one dollar in one year's time using a **discount rate** of 10%. To assess the costs of the various options on a consistent basis, it is necessary to convert all future cash flows to present values.

For further information on capital expenditure evaluation refer to the Treasury Policy and Guidelines Papers *NSW Government – Guidelines for Economic Appraisal*[6] and *NSW Government – Financial Appraisal*[7].

[6] *NSW Government – Guidelines for Economic Appraisal (TPP 97-2), June 1997*

[7] *NSW Government – Financial Appraisal (TPP 97-4), September 1997*

10 Costing Systems

10.1 Introduction

Costing systems are used to accumulate the costs of "things" that managers want to cost. These "things" are referred to as *cost objects* and can include:

- services provided by the agency;
- functional or responsibility areas such as corporate services; and
- activities or processes.

A wide range of costing systems can be employed. The decision on the type of costing system to adopt will be based on an assessment of the costs versus benefits. For example:

- larger agencies, providing a complex range of services, would normally be able to justify a more complex costing system than smaller agencies, providing a limited range of services; and
- an agency that is organised around specific services (i.e. its services broadly equate to its departmental or branch structure) would need a less complex costing system than an agency where individual branches contribute to a wide range of services.

10.2 Costing Systems

The complexity of the costing system can vary from a simple manipulation of general ledger information and the use of simple stand alone spreadsheets to an integrated system that links the general ledger to a separate costing module that provides on-line real time cost information.

Examples of the types of costing system that are feasible, in ascending order of sophistication and cost, are set out below.

Service Costing System – using spreadsheets

The account coding structure in the general ledger of the agency has two elements:

- Account Element – e.g., salaries and wages, stationary, electricity
- Responsibility Element – e.g., department, branch, business unit

The agency keeps track, on an ongoing basis, of the costs of responsibility centres, e.g. branches, directorates, agency for control purposes. The system can provide each responsibility centre with details of its costs by account element, i.e. salaries and wages, maintenance, depreciation, etc, on an ongoing basis.

The calculation of service costs has to be done off line, e.g. using spreadsheets. For example, the calculation of the costs of service groups for reporting to Treasury in a Results and Services Plan would be calculated off line, in a manner similar to that demonstrated in Appendix A.

Service Costing System – general ledger

One method of providing more real time information on service costs is to add a service element to the account coding structure in the agency's general ledger. Therefore the account coding structure has three elements:

- Account Element – e.g., salaries and wages, stationary, electricity;
- Responsibility Element – e.g., department, branch, business unit; and
- Service Element – the services the agency provides.

Agency transactions are coded to the service to which they contribute, as well as the type of expense and the branch.

Such a system will enable the agency to track service costs for control purposes. It will not, however, allow the control of costs on a project by project basis or facilitate the types of cost management and decision support practices highlighted in this Policy Paper.

Service Costing System – separate costing module

More sophisticated systems involve the use of specialist costing software which operates outside, but interfaces with, the general ledger. Such systems facilitate a much greater degree of data analysis than a general ledger based costing system.

Ideally more advanced costing systems should be linked to other performance management systems used by agencies. This helps to ensure that analysis of cost information takes place in the context of analysing agency performance as a whole, with the main focus of that analysis being on the effectiveness and efficiency of service delivery.

10.3 Accumulating Service Costs

There are basically two types of methods used by organisations to accumulate service or product costs on an ongoing basis; job costing and process costing.

Job costing

Job costing systems are used to accumulate costs in organisations where discrete jobs or projects are produced which can be significantly different from one another. Such a system is used in organisations such as construction companies and accounting firms where each job is practically unique.

In the public sector job costing may be applicable in areas such as policy development where large, unique projects are undertaken. Employees code their time to individual jobs/projects which means that employee related costs are traced directly to individual projects. Similarly, other costs may be able to be traced to individual projects, such as travel, printing etc.

In addition each project/job is allocated a share of the organisation's corporate overheads. The costs of the agency's service groups and services would comprise the costs of all the individual projects that contribute to the service or service groups.

Process costing

Process costing is used by organisations that produce a small range of homogeneous products in large quantities. It is used in industries such as petroleum, motor vehicles and food.

In the public sector, process costing may be relevant in areas such as processing social security payments or traffic infringement fines.

