



Tasmania

**Performance Information for
Management and Accountability
Purposes**

**An introductory guide for Tasmanian
inner-Budget agencies**

**Department of Treasury and Finance
Tasmania**

October 1997

© Government of Tasmania 1997

ISBN: 0 7246 4688 4

This work is copyright and may be used as permitted under the *Copyright Act 1968* provided there is proper acknowledgment of the source.

Published by the Department of Treasury and Finance
GPO Box 147B
HOBART TAS 7000

For further information please contact:

Mrs Heather Felton
Principal Consultant
Budget Management Branch
Department of Treasury and Finance
Phone: (03) 6233 2151
Fax: (03) 6223 2755
Email: h.felton@tres.tas.gov.au

Mr Ian Pitchford
Assistant Director
Budget Management Branch
Department of Treasury and Finance
Phone: (03) 6233 4572
Fax: (03) 6223 2755
Email: i.pitchford@tres.tas.gov.au

Foreword

Over the past few years the Tasmanian State Service has made considerable progress in implementing financial management reforms aimed at providing better value for money in the delivery of services. Central to this reform process has been the need for improved accountability for the use of scarce resources.

The move to an Output and Outcomes focus for financial management in inner-Budget agencies means that accountability is now focused on performance in delivering those goods and services funded through the Budget, and on ensuring that the Outputs assist in achieving appropriate Outcomes.

The move from accountability for inputs and activities to accountability for performance in achieving objectives requires new skills and understandings in relation to the development of performance measures, the use of evaluation processes and the preparation of performance information.

This document has been prepared as an introductory guide to the management and use of performance information. It is aimed at managers, and covers key issues related to using performance information both for internal management purposes and for external reporting. It outlines the main concepts and principles of performance measurement and evaluation and provides practical information that will be of assistance to agencies in establishing effective systems for developing performance measures and managing performance information.

I wish to thank all those who contributed to the development of this document, and, in particular, acknowledge the work of Heather Felton who was responsible for compiling and editing the guide.

D W Challen
Secretary

October 1997

Contents

1. Introduction	1
2. Why Measure Performance?	3
3. What is Performance Information?	5
Performance Information is About Achievement	5
Qualitative and Quantitative Information	6
4. Types of Measures: Direct Measures and Indicators	8
Measures	8
Direct measures	8
Indicators of Performance	10
5. Aspects of Performance	13
Economy	13
Efficiency	13
Effectiveness	15
Appropriateness	16
Responsiveness, Social Justice and Equity	18
Assessing Quality	19
6. Expectations and Criteria	21
Expectations of Performance	21
Targets	21
Selecting Targets	22
Standards	23
Benchmarks and Benchmarking	25
7. Measurement and Evaluation	27
Measurement Procedures	27
Evaluation	28
Customer and Client Satisfaction	29
8. Developing and Using Performance Information	31
Purpose	31
Selecting Performance Measures	33
Useability	35
Characteristics of Public Sector Outputs	36
Customer oriented Outputs	37
Transactions	37
Professional/Managerial	37
Investigations	37
Behavioural	37
Control	38
Emergency Services	38
9. Managing Performance Information	39
Measuring Performance is a Complex Process	39
A Performance Information Management System	39
A Plan	40
A Framework	40
A Guideline	40
Sets of Output Performance Measures	41
Managing Performance Information	41
Key Principles: Managing Performance Information	43
1. Commitment	43
2. Involvement	43
3. Integration	43
4. Improvement	44

5. Accountability	44
6. Appropriateness	44
7. Coverage	45
8. Expectations and Criteria	45
9. Useability	46
10. Monitor and Maintain	46
11. Do not stop at measurement	47
10. Checklist for Assessing Performance Measures	48
Are the measures useable?	48
Is there a basis of comparison for each measure?	48
Are the measures of the appropriate quality?	48
Are the Output measures adequate?	48
11. Some Common Problems in Developing and Using Performance Measures	50
Glossary	53
References	59
Figures	
Figure 1: Performance information for internal and external purposes	3
Figure 2: The four elements of performance information	4
Figure 3: Types of direct measures	9
Figure 4: Aspects of performance that can be measured using indicators	11
Figure 5: Purposes, Audiences and the Timeline for the Provision of Output Performance Information by Tasmanian inner-Budget agencies	32
Illustrations	
Reasons for Measuring Performance	2
Purposes for Measurement	4
Measures of Work Activity	5
Meaningful reporting of performance measures	7
Examples of different types of direct measures	8
Example: An Indicator of Output Adequacy	11
Unintended results	12
Measures of Efficiency	14
Benefit Cost Measure	15
Effectiveness Indicators	16
Types of Indicators of Appropriateness	17
Example of an indicator of relevance	17
Example of an Indicator of Sustainability	17
Real and perceived needs	20
Examples of generic targets for productive efficiency	21
Targets	23
Standards and Quantitative Targets	23
Qualitative Targets:	24
Benchmarking	26
Continuity of Measurement and Environmental Change	28
Accountability Reporting and Internal Management	31
General Principles for Selecting and Using Performance Measures	33
Measuring Output Performance	35
Performance Measures: Key Characteristics for Accountability Reporting	38
A Performance Information System	42

1. Introduction

This paper has been prepared to provide managers of inner-Budget agencies with general information about performance information and about the measurement of performance for both agency internal management purposes and accountability requirements.. It is both an introduction to the main concepts relating to the measurement and evaluation of performance, and a basic guide to the development, use and management of information about performance.

While the paper has a practical focus, it is not a step by step outline of procedures for developing and using performance information. For example, specific requirements for reporting performance information for Budget purposes are not set out in this paper. Rather, the paper provides general guidance that may be of help in preparing and managing performance information for internal and external purposes.

There are two key principles underlying the focus of the paper:

- that management of performance information is a corporate responsibility; and
- that the development and use of performance measures should be integral to the agency's planning, budgeting and reporting processes.

Six main topics are covered in the paper:

- purposes for measuring performance (pp3-4);
- characteristics of performance information and measures (pp5-20);
- criteria for assessing performance (pp21-26);
- procedures for measuring and evaluating performance (pp27-30);
- development and use of performance measures (pp31-38); and
- management of performance information (pp39-47).

The paper is meant to be used as an ongoing reference tool and has been structured to enable key information to be easily identified and extracted for particular purposes. Each section focuses on a discrete issue, and a number of summaries of issues and principles relating to various aspects of the measurement of performance have been included. For example:

- an outline of some common problems in developing and using performance information (pp50-52);
- key principles in managing performance information (pp43-47);
- some general principles for selecting and using performance measures. (p34);
- a checklist for assessing performance measures (pp48-49);
- issues related to assessing quality (pp19-20);
- issues related to surveying clients and customers (pp29-30; see also pp18-20);
- aspects of performance (pp13-19);and
- characteristics of public sector Outputs (36-38).

In addition, figures and illustrations throughout the text provide quick access to examples, definitions, descriptions and explanations of key concepts.

An extensive glossary of terms has been provided (pp53-58). This is a comprehensive alphabetical listing of the key concepts that have been used in the paper. The definitions are consistent with those used in other relevant Tasmanian Government publications.

Reasons for Measuring Performance

What gets measured generally gets done.

If you don't measure results, you can't tell success from failure.

If you can't see success, you can't reward it.

If you can't reward success, you are probably rewarding failure.

If you can't see success you can't learn from it.

If you can't recognise failure, you can't correct it.

If you can demonstrate results, you can win public support.

2. Why Measure Performance?

The measurement of performance is not something that is done for its own sake. It is a process undertaken to ensure that appropriate and trustworthy information is available, when required, for use in decision-making.

Decision-makers need ongoing access to relevant, valid and reliable information about performance in order to adequately address two questions that are basic to good management:

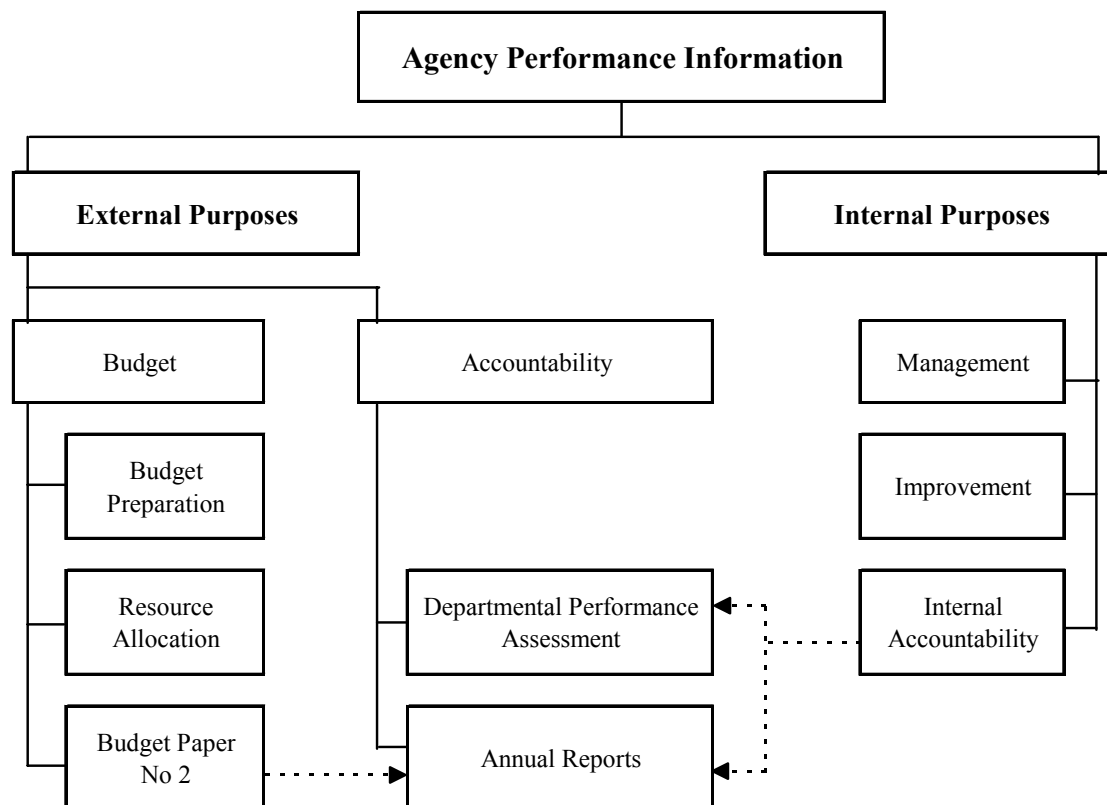
How well are we doing?
How can we do better?