In situations where the same process is repeated over and over again, it is unnecessary to trace costs to individual products because each one is identical.

In process costing, the costing system accumulates all the production costs over an accounting period and then averages these costs over the number of units produced during the period.

Process costing involves three main steps:

- estimate the total cost of the production process within the accounting period;
- determine the total units produced in the accounting period; and
- calculate the average cost per unit.

10.4 Service Costing Systems in General Government Sector Agencies

An effective service costing system requires more than appropriate hardware and software. It also needs finance staff who are expert in developing and analysing costing information and operational staff who are properly trained in its use.

These factors taken together (i.e. hardware, software, skills of financial and operational staff) determine the overall capability of a service costing system. Individual General Government Sector agencies are likely to be at different levels of capability. Figure 10.1, *Service Costing Systems*, following, describes the general characteristics of service costing systems in order of sophistication.

Figure 10.1: Service Costing Systems

Status of the Service Costing System	Characteristics
Stage One – Non-existent	▪ Agency does not cost its services.
Stage Two – Compliance focussed	▪ The provision of information on service costs is largely driven by external reporting requirements (Results and Services Plans, Budget Papers) ▪ Management largely monitors input costs ▪ The use of service costing information is largely restricted to the finance department ▪ Service costing information will often be at a high level, ie service group.
Stage Three - Intermediate	▪ Service costing is driven by the finance department but management uses the information ▪ Internal reporting includes service costing information and is used to support decision making ▪ The agency can identify the costs of individual services as well as service groups.
Stage Four – Management focussed	▪ Service costing is seen as the preserve of the whole organisation ▪ Information from the costing system is used in all key business decisions ▪ The costing system focuses not only on the costs of services but also on the costs of the processes that are undertaken (i.e. the tasks performed) to produce those services.

For agencies in the earlier stages, as described in Figure 10.1 above, service costing information is unlikely to be used in the development of the agency budget. It is more likely that the Budget is set first and then the costs of the agency's services are calculated (as is done in the example in Appendix A).

As an agency moves to the higher stages, it is more likely that service costs will underpin the development of the agency budget. This is more like the financial planning models adopted in the private sector where the budget is derived from an estimation of the likely demand for the company's goods or services and the cost of their production.

At Stage Four, an agency will employ many of the cost management and decision support practices highlighted in this Policy Paper.

NSW Treasury is keen to ensure that the service costing initiative, along with all elements of the Financial Management Framework, achieves real improvements in agency financial performance and is not a compliance exercise.

In the short term, it is anticipated that many agencies will meet their accountability obligations (e.g. in the Budget Papers or Results and Services Plans) through the development of service costing systems that exhibit the characteristics of Stage Two. In the longer term, however, it is NSW Treasury's aim that all agencies of a significant size develop service costing systems that exhibit the characteristics of Stages Three or Four.

Appendix A

Hypothetical case study – Service Costing

Scenario

The Agency is developing a Results and Services Plan (RSP) for the forthcoming Budget cycle. The agency has to determine the full cost of each of its services for inclusion in the RSP.

The Department is organised into three functional areas:

Division	Responsibilities
Service Delivery Division	Responsible for the delivery of a range of different services to a number of different clients including.
Regulation and Policy Development Division	Responsible for : ▪ Regulating certain industry practitioners; ▪ Policy advice to the Minister, Executive, Service Delivery Division and the rest of the agency; ▪ In-house technical training. The Division earns some user charge revenue through the conduct of training seminars to private sector companies (based on the expertise gained in developing in-house training programs).
Corporate Services Division	Responsible for all corporate services to the agency including finance, human resources, IT and asset management. The Division earns some user charges revenue through renting building and computer surplus capacity to a small private sector company.

The agency uses a “Responsibility Centre” identifier in its general ledger to track actual costs to each of these functional areas during the year, but the calculation of service costs has to be done through spreadsheets.

The budgeted operating statement for the department and for each of the three Divisions is set out below.

Government Department
Budgeted Statements of Financial Performance

	Agency $'000	Service Delivery Division $'000	Regulation and Policy Division $'000	Corporate Services Division $'000
Employee Related Expenses				
Salaries and wages	125,000	89,200	27,200	8,600
Overtime	2,500	1,800	500	200
Worker's compensation	1,500	1,100	300	100
Fringe Benefits Tax	500	300	100	100
Payroll tax	7,500	5,400	1,700	400
Superannuation and LSL	10,000	7,200	2,200	600
	147,000	**105,000**	**32,000**	**10,000**
Other Operating Expenses				
Advertising and promotion	1,250	750	250	250
Auditor's remuneration	750	250	250	250
Consultancies	2,500	1,500	500	500
Courier and freight	500	300	100	100
Electricity	1,000	700	200	100
Insurance	1,000	700	200	100
Operating lease – MV	3,000	2,000	500	500
Property rentals	25,000	18,000	5,000	2,000
Telephone	3,500	2,000	1,000	500
Travel and accommodation	4,000	3,000	600	400
Other expenses	2,500	1,500	700	300
	45,000	**30,700**	**9,300**	**5,000**
Maintenance	10,000	-	-	10,000
Depreciation	17,000	-	-	17,000
Total Expenses	**219,000**	**135,700**	**41,300**	**42,000**
Retained Revenue				
Fees for Services	10,000	-	10,000	-
Other Revenue	7,000	-	-	7,000
Total Revenues	**17,000**	**-**	**10,000**	**7,000**
Net Cost of Services	**202,000**	**135,700**	**31,300**	**35,000**
FTE Employees	2,850	2,040	620	190

The Department does not allocate the costs of corporate services to the operational divisions. Building costs (i.e. depreciation and maintenance) are all allocated to the Corporate Services Division.

Step One: Specify all Services produced by the Agency

A service is the 'end product' that your agency produces for consumption outside the department (by individual clients, the broader community or another Government agency).

Guidance on specifying services is provided in the Treasury Working Paper *What You Do and Why – An Agency Guide to Defining Results and Services.*[8] and the associated information sheets.

The Agency has determined that it has the following services.

	Description
Service 1	Industry Advisory Services
Service 2	Community Education
Service 3	Private Practitioner Accreditation
Service 4	Portfolio-Wide Policy Advice & Coordination

Step Two: Trace direct costs to the services

A **direct cost** is a cost that can be directly traced to a cost object in an economically feasible manner.

Employee Related Costs is the major category of cost incurred by the department. The department's management considers that it is cost beneficial to trace these costs to individual services.

The department, however, does not currently have a formal time recording system in place. The directors of the two operational divisions requested all staff to record the time they apply to each service for a period of three months. The results of this sampling approach are considered to be a good approximation of the time applied for each service on an ongoing basis. The Divisional directors have now provided the following analysis of time spent on each service.

	Service Delivery Division	**Regulation and Policy Division**
Service 1 : Industry Advisory Services	90%	10%
Service 2 : Community Education	10%	30%
Service 3 : Private Practitioner Accreditation	-	50%
Service 4 : Portfolio-Wide Policy Advice & Coordination	-	10%

[8] What You Do and Why – An Agency Guide to Defining Results and Services (Treasury Policy Paper TPP 04-4, October 2004)

Based on this analysis, Employee Related Costs are traced to services as follows.

Costs	Service 1 $'000	Service 2 $'000	Service 3 $'000	Service 4 $'000	Total $'000
Employee Related Expenses:					
Service Division	94,500	10,500	-	-	105,000
Regulation and Policy Division	3,200	9,600	16,000	3,200	32,000
Total Direct Costs	**97,700**	**20,100**	**16,000**	**3,200**	**137,000**

For simplicity, all Employee Related Costs have been assumed to behave in the same way and traced to services on the same basis. That is, the impact of higher salaries earned by management is assumed not to affect our calculations.

The time recording system could have been used to trace individual employee related costs in more detail. For example, tracing overtime payments may reveal that one service generates most of the overtime. It has been assumed that this is not cost beneficial in this example.

Step Three: Allocate indirect costs to the services

It is possible to trace a number of individual *Other Operating Expenses* of the two operational divisions to specific services, as was done for *Employee Related Expenses*.

Employee related expenses account for approximately two thirds of the total expenses of the agency. Management does not consider it cost beneficial to establish systems to trace any of the expense categories that make up the remaining one third. Accordingly, *Other Operating Expenses* will be treated as **indirect costs** and **allocated** to the agency's services.

An **indirect cost** is a cost that cannot be directly traced to a cost object in an economically feasible manner.