Through systematic measurement and evaluation of performance, evidence is obtained that assists in developing a better understanding of:

- how well existing services perform;
- how well services meet the needs of clients; and
- whether the services provided are consistent with Government expectations of agency performance.

Performance information is required for both internal and external purposes (figure 1). The timely availability of such information enables well-informed decisions to be made about how to improve performance.

Figure 1: Performance information for internal and external purposes



Purposes for Measurement

Output performance measures provide information that assists agencies and the Government:

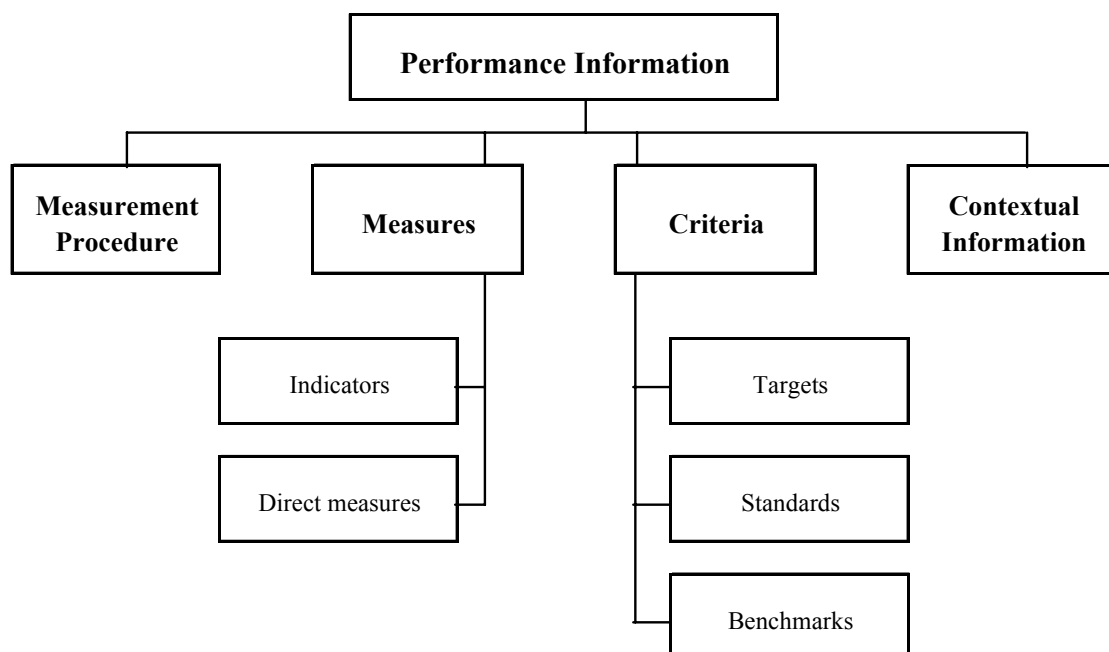
- monitor what is being done;
- assess whether the right things are being done;
- adjust to changes;
- manage for change;
- account for what has been achieved; and
- improve the provision of goods and services.

When an agency develops and manages performance measures as part of a strategically focused performance information system, both the Government and agency managers are able to have access to information that is relevant, reliable and timely. This places the Government and agency management in a better position for improving strategic decision making and resource allocation. Better informed decision making should result in more efficient and effective delivery of services and improved Outcomes for the community.

For accountability reporting, agency managers need externally focused Output measures such as indicators of effectiveness, efficiency and appropriateness. Agency managers also need a broad range of measures - both direct measures of Output provision and performance indicators - specifically for internal management purposes.

Information generated by internally focused measures is used for monitoring the delivery of Outputs and for ensuring that, in the immediate and short-term, the goods and services being provided are likely to have the intended impact on customers, clients or the community at large. These measures provide managers with information that helps the agency identify and adjust to changes, and improve, on an ongoing basis, the provision of goods and services.

Figure 2: The four elements of performance information



3. What is Performance Information?

Performance Information is About Achievement

Performance information is information that has been collected systematically in order to make judgements about achievement in relation to objectives, plans or intentions. It is information about performance that is suitable for use as evidence in making decisions. It can be in the form of numbers (data, or quantitative information) or words (qualitative information) and consists of four inter-related elements (see figure 2).

The four elements of performance information are :

- the measure - in the form of either a direct measure or an indicator;
- a measurement procedure - this defines how the information for the measure is to be collected and interpreted;
- the criteria to be used in judging success - in the form of targets, standards, or benchmarks; and
- contextual and explanatory information - for communicating the meaning of 'achievement against the measure' in relation to the criteria.

Performance information is about what is being achieved by the agency, it is not about what is being done within an agency. Workload measures, measures of demand, and process data, such as throughputs, production rates, and activity counts, do not by themselves provide evidence about performance. These measures are useful in managing an organisation and in ensuring that delivery of the Output will be on time, and will meet quality and cost targets.

Workload and demand measures are sometimes reported with performance indicators because they can provide information necessary for understanding the performance of the agency and the context within which it operates.

Measures of Work Activity

A common shortcoming in reporting performance, is the use of measures of work activity as if they were indicators of performance. Workload measures may provide information about how hard people are working but not whether they are accomplishing anything.

For example:

The number of people who used a service is a measure of an important environmental factor - the demand for the service - but does not report how well the agency is responding to this demand, ie how well it is performing.

An appropriate performance measure may be the number of people processed per person-year at a given level of service, with explanatory information about other external factors that have had an impact on changes in the observed level of performance.

Qualitative and Quantitative Information

Performance information may be either:

- quantitative - that is, it has a numeric value; or
- qualitative - that is, the characteristics of performance are described in words.

This means that performance information can be in the form of narrative statements, as well as in the form of statistical data.

Qualitative performance information can be derived from a variety of sources. Some examples are:

- reports based on interviews with stakeholders;
- written opinions given by experts;
- summaries of client opinion obtained through interviews, periodic surveys or the use of focus groups; and
- commissioned audits, evaluations and research studies.

In making decisions about what type of information is needed for assessing performance, it is important to focus on the purpose for collecting the information, and the decisions to be made on the basis of the performance information.

Three errors commonly made when selecting performance measures are:

- identifying a very large number of measures;
- measuring Output performance using only one measure for each Output; and
- concentrating solely on easily measured numerical data, typically data derived from measures that just happen to be around.

Initial attempts to identify measures of performance usually lead to the selection of a very large number, with many of them being activity and input measures. While all the measures may provide information that could be used for management or accountability purposes at different levels within the agency, the amount of information provided by the measures may be unwieldy and may result in unfocused reporting.

To be meaningful, a report on performance needs to focus on a small set of critical indicators. Selectivity, based on an understanding of the purpose for which information is required and the types of decision to be made by the audience for the information, is the key to success in using performance measures.

Approaches to simplifying the reporting of performance have often resulted in the selection of only one measure to represent performance for an Output. Much of the controversy and lack of acceptance surrounding the use of performance measures is a result of these kinds of attempts to make a very complex problem appear too simple.

A single measure will rarely document sufficiently even one aspect of the performance of an Output. Rather, a set of measures is needed, covering a number of criteria, to provide a balanced view of performance. It is often useful to have indicators which pull in opposite directions.

While existing data should be used whenever possible, their uncritical use is likely to lead to performance measures that:

- do not focus on appropriate aspects of performance;
- are not robust; or
- have little explanatory power.

In the past, there has sometimes been an over-emphasis on quantitative measures in the belief that because of the statistical rules that are applied to test validity and reliability, these measures are more 'objective', and therefore more trustworthy and useful than qualitative measures. However, two things should be kept in mind.

- Subjectivity can impact on the usefulness and validity of quantitative measures, for example, through the process of deciding the focus for a measure or the questions to use in a survey.
- It is difficult for numbers alone to 'tell the story' and provide managers with sufficient information on which to base effective decisions.

Two errors that frequently appear in performance reports, particularly when quantitative measures are being reported, are:

- not providing contextual information or guidance on how to interpret the meaning of the achieved level of performance; and
- not taking external factors into account when interpreting the achieved level of performance.

Qualitative information is very important to an understanding of the performance of an agency. In many cases, evidence about a particular aspect of Output performance derived from qualitative measures will be more relevant to particular decisions than that provided by quantitative data. It is, therefore, essential for managers to have access to qualitative measures, either to report on difficult-to-quantify aspects of performance or to provide needed explanatory information. Quantitative measures should rarely, if ever, be used on their own.

Meaningful reporting of performance measures

Meaningful reporting of performance measures requires a descriptive interpretation.

This description should include:

- a contextual discussion about the environment; and
- an interpretative analysis which includes a discussion of the significance of the measure.

Simple numbers - such as reports from a management information system - say very little and can mislead.

External factors.

As part of the explanation of performance, it can be useful to include measures of external factors that influence performance. For example, changes in the nature or volume of demand by clients (workload changes) while not in themselves indicators of Output performance, provide important information about environmental changes.

Changes in the economic, social and demographic environment should be reported as they can affect efficiency and effectiveness. The impact of such changes may lead to, for example, the loss of key staff, budget constraints, changes in legislation, and policies that affect the agency's capacity to hire and retain qualified employees.

4. Types of Measures: Direct Measures and Indicators

Measures

A measure is an explicit statement that identifies the focus for measurement: that is, the measure specifies what is to be measured.

The specific focus for a measure could be, for example:

- a quality of the good or service required by the purchaser;
- the delivery of a service in accordance with time and cost requirements;
- the impact on the client of an Output paid for by a third party;
- the impact of the service on the community; or
- the inputs used in delivering the good or service.

Performance information may be obtained using either direct measures or indicators (indirect measures).