An analysis of the *Other Operating Expenses* reveals that they can be broadly categorised into those that are caused by:

- number of employees (administration costs); and
- floor area occupied (occupancy costs).

Therefore, the *Other Operating Expenses* are aggregated in two **cost pools**:

- administration cost pool; and
- occupancy cost pool. A cost pool is a collection of costs that are allocated to a cost object using the same allocation basis.

	Service Delivery Division $'000	Regulation and Policy Division $'000	Total $'000
Administration cost pool			
Advertising and promotion	750	250	1,000
Auditor's remuneration	250	250	500
Consultancies	1500	500	2,000
Courier and freight	300	100	400
Operating lease – MV	2,000	500	2,500
Telephone	2,000	1,000	3,000
Travel and accommodation	3,000	600	3,600
Other operating expenses	1,500	700	2,200
	11,300	**3,900**	**15,200**
Occupancy cost pool			
Electricity	700	200	900
Insurance	700	200	900
Property rentals	18,000	5,000	23,000
	19,400	**5,400**	**24,800**
Total other operating expenses	**30,700**	**9,300**	**40,000**

The other indirect costs are those of the Corporate Services Division.
The support of this division is essential to enable the department to produce its services. The costs incurred by this division must be reflected in the costs of the department's services (i.e. services).

The Corporate Services Division manager has provided the following analysis of that Division's *Total Expenses* of $42 million.

	$'000
Finance	5,250
Human resources	3,000
Information technology	4,500
Executive management	2,250
Building costs (maintenance and depreciation)	27,000
	42,000

The Corporate Services Division manager has also indicated that the following **cost drivers** are relevant (i.e. the major cause of the volume of costs) for each area of Corporate Services.

Cost	Cost Driver / Allocation base
Finance	Number of employees (FTE)
Human resources	Number of employees (FTE)
Information technology	Number of personal computers
Executive management	Number of employees (FTE)
Building costs (maintenance and depreciation)	Floor space occupied (square metres)

Managers of the two operational divisions were then asked to quantify these cost drivers. For example, the managers were required to estimate what proportion of the 30,000 square metres of floor space occupied by the two operational divisions used to produce each service.

Cost driver/ Allocation base	Service 1	Service 2	Service 3	Service 4	Total
Employees (FTE)	1,898	390	310	62	2,660
Floor area (sq. metres)	19,000	5,000	5,000	1,000	30,000
Personal computers	940	300	300	60	1,600

To understand the above numbers it is relevant to note that:

- The FTE number is derived based on the percentage of total employee related expenses allocated to each service in Step Two above. For example,

$$\left(97{,}700 \big/ 137{,}000\right) \times 2{,}660 = 1{,}898\ ;$$

- Service Division staff spend a lot of time out of the office and therefore the average occupancy (i.e. square metres occupied per employee) is lower than for the Regulation and Policy Division; and
- similarly, there are fewer computers per employee in the Service Division than in the Regulation and Policy Division.

The next step is to allocate the indirect costs using the appropriate allocation base.

Costs	Allocation Base	Service 1 $'000	Service 2 $'000	Service 3 $'000	Service 4 $'000	Total $'000
Branch indirect costs						
Admin cost pool	No. FTE	10,846	2,229	1,771	354	15,200
Occupancy cost pool	Floor area	15,707	4,133	4,133	827	24,800
Corporate Services Division						
Finance	No. FTE	3,746	770	612	122	5,250
Human resources	No. FTE	2,141	440	350	69	3,000
Information Technology	No. PCs	2,644	844	844	168	4,500
Executive Management	No. FTE	1,605	330	262	53	2,250
Building costs	Floor area	17,100	4,500	4,500	900	27,000
Total Indirect Costs		**53,789**	**13,246**	**12,472**	**2,493**	**82,000**

N.B. Calculations in this table include rounding.

Step Four: Add the direct and indirect costs for each service

Costs	Service 1 $'000	Service 2 $'000	Service 3 $'000	Service 4 $'000	Total $'000
Total Direct Costs	97,700	20,100	16,000	3,200	137,000
Total Indirect Costs	53,789	13,246	12,472	2,493	82,000
Total Cost	**151,489**	**33,346**	**28,472**	**5,693**	**219,000**

The Total Expenses of the Agency of $219 Million, as reported in its operating statement, have now been disaggregated into the cost of each of the agency's four services.