When selecting or developing direct measures and performance indicators, care needs to be taken to ensure that the information generated through use of the measure will be of the appropriate quality. To ensure that quality information can be obtained, measures must be:

- valid, in that the measures actually do measure the characteristics they claim to measure;
- reliable, in that, given set conditions, the information generated against the measure will not vary significantly;
- relevant;
- accurate; and
- timely.

Direct measures

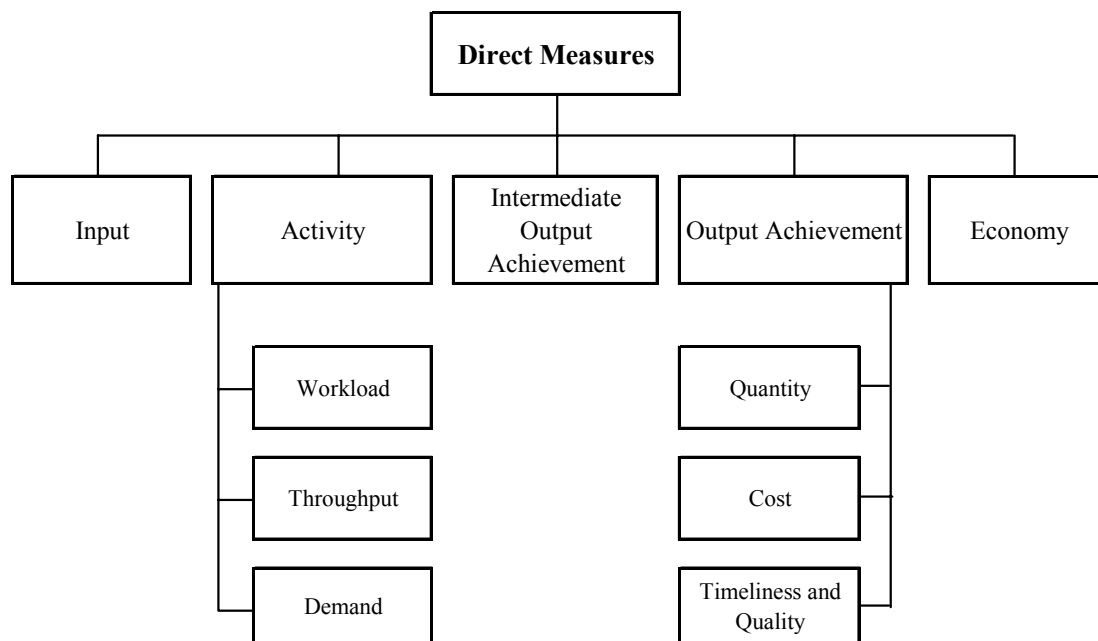
Direct measures provide evidence of the actual results of specific activities, processes or Output delivery systems (figure 3).

They focus on what has been achieved in relation to targets and can provide information about what has been done, what has been delivered or achieved, and the level of activity involved. They can measure, for example, economy, workload, demand for the service, sub-Output achievement and Output achievement.

Examples of different types of direct measures

- *Economy*: cost per unit of input eg staff time.
- *Workload*: number of inquiries processed;
- *Sub-Output (or intermediate Output) achievement*: average number of inquiries processed per staff hour.
- *Output achievement*: average waiting time for elective surgery.

Figure 3: Types of direct measures



It should be noted that direct measures that focus on ‘inputs’ or on the level of ‘activity’, such as measures of workload, throughput and demand, are not measuring performance. These measures may provide information about how hard people are working, or the level of resources consumed, but they do not provide information on whether anything is being accomplished.

However, some direct measures do measure performance. Output achievement measures are direct measures of performance, and provide information about the quantity, cost, timeliness and standard of provision of a product or service against predetermined targets or standards. They measure whether the Output has been provided as intended.

Direct measures used in judging performance in the delivery of Outputs usually focus on the following aspects:

- quantity of Outputs eg volume, level of supply;
- quality of the Outputs eg to an agreed standard;
- timeliness of the Outputs eg delivery and/or response time; and
- the cost of the Output eg cost per unit of Output, and total cost.

These are all *direct* measures of performance. They are not, by themselves, *indicators* of performance.

Indicators of Performance

Indicators are indirect measures. They provide evidence of how well achievements at one stage in the provision of an Output translate into results at another stage, or level, of performance.

Indicators are derived from a relationship between direct measures of different aspects of the operation of an agency, and are expressed in the form of an index, a ratio, a per unit measure or some other form of comparison.

For example:

1. *Government School Education: Enrolment Index*

The full time equivalent (FTE) enrolments in each subject as a proportion of all FTE enrolments in the State.

2. *Total Prison Utilisation Rate*

The average total prison population divided by useable prison capacity multiplied by 100.

3. *Prison Escape Rate*

Total number of escapes from open and secure prisons in twelve month period ending 30 June multiplied by 100, divided by the average annual prisoner population.

4. *Rate of emergency patient re-admissions within 28 days*

Number of emergency patient readmissions within 28 days of separation as a proportion of total number of admissions, excluding deaths.

5. *Percentage of facilities accredited by the Australian Council on Healthcare Standards (ACHS)*

The ratio of accredited beds to all hospital beds in the jurisdiction.

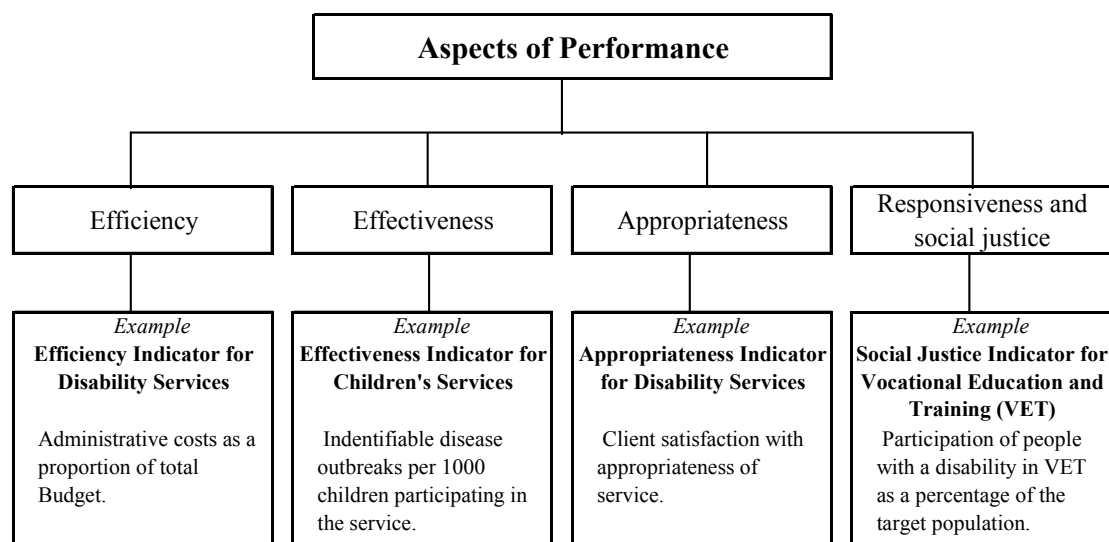
6. *User cost of capital per casemix adjusted separation*

Depreciation plus opportunity cost divided by casemix adjusted separation.

Indicators are used when assessing key aspects of Output performance such as efficiency, effectiveness, appropriateness, responsiveness and equity or social justice (figure 4). For example, the measures numbered 4 - 6 above translate into 'results' for the following broad aspects of performance of Public Acute Care Hospitals:

- measure 6 is an indicator of efficiency;
- measure 5 is a proxy general measure of the quality of care processes, and is used as an indicator of effectiveness;
- measure 4 is a measure of an aspect of quality determined by reference to a national standard, and is used as an indicator of effectiveness.

Figure 4: Aspects of performance that can be measured using indicators



As applied to the measurement of performance, the term 'indicator' has two meanings. An indicator can be either:

- an explicit statement that defines how success is to be measured; or
- information (a 'data set' or 'evidence') about a selected aspect of performance, which is indicative of broader performance.

Example: An Indicator of Output Adequacy

Adequacy: Information about effort relative to need or demand.

An Output adequacy indicator:

Focus of the measure: Primary student enrolment in Government schools.

Indicator: Primary enrolment in Government schools per total Tasmanian primary enrolment.

Criterion: Compared with the Australian average

The term 'indicator' is derived from the verb 'to indicate' which means to point out; to show; to give some notion of; or to give ground for inferring. Indicators provide evidence that *infers* something more general about the performance of an agency than just performance on the aspect that was measured.

Unlike direct measures, performance indicators do not generate information for use as evidence about actual achievement for the aspect measured. Indicators provide a guide to performance where causal links are not obvious and where changes in performance are difficult to measure directly.

Indicators focus on relationships, for example, between effort and need, or between service provided and intended results. For this reason, indicators are sometimes called relational measures.

Comparison is basic to the use of performance indicators. As an index, ratio, per unit measure and so on, the measure itself is in the form of a comparison. In addition, achievement against a performance indicator is judged through comparison with selected criteria, such as targets, standards or benchmarks. While levels of performance can be measured before and after a change, or trends over time recorded and analysed, the meaning of the information only becomes clear when compared with a predetermined target or other criterion.

The criteria represent the expectations for performance by the agency. In order to be able to use a performance measure for judging success, each measure has to have at least one related criterion identified for use with the measure.

Unintended results

A key issue for senior management is how the system for managing performance information copes with important but unintended results.

When judgements of success and failure are based only on pre-determined statements of objectives and targets, unintended results may be ignored, even though they may be more significant than those intended.

If the Output produces results other than those intended, what then?

To what extent do the unintended results contribute to judgements about effectiveness?

These unintended results could, after all, be good or bad, but the system which monitors performance may take little, if any, account of these. It is likely that information relevant to these unintended results will not even be collected.

5. Aspects of Performance

In assessing how well an agency is doing in delivering services to the community on behalf of the Government, there are six key aspects of performance that can be measured:

- Economy (an input measure);
- Efficiency of the service;
- Effectiveness of the service;
- Appropriateness (results compared with intentions);
- Responsiveness, social justice and equity; and
- Quality.