Appendix B

Hypothetical Case Study - Budget Variance Analysis

An agency provides the following information:

	Budget	Latest Projection	Variance
Employee related expenses	$52,592,000	$52,592,000	$0

In terms of simple Budget compliance the agency is right on target. Through Results and Services Plan reporting, however, the agency provides the following additional information:

	Budget	Latest Projection	Variance
Services	12,000	11,800	(200)
Employee numbers (EFT)	2,390	2,360	(30)

This information can be used to perform a basic budget variance analysis. It is possible to analyse the variance (in this case zero) into the following components:

- price variance;
- volume variance; and
- efficiency variance.

Price variance

Price variance reflects the impact on final **cost** numbers of a change in the cost of inputs. In this example, the primary input is EFT.

Originally the agency budgeted to spend $52,592,000 using 2,390 EFT.

This results in an average cost per EFT of $\$22{,}005.02$ $(\$52{,}592{,}000 \div 2{,}390)$.

With an EFT of 2,360, final cost should have been:

$$(\$52{,}592{,}000 \div 2{,}390) \times 2{,}360 = \$51{,}931{,}847$$

Instead it was $52,592,000 and so the average cost per EFT increased to $22,284.75 $(\$52{,}592{,}000 \div 2{,}360)$.

Therefore an additional cost of $(\$52{,}592{,}000 - \$51{,}931{,}849)$ is attributable to an increase in average EFT costs, namely **an additional cost of $660,151.**

This could have been caused by a number of factors that should be investigated, e.g. the employees receiving a pay rise higher than budgeted or the service requiring more input from more highly graded employees than budgeted.

Volume variance

Volume variance reflects the impact on final **cost** numbers of a change in the number of services delivered.

Originally the agency budgeted to spend $52,592,000 to produce 12,000 units.

This results in an average cost per unit of service of $\$4{,}382.67\ (\$52{,}592{,}000 \div 12{,}000)$.

With a final service of 11,800 units, final cost should have been:

$$(\$52{,}592{,}000 \div 12{,}000) \times 11{,}800 = \$51{,}715{,}467$$

Instead it was $52,592,000 (average cost per unit increased to $\$4{,}456.95\ (\$52{,}592{,}000 \div 11{,}800)$).

Therefore an expected saving of **$876,533** $(\$52{,}592{,}000 - \$51{,}715{,}467)$ did not materialise.

Efficiency variance

Efficiency variance reflects the impact on final **cost** of a change in the efficiency with which services are produced.

Originally the agency budgeted to spend $52,592,000 to produce 12,000 units using 2,390 EFT.

Efficiency ratio as measured by $\left(units/_{EFT}\right)$ was budgeted to be $5.02092\ (12{,}000 \div 2{,}390)$. The actual efficiency ratio decreased to $5\ (11{,}800 \div 2{,}360)$.

With a final service of 11,800 units, final cost should have been:

$$(11{,}800 \div 5.02092) \times \$22{,}005.02 = \$51{,}715{,}467$$

Instead the drop in efficiency (as distinct from the increase in cost per employee – the price variance) resulted in a cost shift to:

$$(11{,}800 \div 5) \times (52{,}592{,}000 \div 2{,}390) = (11{,}800 \div 5) \times \$22{,}005.02 = \$51{,}931{,}849$$

The shift in total cost due to the decrease in efficiency (the efficiency variance) was therefore $\$51{,}931{,}849 - \$51{,}715{,}467 =$ $216,382.

Note that the expected saving $876,533 (volume variance) was negated by the increased cost attributable to price variance of $660,151 and the increased cost attributable to the efficiency variance of $216,382.

In other words, the agency was less efficient than budgeted (each employee produced less service than budgeted) and its input prices (in this case wage rates) were higher than budgeted. It managed to remain within Budget only by providing less services than it should have.

The previous analysis is quite complex. The variances can also be expressed as equations. This is demonstrated below.