Economy

Economy is defined as ‘cost per unit of input’ and is about minimising the resources used in delivering an Output.

Economy is a direct measure - a measure of actual achievement - not a performance indicator. It focuses on the input-use achieved in delivering the service. This measure is particularly useful for internal management, and it can be required to be reported as part of a service or purchase agreement.

This measure can also provides important contextual information that can help in interpreting the meaning of performance indicators.

Efficiency

Efficiency is a term generally used to describe how well agencies use their resources in producing Outputs. Efficiency can be measured at both the Output and the Outcome level. For example, the measures can focus on aspects of operational efficiency, such as cost efficiency and productive efficiency; or they can focus on aspects of Outcome efficiency, such as allocative efficiency.

Output or operational efficiency indicators relate resource inputs to resulting Outputs. They indicate how well an activity or operation is being performed.

Operational efficiency can be measured in terms of:

- quantity of Output (that is, the most Outputs for a given set of inputs);
- cost (that is, the least cost or least inputs associated with producing a given level of Output); or
- mix of Outputs (that is, the optimal mix of Outputs for a given set of inputs).

Efficiency is about producing more services and/or better quality services with the same or fewer resources. Efficiency is determined mainly by the internal structure and operations of an organisation. It is best understood as the relationship between optimal performance and actual performance. Optimal performance involves using the best combination of inputs in the best way.

Unit cost and productivity measures of efficiency can be developed separately for specific factors of production, such as labour and capital, for example, ‘offender:staff ratio’ and ‘value of assets per prisoner’, are two efficiency measures developed for national reporting of performance for Corrective Services.

Measures of Efficiency

Cost efficiency indicator: cost per unit of Output (unit cost).

Productive efficiency: measures of various aspects of the relationship between inputs and Outputs; for example, ‘unit cost’ is often used as a proxy indicator of productive efficiency.

Productivity indices: the relative change of a measure from a base period to another time period.

Allocative efficiency: producing the optimal mix of services given budget constraints.

Care needs to be taken in using efficiency measures. For example, one error that can easily be made when using efficiency measures to determine resource allocation within an agency, is to mistake average efficiency for marginal efficiency. This may cause extra resources to be allocated to an Output where average efficiency seems high, but with little net effect on delivery.

Too much emphasis on measuring efficiency can lead to goal displacement. This occurs when a few performance targets - typically numerical ones - replace the actual intentions (the objectives) for the delivery of the service. It is therefore important to ensure that the agency uses a balanced combination of different types of measures, and ensures that there are measures available that clearly relate the provision of the Output to intentions and to Outcomes.

Operational efficiency indicators

The focus of operational efficiency indicators is the relationship between inputs and Outputs.

Operational efficiency indicators include measures of productivity as well as measures of various aspects of service delivery. Operational efficiency indicators answer questions such as:

- How much does it cost to deliver services to our clients?
- How does this compare with previous performance or to the costs of similar services elsewhere?

Outcome efficiency indicators

The focus of outcome efficiency indicators is the relationship between inputs and Outcomes.

Outcome efficiency indicators provide answers to questions such as:

- How can we examine the costs against the benefits of this Output?
- How do we know whether this Output achieves its outcome efficiently?
- Can the Output be delivered more efficiently to achieve the outcomes?
- How do we know the optimal level of service is being produced, given budget constraints

Benefit Cost Measure

Production system objectives or intentions compared with actual outcomes: for example, 'net social benefit per dollar cost'. This measure takes in negative unintended consequences as well as positive outcomes, and highlights social justice goals as well as Output production system intentions.

Effectiveness

Effectiveness refers to success in achieving objectives. It is about performing the correct activity and achieving a desired impact or outcome. Effectiveness is determined by the relationship between an organisation and its external environment.

Effectiveness can be measured at a number of levels. A service may be 'operationally effective' if it reaches its target population and the service is delivered adequately. It may be 'policy effective' if it fulfils its longer-term policy objectives and delivers intended outcomes.

Indicators of effectiveness focus on the extent to which objectives, at different stages in the delivery of a service, are being achieved.

Effectiveness indicators relate Outputs to immediate and short term impacts and/or to long term outcomes. They can measure the steps along the way to achieving an overall objective, and test whether Outputs have the characteristics required for achieving the desired objective. They can also show the extent to which objectives have been achieved.

Methods of gathering information about effectiveness include proxy measures such as client surveys, observational studies, case studies and focus groups, as well as longitudinal research and evaluation projects.

Effectiveness can be measured in terms of:

- Output compared with actual impact;
- Output compared with intended process level or delivery system objectives;
- Delivery system objectives compared with actual outcome;
- The ratio of Output per unit of result;
- Cost per unit of successful outcome (cost effectiveness);
- Net social benefit per dollar cost; and
- Success in meeting objectives within budget and without significant unwanted effects.

Measures of general effectiveness provide answers to questions such as:

- Is the Output satisfying the purpose for which it was funded?
- What sorts of things would you point to as evidence that the intended results were being achieved?
- Is the Output being delivered in the most effective and efficient way?

Cost effectiveness measures provide answers to questions such as:

- Was the delivery approach used the least costly?
- Would alternative delivery approaches achieve objectives more cost effectively?

- Is the level of user charge appropriate?

Effectiveness Indicators

Effectiveness indicators provide answers to the general question:

- Is the Output delivering (or likely to deliver) the intended results?

The formula for a cost effectiveness indicator is:

- cost per unit of successful result.

The formula for a general measure of Output effectiveness is:

- ratio of Outputs (or the resources used to produce these Outputs) per unit of result.

Example of an Output effectiveness indicator

Focus of the measure: Impact of arts activities funded through Arts Tasmania.

Indicator: Number of attendances at funded activities per dollar value of grant and loans

Criteria: Compared with previous year and with target

Appropriateness

Appropriateness focuses on the way in which a service is delivered, as well as on the results achieved. It is concerned, for example, with whether a service should be delivered in another way or by another provider; whether the right client group is being served; whether current delivery of the service is sustainable and whether a service is really needed. Appropriateness is sometimes considered to be an aspect of Output effectiveness (for an example, see the *Report on Government Service Provision 1997*, pp12-13).

Appropriateness relates to the extent to which the intended outcomes (or the objectives) for an Output match the needs and expectations of clients and stakeholders. Appropriateness can be measured in terms of:

- adequacy;
- sustainability;
- relevance; and
- outcome or policy achievement.

The appropriateness of a service may be interpreted in a number of ways: it may refer to whether objectives have been met, or to the way in which the service meets its objectives. For example, appropriateness indicators for Aged Care include assessing the 'intensity and suitability of care provided', and the 'adequacy of targeting'. For hospitals, 'separations per 1 000 population' is an indicator of appropriateness that focuses on the relevance of the service.

Types of Indicators of Appropriateness

Output adequacy measures

Information about effort and performance relative to measures of community need or demand.

For example:

- The match between effort and needs.
- Adequacy of performance effectiveness relative to level of need.
- Is the appropriate client group being served relative to high risk groups or mandated target populations.
- Awareness of services among the community.

Sustainability

The persistence of impact, or results, over time.

Relevance

The relationship between intended result and actual impact, measured either quantitatively or qualitatively.

Outcome or policy achievement

These measures are concerned with the level of need satisfaction of stakeholders; and with identifying and measuring whether intentions have been achieved.

Measures of appropriateness address questions such as:

- Are there realistic alternatives to government provision and funding of the Output?
- Is the Output aligned with government policy priorities?
- Is the Output adequate in relation to existing need?
- Given specified changes in need/availability of resources what level of service can be sustained over the next three years?
- Is the appropriate client or mandated target audience receiving the service?

Example of an indicator of relevance

Relevance:

- the extent to which the intended outcomes for an Output match needs and expectations.

Output relevance indicator

Focus of the measure: Appropriateness of care: variations in intervention rates in Public Acute Care Hospitals.

Indicator: Number of separations for selected procedures per 1000 persons.

Criteria: Compared with performance in previous years and with the Australian benchmark.

Example of an Indicator of Sustainability

Sustainability

- the persistence of the impact or results over time.

Output sustainability indicator

Focus: Learning outcomes of students with disabilities - success in Tasmanian Certificate of Education (TCE) subjects.

Indicator: Number of TCE subjects successfully completed by 'students with disabilities' per number of students with disabilities in years 11 and 12.

Criteria: compared with:

- the Tasmanian average figure for subjects per student; and
- trend over nine years.

Responsiveness, Social Justice and Equity

Responsiveness, social justice and equity are concerned with the impact, or effect, that delivery of a service may have on the population or on selected customer or client groups. Client perceptions of the quality, adequacy, standard of service and distribution of service provide evidence for answering questions about the responsiveness and equity of service provision. However, client impact can often be measured only indirectly, using returns, surveys or ratings.

Responsiveness indicators measure the extent to which the demand and preferences of the public are satisfied. Social justice, or equity, indicators measure the distribution of services, especially in relation to demographic characteristics, in accordance with various generally accepted criteria of fairness.

Responsiveness and social justice are sometimes treated as aspects of effectiveness (for example, as in the *Report on Government Service Provision 1997*, pp11-14) or of appropriateness.

Social justice indicators focus on the social impact of a service in terms of equity of service delivery, equality of access and equality of participation. These indicators provide answers to questions such as:

- Does the service address all client target groups equitably?
- Is access (geographic, language, timing) to the service facilitated for all client target groups?
- Does this service increase the ability of clients to participate fully in the community?

The extent to which clients are able to access services is an important issue for services provided by Government. Ease of access can be defined with reference to:

- waiting periods to enter the service, for example for hospitals, public housing, courts administration;
- the affordability of the service, for example, public housing, aged care, children's services; or
- physical accessibility, for example, geographic location or facilities for the disabled.

Most indicators of access are based on the representation of the target group in the client base compared with the target group's representation in the total population. A shortcoming of these indicators that should be noted, is that they are seldom designed to account for variations in a target group's demand for these services compared with demand by the rest of the community.

Measures of responsiveness focus on the quality of the service to clients and on the standard of service provided.

Measures of 'standard of service' answer questions such as:

- Are our clients satisfied with the way they are treated?
- How do our current standards of service compare with past levels of service?
- Is the standard of service being provided appropriate to client needs?

The main dimensions of 'quality' which indicators of responsiveness can address are:

- accuracy;
- completeness;
- accessibility;
- timeliness;
- risk coverage;
- compliance with legal standards; and
- satisfaction of client needs.

Assessing Quality

The 'quality' of a service can be assessed in relation to whether the service conforms to specifications and whether it is fit for the purpose for which it was intended. However, these criteria can be difficult to use for services which are intangible or where there is no market transaction. In these cases, surrogate or proxy measures, such as information obtained through surveys of customer, client or stakeholder satisfaction, are used for measuring aspects of service quality.

A frequent limitation of such surveys is that 'quality' is usually defined in relation to the characteristics of the product or the service that customers or stakeholders refer to when making judgements of 'worth' or 'value'. This notion of quality equates quality with 'benefit to the customer' and the 'meeting of needs'. However, the concept of quality also encompasses notions of 'merit': that is, the intrinsic characteristics of a product or service as these relate to externally defined standards.

For many public sector goods and services, judgements about quality have to be made in relation to 'merit', as well as 'worth' and 'value'. In some cases, judgements of quality as 'merit' will be more important to the agency, in relation to improving performance, than judgements about 'worth' or 'value'. For example, medical or educational services that fail to meet appropriate professional standards are not considered to be 'quality' services even when clients assess them as meeting their needs. Failure to meet professional standards of 'merit' can result in a service being discontinued: for example, nursing homes, childcare facilities, hospital services and some tertiary training courses have to meet accreditation quality standards if they are to continue to operate.

Measures of quality need to encompass ‘merit’, ‘worth’ and ‘value’, in relation to processes, Outputs and results, and also need to take into consideration relevant objectives and available resources.

In selecting indicators of ‘quality of service’, dimensions of performance such as time, location or accuracy need to be treated as parts of the quality of the good or service and not as extra dimensions different from quality. This approach recognises how clients actually perceive quality. For some Outputs, time may be the most important dimension of quality, while in others, for example, it might be accuracy or ease of access.

Other approaches to measuring quality include:

- identifying the incident of service failure, for example, ‘the number of serious and sustained and notifiable outbreaks of disease per 1000 children in child care and preschool services’;
- using ratings for ‘quality of inputs’ and ‘quality of production processes’, as measured through quality assurance (QA) procedures, as indicators of the quality of the service; and
- using the results of accreditation procedures as indicators of service quality.

Quality standards and improvement targets should be developed for both service delivery quality and for the quality of outcomes or results.

Standards and improvement targets that relate to quality as ‘worth’ and ‘value’ need to be based on a sound analysis of stakeholder interests as well as client needs and expectations. They need to strike a balance between the intended results and the resources available. Factors which may have to be considered include the needs of different client groups, the relative priorities of service delivery, the achievement of results, and the interests of key stakeholders.

Assessment of quality also involves gathering information about the expectations of key interest groups in order to identify differences between expectations and the experiences of users and stakeholders. Key interest groups can include direct and indirect customers and clients, staff, professionals, the general community, and the Government.

Real and perceived needs

In the provision of a service, the success of any activity or strategy, is tied up with the extent to which the perceived needs on which the activity or strategy was based match the real needs of the client.

An Output could achieve intended results, but if the perceived needs on which it was based were inappropriate, or had changed, it is questionable whether the performance of the agency could be assessed as appropriate.

6. Expectations and Criteria

Expectations of Performance

The assessment of performance is based on comparing results with expectations. Performance criteria represent an agreement about desired levels of performance based on the expectations of customers, clients and stakeholders. The expectations of key stakeholders - or in a purchaser/provider relationship, the purchaser - need to be identified before selecting criteria for use in judging performance.

It is important that the processes used by the agency for establishing an agreement on expectations, and for selecting criteria, are appropriate to the agency and to the nature of its business. The processes also must be acceptable to stakeholders.

To ensure the acceptability of the selected criteria, there is a need to:

- involve those who participate in the accountability relationship;
- focus on a few key expectations;
- choose criteria that are both challenging and feasible;
- use both ongoing and periodic measures; and
- be prepared to change and adapt expectations as experience is gained or circumstances alter.

Criteria provide the basis for establishing how performance against a particular measure is to be judged. Performance criteria can be specified in quantitative terms, or as qualitative statements of expectation.

Criteria are derived from expectations of performance for an Output against a particular measure. Being able to compare the level of performance achieved against clear criteria, identified in advance, enhances accountability and enables action to improve performance to be appropriately focused.

The criteria need to be sufficiently challenging to encourage improved performance and motivate good management, but also need to be realistically achievable and within the capacity of the agency to deliver.

Criteria can be specified in the form of targets, standards or benchmarks.

Targets

Targets are agreed levels of performance to be achieved within a specified time. An agency is expected to assess progress and manage performance against targets.

Targets express quantifiable performance levels, or changes in the level of performance, that are to be attained at a future date. For example, annual targets can specify the quantity to be produced, the expected quality standard, the delivery time, and the cost, or can be in the form of a benchmark or a productivity gain. Targets enable direct judgement of performance, and clarify and simplify the process of performance monitoring.

Examples of generic targets for productive efficiency
--

- The 'least amount' of input required to produce a given amount of Output.
- The 'least cost' to produce a given amount of Output.

- The 'optimum mix' of the various factors of production required to produce a given amount of Output, having regard to cost.

For most Outputs, it is possible to identify relevant targets that are meaningful when measured annually, and for which progress towards the annual target can also be measured at appropriate intervals (which may be quarterly, monthly, weekly or even daily). Annual targets tend to be specified either in terms of the actual quantitative results to be achieved, or in terms of productivity, service volume, service-quality levels, or cost-effectiveness gains. For some Outputs, assessing trends over time in relation to a target may be appropriate, and it may be feasible to benchmark against performance achieved in other jurisdictions.

Ideally, targets should encourage improved performance on a continuing basis. To operate in this way, targets need to be challenging in that the expected change in level of performance would be difficult to achieve in one year, and subject to revision, particularly when performance nears a particular target. However, care should be taken to ensure that the focus for performance does not become the achievement of individual targets at the expense of overall performance. Targets need to be monitored, reviewed and updated on a regular basis.

For some expectations of Output performance, annual targets alone may not be sufficient. In these cases, there will need to be an agreement concerning the milestones and targets to be measured along the way: that is, the events that have to occur, the expected levels of performance, and the timing of these events will have to be identified and monitored. This is in addition to agreement on, and assessment of, the overall intended client impact and the level and standard of performance to be achieved.

Selecting Targets

Targets can be derived from:

- time trend data;
- needs analysis;
- performance of similar organisations;
- performance of other populations;
- performance of market leaders/best practice; or
- long term plans for Output performance.

Some commonly used approaches to setting performance targets are:

- adoption of current performance (status quo);
- current performance plus a percentage increase;
- average performance (national/state/industry);
- best practice (benchmarking);

- frontier practice (best achievable performance with present technology even though not currently achieved);
- technical standards (external standards established by a professional association); and
- management decisions (calculated decisions given resource and staffing limitations).

Targets

- relate to a single performance measure for a particular Output;
- are required for each measure (at least one target per measure);
- are defined in precise terms that relate to the delivery of Outputs;
- are measurable (ie are specified as actual numbers, percentages, or in operationally defined terms, not in general terms such as optimise, increase or decrease);
- are expressed simply;
- are realistic and achievable, yet challenging;
- encourage continuous improvement; and
- are systematically reviewed to ensure practicality and continuing relevance.

Standards

A standard is a pre-determined level of excellence or performance.

There are two main types of standards:

- service delivery standards that relate to the quality of the relationship between the agency and clients; and
- effectiveness standards that relate to intended outcomes or objectives.

Service delivery standards can be established for various aspects of the delivery of a product or service - for example, for inputs, and processes, as well as for the level and quality of client service. Some examples of standards for service delivery are delay standards, standards of compensation and rectification, and speed of response.

Standards relating to effectiveness are an expression of a shared understanding of what the quality of the service to the community should be: for example, standards set for the quality of life and care in nursing homes. These types of standards operate as an aid to public scrutiny and, therefore, enhance public accountability.

For Outputs, standards are set with the aim of defining a level of performance that is appropriate for the service and is also expected to be achieved. Progress in delivering the service is measured against the standard. Standards can be set at a minimum acceptable level of performance, or at a level that is challenging, but is expected to be

Standards and Quantitative Targets

Example: 'the processing of 75% of new claims for age pensions within a 28 day period'.

The workload measure is: 'number/proportion of new claims for age pensions processed.'
The standard is: claims processed 'within 28 days'.

The target is: process '75%' of all claims received.

The standard is derived from national customer service standards, while the target has been determined by the agency, taking into account that the national target for processing claims is set at 80%.

Other national standards and targets that could be used for this activity:

- for 'accuracy of processing claims', a standard of 100%; and
- a target for 'overall customer satisfaction' set at '85% of clients'.

Qualitative Targets:

Example 1: As a result of changes to the service, access to public radio frequencies will improve and interference will drop in the next three years.

Performance measures for this target would be:

- the extent to which access improves over the three years; and
- the extent to which interference decreases over the three years.

NB. To be able to use this qualitative target:

- the key terms 'changes to the service', 'improvement in access' and 'decrease in interference' would have to be defined in operational terms;
- the definitions would have to be communicated to all stakeholders; and
- the measurement procedure to be used for each measure would have to be described and communicated.

Example 2: Delivery of this Output will lead to a favourable result for certain negotiations being conducted by the government.

A performance measure for this target could be:

- an assessment of whether the result of negotiations are attributable to the delivery of the Output.

NB To be able to use this qualitative target:

- the meanings of the imprecise terms 'favourable result, 'certain negotiations'' have to be defined in operational terms, and communicated to all stakeholders; and
- the procedure(s) to be used in making an 'assessment', or undertaking an 'evaluation', need to be described in operational terms.

achieved within a specified time period. A standard used by an agency may be one that:

- is internationally recognised;
- is nationally-agreed;
- has application only within a State; or
- has been developed by the agency for use only within that agency.