- Final cost = $\frac{Cost}{Service} \times Services$

  where, $\frac{Cost}{Service} = \frac{Input}{Service}(i.e.\ efficiency) \times \frac{Cost}{Input}(i.e.\ price)$

- Volume variance = $(Change\ in\ no.\ services\ \ from\ budget) \times \frac{Budgeted\ Cost}{Budgeted\ Services}$

- Price variance = $\left(Change\ in\ \frac{Cost}{Input}\ \ from\ budget\right) \times Actual\ inputs$

- Efficiency variance = $Actual\ Services \times \left(Change\ in\ no. \frac{Inputs}{Service}\ from\ budget\right) \times \frac{Budgeted\ Cost}{Budgeted\ Input}$

In the example above:

	Final cost A	Services B	Cost/Service (A/B)	Inputs C	Input/Service (C/B)	Cost/input (A/C)
Budget	$52,592,000	12,000	$4,382.67	2,390	0.1991667	$22,005.02
Projected	$52,592,000	11,800	$4,456.95	2,360	0.2	$22,284.75
Variance	$0	(200)	$74.28	(30)	0.0008333	$279.725

Volume variance = $(12{,}000 - 11{,}800) \times \left(\frac{\$52{,}592{,}000}{12{,}000}\right)$

= $200 \times \$4{,}3282.67$

= $876,533

Price variance = $\left(\frac{52{,}592{,}000}{2{,}360} - \frac{52{,}592{,}000}{2{,}390}\right) \times 2{,}360$

= $\$279.725 \times 2{,}360$

= $660,151

Efficiency variance = $11{,}800 \times \left(\frac{2{,}360}{11{,}800} - \frac{2{,}390}{12{,}000}\right) \times \left(\frac{52{,}592{,}000}{2{,}390}\right)$

= $11{,}800 \times 0.0008333345 \times \$22{,}005.02$

= $\$216{,}383$

The volume variance (an expected saving of $876,533) is offset by a price variance of $660,151 and an efficiency variance of $216,383, i.e. a total of $876,533.

Appendix C: Glossary

Term	Description
Activities	The things that are done to produce a product or service.
Activity Based Costing	A costing approach that determines the costs of the various activities required to produce a product or service.
Activity Based Management	A process that uses activity based costs to analyse activities, and their cost drivers, to improve performance and reduce costs.
Avoidable costs	Those costs that would be avoided if a good or service were not produced.
Capital charge	A charge recognising the opportunity cost of capital invested in General Government agencies.
Competitive neutrality	The elimination of competitive advantages or disadvantages that arise solely through the ownership status of the entity.
Controllable cost	A cost that a manager can directly influence.
Cost driver	Any factor that causes a cost to be incurred. A change in the cost driver causes the total cost of the cost object to change.
Cost object	The item that someone wants to cost.
Costs	Resources that are used to achieve a particular objective.
Direct cost	A cost that can be directly traced to a cost object in an economically feasible manner.
Fixed cost	A cost that does not change in total despite changes in the cost driver.
Full cost attribution	The identification of all costs incurred by an agency on the cost object, i.e. all direct costs and indirect costs.
Indirect cost	A cost that cannot be directly traced to a cost object in an economically feasible manner and is allocated on a cost allocation basis.

Term	Description
Input	The resources used in the production of a good or service.
Marginal cost	The cost of producing another unit of a good or service.
Performance budgeting	Explicit funding by the Executive Government of *service delivery plans* developed by service delivery agencies in order to achieve desired Government results.
Responsibility centre	A functional area of an agency such as a branch, division or business unit.
Results	The desirable, long term impacts of Government program and service delivery on the community, the environment or the economy or changes in public perceptions.
Results and Services Plan	A high-level service delivery and funding plan prepared by an agency to support decision making by Budget Committee. It provides a clear "line of sight" for performance management by setting out the linkages between Government priorities, the results that an agency is working towards, the services it delivers to contribute to those results, and the costs of delivering those services as reflected in the agency's budget.
Service	The 'end product' that your agency delivers for external consumption (e.g. to clients or recipients, the community or another government agency.)
Service Group	A number of services grouped together in a meaningful way for the purpose of keeping information in the RSP at manageable levels.
Standard costing	A costing approach that traces costs to services using standards (i.e. budgeted amounts) for input prices and quantities.
Uncontrollable costs	A cost that a manager cannot directly influence.
Value added activities	Those activities which are essential to provide value to the service recipient or for the proper functioning of the agency.
Variable cost	A cost that changes in response to the level of activity or as its cost driver changes.

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