For some Outputs, national standards have been developed that operate as a guide to quality. Achieving some nationally-agreed effectiveness standards can be a requirement for the continued operation of a service, for example, as occurs with accreditation procedures for hospitals, nursing homes, child care facilities and some tertiary level courses.

In contrast to targets, which are usually adopted to encourage continuous improvement, standards are more frequently used to designate minimum levels of acceptable performance.

Benchmarks and Benchmarking

Benchmarks are standards derived from performance levels achieved by other comparable organisations, or by other sections within an organisation. For benchmarking purposes performance comparisons can be made with Government agencies in other jurisdictions, businesses in the private sector, Government agencies in the same jurisdiction or even with sections within the same agency.

Benchmarks can be used as:

- challenging targets for efficient performance;
- best practice standards;
- qualitative prescriptive standards;
- minimum quality standards;
- normative (population wide) measures of quality;
- indicators of viability;
- baseline measures for monitoring a performance indicator;
- tools to identify and understand how best practice can be achieved;
- a technique for focusing an agency on external, customer-orientation or competitive factors; and
- a checklist of the essential characteristics of good service operation.

Benchmarking is a procedure for gathering ideas and techniques about how to improve one process by studying another process that is thought to have particular relevance to the one to be improved.

Benchmarking can also be defined as an ongoing, systematic process to search for and introduce best practice into an agency by making valid comparisons with other

processes or organisations. ‘Best practice’ refers to the identification and adoption of the best ways of carrying out particular tasks and of approaching particular projects.

The focus of benchmarking can be:

- internal; that is, comparisons of the same activity between different parts of the agency;
- external; that is, comparisons with other agencies, of the same activity;
- generic; that is, comparisons of similar processes with other agencies, or private sector organisations, where the Outputs are different.

Benchmarking can be used in two contexts: as a strategy for performance auditing; and as a strategy for performance improvement.

Benchmarks can be used to support accountability processes. Benchmarked information can be used by purchasers to assess value for money, even when the number of service providers is limited. Service providers can employ benchmarking techniques to enhance performance in a competitive or a contestable market environment.

Benchmarks need to be used with care. Because of differences in the environment and in the nature of businesses, the likelihood of the level of performance achieved by one agency being appropriate for use as a target by another agency can be very small. It is important to look at the detail of the data definitions and the counting rules. For comparisons to provide a valid basis for decision making in relation to improving performance, the counting rules for the measures must be the same.

The expression, ‘what you measure is what you get’ is very true of benchmarking. If the wrong questions are asked to start with, then benchmarking may, at best, do nothing more than allow the wrong results to be achieved more efficiently.

Benchmarking is best suited to the assessment and enhancement of Output efficiency. This is because of its focus on the processes and activities by which inputs are converted to Outputs. Benchmarking can also be used to help in improving the quality of an agency’s Outputs, for example, in terms of faster service and better access to information, and to add value in terms of quality improvement. However, it will not assist in improving other aspects of effectiveness, nor will it shed light on whether the service or product is likely to achieve intended outcomes, nor whether it is meeting community needs.

Benchmarking

Through benchmarking performance, improvements to service provision can be identified and decisions made about whether the Outputs provided represent value for money. Benchmarking also enables effective production processes - best practice - to be identified and this information used in improving performance.

7. Measurement and Evaluation

Measurement Procedures

An essential part of defining performance information for an agency is identifying, for each measure, the measurement procedure to be used for collecting information. Without an associated measurement procedure, a performance measure simply identifies the type of information it would be nice to know.

A measurement procedure explains how and when the required information is to be collected and reported, and identifies who is to be involved in the process of collecting and reporting.

To be meaningful, a measurement procedure must also include a process for ensuring that the data and the measures are reviewed and updated on a regular basis. Without the inclusion of this process, performance measures quickly become dated, and of little or no use as the information obtained will be relatively meaningless.

A measurement procedure might be:

- an evaluation to be undertaken at three year intervals;
- the routine collection of relevant data on a monthly basis through the agency's management information system; or
- an annual sampling of agency clients to measure levels of satisfaction with the services they are receiving.

In essence, there are only two basic ways to measure performance.

- Conduct a special study to gather and analyse information on performance.
- Routinely capture data on the ongoing operations of the agency as part of a management information system.

Special studies and ongoing performance monitoring are complementary approaches to generating trustworthy information for management and accountability purposes.

Frequently, the optimum set of Output performance measures will include a number of indicators based on ongoing measurement, supplemented by information that requires a special study, such as an evaluation process involving periodic surveys/interviews, an audit, a review or a research process.

Issues concerning the efficiency of the Output delivery system can be examined through internal audits or other types of review. Regular surveys can be conducted, at appropriate intervals, to obtain information on client impact and on the views of stakeholders. Periodic evaluations or research studies can be commissioned to obtain information on the adequacy, relevance, sustainability, responsiveness or equity of service delivery.

Many aspects of performance can be measured either through routinely capturing data or through conducting a special study. In these cases, the choice of procedure is a

tactical one, and depends on the use to be made of the information, the cost of collecting it and, to some extent, the aspect of performance being measured.

The direct measures used for monitoring and reporting on the delivery of Outputs should be incorporated in the agency's management information system. Information on, for example, cost, quantity, and timeliness, usually needs to be reported for monitoring senior management on a monthly basis and may be required more frequently by other audiences for other internal management purposes. The information also has to be capable of being aggregated, at relevant times, for both internal and external accountability reporting.

For some types of Output, rather than collecting information on an ongoing basis, periodic sampling at relevant intervals will be appropriate as carefully targeted sampling is likely to provide sufficient data for assessing performance.

Similarly, it is usually not necessary to measure everything about an Output, or to survey all clients. Well designed sampling procedures - either statistically based or 'purposeful' - can provide reliable information at significantly reduced administrative cost.

In most cases, more than one measure, covering at least two criteria, should be used for an Output. Only in the case in which the situation surrounding the agency has remained unchanged over time and the Outputs have remained of the same type over time would it be possible, for example, to draw a conclusion from the use of a single performance indicator.

Continuity is an important characteristic of performance information. If the nature of the Output remains stable over time, then the information generated by a measure can be used in determining trends. Trend information, in combination with other data or evidence, can be used to assess performance improvement over time.

However, it is to be expected that performance measures will have to change for them to continue to reflect the performance achieved, and remain relevant for making decisions about how to improve performance. For example, measures may need to change to reflect the results of evaluations and changes to policy, or to focus on new areas for performance improvement. When an agency reports against measures that have changed, the changes need to be noted and the impact of these changes reflected in the way that the level of performance over time is interpreted and explained.

Continuity of Measurement and Environmental Change

For most government agencies, environmental change is the norm and, typically, the situation in relation to measuring Outputs over a period of time is complicated.

For example:

In the face of a reduction in resources over time, an agency may appear to have constantly maintained the level of service for a particular Output, as measured by one performance indicator, such as 'units processed per unit of time'. However, the nature of the 'units processed' may also have changed over time, and so the level of service and its effectiveness may have deteriorated.

Evaluation

Evaluation is the process of determining merit, worth and value. In relation to Output performance, evaluation is a systematic and disciplined process through which trustworthy information is gathered for assessing, for example, the appropriateness, effectiveness or efficiency of Output delivery. An evaluation will provide both quantitative and qualitative information and typically will involve the use of surveys, interviews, observation and/or analysis of existing management information.

Evaluation studies, conducted at intervals of one or more years, are necessary to measure achievement against expectations for an Output, or to assess whether the delivery of the Output continues to be relevant and cost effective.

Evaluations are particularly useful for:

- examining the effectiveness of service delivery over the longer term;
- defining linkages between the delivery of services and the results achieved;
- assessing objectives; and
- reviewing the appropriateness and quality of current performance information.

Qualitative measures, such as effectiveness indicators, that can provide a basis for an evaluation study, may need to be custom built. In this case, unless there is collaborative involvement in the development process at the national level, the indicators may not produce data that is comparable across jurisdictions or across agencies. The Review of Commonwealth/State Service Provision is an example of a collaborative initiative to custom-build measures to ensure that nationally comparable information about performance will be available.

Custom building agency-specific qualitative measures requires a significant commitment of resources. This can cause difficulties for agencies where the tools for creating qualitative information have not been widely used. In these cases, agency management may need to buy-in appropriate evaluation and research skills, at least in the short term.

Given their periodic nature, evaluations may be useful for collecting information which is too expensive or difficult to collect on an ongoing basis. Comprehensive surveys that would otherwise be too resource intensive to undertake, can be conducted as part of an evaluation. It is also possible to undertake more detailed analysis of existing performance information as part of an evaluation focused on key issues for the agency.

It should be noted that there are limits to the usefulness of customer or client surveys in determining the quality or effectiveness of services. For example, measures of 'level of satisfaction', as determined through surveys, may not always provide reliable information about the effectiveness or appropriateness of a service (see p38). Expert advice should be sought, when relevant, to ensure that information collection procedures will be appropriate for the intended decision-making purpose. In particular, it is important to ensure that information is not biased because of poor survey design or sampling errors.

Customer and Client Satisfaction

Where an Output has identifiable individual customers or clients, it is important for management to have access to their views about, and attitudes towards, the level of service they are receiving.

A performance measure for customer/client satisfaction, with an associated standard and measurement procedure, is usually expressed in terms such as: ‘80% of our users will rank our service as ‘good’ or ‘very good’ on the basis of an independent survey against agreed criteria.’

However, the need to measure customer/client satisfaction should not be interpreted as meaning that judgements about service appropriateness and effectiveness can be derived from solely from information about how well the service ‘satisfies client needs and expectations’ (see also ‘Assessing Quality’ pp19-20).

The main reason for surveying clients is to ensure that their views can be taken into account when attempting to improve the service, within the resources available and in accordance with the expectations of Government and other stakeholders.

The level of ‘satisfaction’ or ‘happiness’ with the service (its value or worth to the client) is only one type of information that should be collected through surveys. In addition to providing information about how clients rate the service, useful client satisfaction surveys provide managers with the views of customers and clients on a range of relevant issues relating to service delivery.

Some examples of issues that can be addressed through surveys are:

- satisfaction with approval processes;
- adequacy of funding level;
- adequacy/appropriateness of the mode of delivering the service; and
- awareness of the service and its features.

Efforts should be made to ensure that quality standards, and other targets for service provision, are clearly defined and justified, and effectively communicated to customers/clients. Surveying clients in relation to known performance standards is likely to result in information that will enable managers to identify specific ways to improve performance. Where a complaint mechanism is used for monitoring service delivery, this can operate more effectively when clients are well informed about management’s intentions for a service.

When a survey is used to gather customer/client views, it is important that the instrument be robust, as a poor quality survey-instrument is likely to provide misleading information about performance. To ensure robustness, client surveys need to:

- be conducted independently and not by the staff of the provider;
- be explicit about the sample size and composition; and
- specify the criteria against which clients are surveyed.

8. Developing and Using Performance Information

Purpose

The main purposes for which inner-Budget agencies in Tasmania need access to performance information are for managing the agency, for accountability reporting, both internal and external to the agency, and for whole-of-Government management requirements.

When developing and using performance information it is particularly important to distinguish those measures developed for accountability reporting from those used in internal management. A common mistake is taking information gathered for one purpose and using it for another purpose for which the information is inappropriate. For example, reporting management information as evidence of performance achievement for Budget purposes.

Accountability Reporting and Internal Management

Measures for accountability reporting:

These are concerned with measuring something that senior managers need to know, or something that is required to be reported externally.

Measures for internal management:

These focus on things that need to be monitored, contained or managed within the agency.

To be appropriate for public reporting for accountability purposes, performance information must have an external focus, and be policy oriented. Many of the measures that are needed for internal management purposes will not have the required external focus, and will not provide information related to policy. They may, however, provide contextual information that will be necessary for understanding the level of performance demonstrated through externally focused measures. Some measures developed for external accountability reporting will also be useful for internal accountability and management purposes.

An agency will require different types of performance measures for different types of internal management decisions, such as:

- ensuring that the delivery of the service is on target through monitoring what is being done;
- assessing whether the right things are being done;
- adjusting to changes in requirements for the delivery of a service;
- managing for change;
- accounting for what has been done; and
- improving the service.

The set of measures developed by an agency should be sufficient to:

- cover the range of internal management needs;
- comply with external accountability requirements; and
- satisfy whole-of-Government management requirements.

In Tasmania there are four main purposes for which inner-Budget agencies are required to provide externally focused performance information. These are:

- the provision of performance information to Treasury for use in developing the Budget;
- reporting Output Group performance in the Budget Papers;
- accountability reporting to Parliament through the Head of Agency's Annual Report; and
- performance reporting, for whole-of-Government monitoring purposes, through Departmental Performance Assessment meetings.

The annual timetable for the provision of performance information by inner-Budget agencies, the key internal and external audiences, and the purposes for which the information is required are outlined in figure 5.

Figure 5. Purposes, Audiences and the Timeline for the Provision of Output Performance Information by Tasmanian inner-Budget agencies

Purpose	Audience	Time
Preparation of the Budget	Department of Treasury and Finance	February to July
Allocation of Resources	Budget Committee Cabinet	
Reporting in Budget Papers	Parliament The Appropriation Bill debates and the Estimates Committee process	August to October
Accountability reporting by Head of Agency through the Annual Report	Parliament	Time of preparation and of tabling: between June and November
Performance reporting for whole-of-Government monitoring purposes	Premier and relevant Minister(s) Dept of Premier and Cabinet Dept of Treasury and Finance	Departmental Performance Assessment meetings
Internal monitoring and reviewing of Outputs and Output delivery systems	Agency corporate management	Periodic reporting, as required by the agency's corporate planning, monitoring and reviewing processes
	Managers responsible for the provision of an Output	Ongoing
	Staff involved in the production of an Output	Ongoing

Selecting Performance Measures

In the Tasmanian context, the performance of agencies in delivering goods and services is measured within a framework of Community Outcomes and Government Outcomes.

Community Outcomes are the intended results associated with high level policy objectives. These Outcomes are achieved through contributions from all sectors of the Tasmanian community, including the Government sector, and are generally achievable only in the long term.

Government Outcomes are the results desired by Government that are expected to be achieved largely through the resourcing of Government agencies to produce specified Outputs. Government Outcomes provide the link between the high level and visionary Community Outcomes and agency Outputs.

Agencies are responsible for Output performance: that is, for delivering the required services and goods, on time, within budget, to the standard required, and to the satisfaction of clients and stakeholders. They are also concerned with the efficiency and effectiveness of service delivery.

While agencies are not responsible for Outcomes, they are responsible for ensuring that the Outputs provided are likely to achieve the intended Outcomes. Because of this, agencies need to measure short and medium term impact on clients and other results of service delivery.

In order to be confident that judgements about Output performance will be soundly based, an agency will usually need to develop a number of performance measures for each Output and Output Group.

As decisions affecting Output delivery are made at many levels within an agency, as well as by the Government, it is important to generate Output performance information appropriate for use at each level of decision-making. This requirement affects the range and number of measures needed for each Output.

The measurement of performance operates within two contexts:

- as a market transaction that is part of the implicit exchange relationship embodied in the funding of Outputs through the Budget process; and
- as part of a political process involving choices by Government on behalf of the community.

Both contexts need to be taken into account when developing performance measures.

As part of a market transaction, performance in delivering an Output is measured through the use of direct measures to determine whether the Output meets quantity, cost and timeliness targets, and quality standards.

However, as the delivery of a service does not exist as an end in itself, it is important that the measures used do not become focused solely on the producer's information requirements, and perceived as being concerned only with production.

General Principles for Selecting and Using Performance Measures
--

Make a commitment to improvement

- Make a commitment to improvement; not a commitment to a measurement system or to an aspect of it such as benchmarking.
- Performance improvement is a long term process: allow time for technical adjustment, and avoid premature use of measures, particularly for accountability purposes.
- The measures must focus on what employees, at the relevant level, can translate into direct corrective action.
- The measures need to reflect the major improvements that are expected by the agency: think of leverage points when choosing measures - measure the things that are most important and most likely to improve once people start paying attention to them.
- Monitor and actively manage the impact of the measures on staff, and ensure that improvements are made incrementally, as problems are identified.
- When strategies and Outputs change, measures must also change

Implement a system

- Implement a system for managing performance information that supports and enhances continuous performance improvement throughout the agency.
- The performance information system must:
 - ⇒ be developed as participatively as possible;
 - ⇒ fit into and support the management process within the agency;
 - ⇒ be integral to the agency's planning and budgeting cycle; and
 - ⇒ be acknowledged throughout the agency as a crucial part of a decision making and problem solving system aimed at performance improvement.
- The measures must be reviewed and updated on a systematic basis.

Develop balanced sets of measures

- Ensure that a balanced set of performance measures is developed for each Output, not just a single measure: think in terms of a family of measures.
- Develop measures for all important elements of Output performance: think in terms of what you will need to know in order to improve performance.
- The measures must focus on what is important strategically, and on what is of value to customers and stakeholders.
- The measures must be capable of adequately reflecting customers' points of view.
- Be concerned about cost-benefit when selecting measures.

Performance measures also need to focus on the user and the choices made by Government on behalf of the client or the community as a whole. Purchaser or client views of the goods or services are important in order to ensure that Outputs are of the appropriate quality, and stakeholder views are important in relation to 'merit' standards, and the achievement of intended results.

Before selecting a performance measure, it is important to be clear about what is to be measured, why it is to be measured, who will be using the information, and how and when it is intended that the information generated by each measure will be used.

In other words, the appropriateness and usefulness of a measure will depend on how effectively it is matched to:

- the purposes for collecting information, and the types of decisions to be made;
- the audience for the information and/or users; and
- the nature of the Output.

Measuring Output Performance

To enable judgements about Output performance to be made, performance information needs to:

- focus on the goods and services that an agency is funded to provide;
- be relevant to *Government Outcomes*;
- be relevant to the needs of clients;
- be indicative of the broader performance of the agency, where possible;
- measure specific aspects of an agency's performance that senior management consider to be important;
- be based on data that is verifiable, free from bias, reliable and comparable; and
- provide information that will be used by agency management improvement, executive decision making, and accountability purposes.

Useability

The cost-benefit of collecting performance information is an important consideration when selecting or developing measures. The costs related to collection, storage and use of the information should not outweigh the benefits arising from the collection of additional or more accurate information.

In assessing the need to collect particular information, the resources required for a range of tasks will need to be taken into account. For example, resources will usually be needed to:

- develop the instrument;
- collect the information;
- analyse the information;
- prepare reports;
- plan the action required to improve or sustain performance;

- disseminate the information about the level of performance achieved and the resulting action plan;
- ensure that the required action is implemented;
- review performance; and
- update both the measures and the performance data as necessary.

Keep in mind that it is often not necessary to measure everything about the Output, or to measure some things all of the time. Well designed sampling procedures (both ‘statistical’, and in relation to ‘purpose’) can provide reliable data at reduced administrative cost and burden.

Key principles in minimising the costs of collecting performance information include:

- use readily available data, where appropriate; create new measures only where essential;
- use indirect, or surrogate, measures for obtaining qualitative information;
- when surveying client opinion, sample the relevant population rather than attempt to survey all clients; and
- where there is a choice, collect the data at specified times of the year (sampling over time), rather than measure continuously.

Characteristics of Public Sector Outputs

The general characteristics of goods and services provided in a government setting have implications for the selection of Output performance measures appropriate for use within the public sector.

The political nature of the process of reporting performance to, or on behalf of, Government also has to be taken into account.

In general, Outputs need to be within the control of the agency so that the agency can be held accountable for performance. Seldom, however, is the case one of absolute control or no control: rather there is a spectrum of controllability. Every entity operates in an environment and, therefore, external factors will always affect performance.

One of the key tests for managers is how well they manage the agency so that it succeeds in meeting the continuous, and changing, demands from its environment. Whether an agency has a significant influence over successful delivery will typically be a sufficient basis for Output measures rather than perfect or absolute control.

Outlined below are some of the characteristics that distinguish public sector Outputs from those of the private sector, and that need to be taken into account to ensure the relevance of particular measures to the Output.

In the public sector there are Outputs where:

- clients and Ministers do not weigh the service against personal payment. There may be a tendency to be more generous in assessment of satisfaction; and both clients and Ministers may expect very high quality service without regard to increased cost;
- there is no other provider of the Output so purchaser or client expectations of standard and cost are limited to past performance of that provider;

- the service is continuous (not just discrete products) and requires qualitative judgements against criteria that recognise the total nature of the Output;
- the service is intermittent and it is experienced by few people experience (eg emergency services);
- the purchasing Minister does not directly experience the service and has to place reliance on proxy measures; and
- the Outputs are effects on individuals. Some Outputs focus on the mind or body of an individual and do not involve the production of tangible goods or services, for example, counselling and treatment. The degree of controllability may be subject to time limitations. The profile of the group will be relevant to any target setting. Measures need to be carefully constructed to recognise these kind of limits while still focusing on the percentage of successful treatments.

Identifying the characteristics of an Output assists in ensuring that the measures selected will be more likely to address significant aspects of performance. Some of the implications that the specific characteristics of Outputs can have for selecting appropriate measures are outlined below.

Customer oriented Outputs

Outputs of this type have identifiable individual customers who voluntarily consume a service for their own benefit. The key measure of quality is ‘meeting customer expectations’, usually assessed through an independent, robust survey. The survey should emphasise customer requirements, such as relevance, response time, and helpfulness. Customers’ views are paramount for determining quality. An example would be measuring the performance of a lending library.

Transactions

Outputs in this category involve the large scale processing of identical transactions. Error rates, response times, average and marginal unit costs are the measures used most frequently. Although individuals, such as tax payers or beneficiaries, are affected by these transactions, they are not customers or clients who pay for or who can choose to use the service. Examples of this type include benefit payments and tax return processing.

Professional/Managerial

Outputs of this type are characterised by a mixture of ongoing service and projects. Quantities are often variable; priority is placed on qualitative assessments against agreed criteria. The ‘structured judgement approach’ may involve a recipient of the service assessing against the criteria, but also requires other professional input to assist in establishing proof of quality, for example in scientific research. Often these Outputs are core services used by Ministers, for example, policy advice.

Investigations

These are public good Outputs where considerations of risk, due process, legal compliance and quality of judgement are most important. Citizens, as offenders and victims, rather than a Minister, experience how these services are delivered. There are difficulties in developing appropriate measures for this type of Output, and in determining criteria for distinguishing success from failure. Other issues, such as variability in the scale and type of investigations, also need to be considered when specifying qualities and unit costs. Criminal Investigations is an example.

Behavioural

These Outputs involve attempts to change attitudes and behaviour. Performance measures need to relate to success in achieving the desired level of individual or family change. Counselling is an example.

Control

These Outputs involve coercive powers, either to keep certain individuals within a controlled environment, or to prevent entry of individuals on to a site or area. Performance measures need to relate to success in achieving the desired level of control. An example is prison management.

Emergency Services

These Outputs involve the purchase of a planned level of response to emergencies, based on average historical levels. The concern is to ensure that a sufficient capability exists to meet various levels of risk, that an adequate response will be available in time to minimise loss, damage or injury, and what the probability of success will be in dealing with the event. The performance measures need to provide assurance against these requirements.

Performance Measures: Key Characteristics for Accountability Reporting

The measures:

- *have an external focus* - the measures are meaningful to clients and stakeholders and do not focus on internal processes or technical procedures;
- *are measurable or assessable* - performance failure can be identified because a clear standard or target has been set for the measure;
- *are Output focused* - aspects of the good or service being delivered are measured, not inputs or processes;
- *have significance* - all significant aspects of performance are covered so that the set of measures for each Output gives a balanced picture of performance; and
- *are manageable* - the number of measures reported is sufficient to cover all significant aspects of performance, without overloading the user with information.

9. Managing Performance Information

Measuring Performance is a Complex Process

Measuring performance is difficult and complex. The process of developing and implementing a satisfactory set of valid and reliable performance measures, with each measure underpinned by an appropriate measurement procedure, is an iterative one which requires a number of years of consistent work. Ensuring that the appropriate action is taken on the basis of performance reports is also difficult and complex.

In many respects, the success or failure of an agency's use of performance measures will depend on the maturity and sophistication with which the management of performance information is handled by managers.

The development, use and management of performance information needs to occur as an integral part of the agency's strategic and operational planning, reporting and reviewing processes. For performance information to be used effectively within an agency the corporate management group and senior executives have to demonstrate that they believe there is a real need to measure performance, and be actively seen to be supporting the use of performance information.

'Commitment' and 'involvement' are basic requirements for successful implementation of an appropriate system for measuring the performance of an agency.

- Senior management needs to be committed to the measurement of performance and to the use of performance information.
- The people who produce the results need to be involved in developing the measures.

The best work done in providing performance information will be of no use unless the measures are owned by those who need to use the information. Have the team that produces the result develop the measures, take responsibility for the measurement process and report the results. Involvement of the line managers who are affected, and of others who will directly use the performance information is also essential.

People are more likely to be motivated by a measure they have had some part in selecting. At the very least, they will need to have training in what the measure means, be provided with information about the measure, and have ongoing access to the performance information generated by the measure. For improvement to occur, all members of a team need be aware of the relevance, strengths and limitations of particular measures, and be able to interpret and internalise the messages conveyed in the relevant performance reports.

Agency managers will find that, in order for their agency to use performance information efficiently and effectively, it will not be sufficient to focus just on developing the performance measures. Managers will need to take responsibility for developing and maintaining a performance information management system and for ensuring that performance information is used appropriately.

Many aspects of the development, gathering and reporting of performance information can be delegated. However, ensuring that performance information is available when needed, that it is acted upon to improve performance, and that the changes made do result in improvement are corporate responsibilities.

A Performance Information Management System

The development and use of performance information has to be strategic and occur as an integral part of an agency's integrated management, budgeting, monitoring, reporting and decision making processes.

A systematic process for managing performance information is essential. This management system should be integrally linked with the accountability and management cycles that apply to the agency.

A management system for performance information consists of:

- a plan that has a strategic focus;
- a framework for the performance information;
- a guideline for developing performance information;
- sets of Output performance measures; and
- a process for managing the performance information.

A Plan

A performance information strategic plan identifies key aspects of an agency's performance information management system. It is prepared as part of the agency's corporate plan, is updated annually, and has a three to five year focus.

The plan provides, in summary form, an outline of how performance information is to be developed, communicated, used and updated, and how the procedures for measuring performance are to be implemented and maintained.

The plan assigns responsibility for each key aspect of the performance management system.

A Framework

The performance information framework:

- identifies the different purposes, audiences, uses and decision making procedures for the agency's performance information;
- identifies the different types of measures required for each Output, and the associated criteria;
- identifies the measurement procedure to be used for each measure;
- specifies timetables for the development and use of the performance information;
- assigns responsibility for each set of Output measures; and
- identifies the processes for managing the measurement system.

A Guideline

The guideline outlines a set of principles, rules and procedures for developing performance information. It is a practical document that is used to communicate what is required to all staff.

It is a general guide for developing appropriate performance information for the range of decision-making needs relevant to the agency.

Sets of Output Performance Measures

These are comprehensive sets of direct measures and performance indicators for all Outputs. The number of measures for each Output needs to be sufficient to provide the information needed by the agency for internal and external accountability reporting, and for use in managing the delivery of the Output.

The set of measures also includes the criteria - targets, standards or benchmarks - that provide the basis for comparison for each indicator and enable judgements to be made about appropriateness, effectiveness, efficiency, economy, or about whether the Outputs have been delivered as specified. The additional information needed to place the measures in context is also recorded with the set of performance measures for each Output.

Managing Performance Information

In order to be able to manage performance information, policies and procedures need to be written down and communicated. For each measure there should be:

- A documented measurement procedure;
- A schedule for the use of the measure;
- A description of the process for implementing the measurement procedure; and
- A statement outlining how the information generated by each measure, as well as the measures themselves, are to be maintained and updated.

A documented measurement procedure for each measure.

This is an outline of the processes and rules to be followed in

- the collecting and preparing the basic data;
- generating relevant evidence; and
- preparing performance information for reporting.

A schedule for the use of each measure.

The schedule is a set of instructions that guides the provision of information for each measure or group of related measures. The schedule specifies:

- when the information is to be available;
- how the information is to be presented;
- to whom it is to be provided;
- who is responsible for managing the measure(s);
- in what forum(s) the information is to be used;
- for what purpose(s); and
- who is responsible for any action resulting from the performance report.

A description of the process for implementing the measurement procedure.

This consists of the protocols for implementing the measurement procedure for each indicator and direct measure. The protocols identify such things as who is responsible for the measure, how it is linked to other measures, and what has to be done to ensure

that the information generated by the measure will be available when required and will be used for the purposes identified.

An outline of the procedures for maintaining and updating the performance information and the measures.

This is a protocol that documents what is to be done to ensure that both the measures and the information generated by each measure remain current. The protocol identifies who is responsible for each action step, and outlines the processes for managing and updating the measures and the performance information.

A Performance Information System

In an effective performance information system:

- *the measurement of performance is:*
 - ⇒ integral to planning, budgeting and reporting;
 - ⇒ facilitates managing by exception; and
 - ⇒ generates action.
- *the measures are:*
 - ⇒ relevant
 - ⇒ easy to understand
 - ⇒ simple to implement
 - ⇒ reviewed regularly; and
 - ⇒ gradually refined on the basis of experience.

Key Principles: Managing Performance Information

1. *Commitment*

- Agency management must be committed to ensuring that an effective system for managing performance information is developed and maintained.
- Managers must demonstrate the importance of performance information for executive decision-making, for improving the delivery of Outputs, and for accountability reporting.
- In gaining commitment from staff to the use of performance measurement as a tool for performance improvement, the process by which the agency determines what to measure, how to measure and how to use the measurement information is of critical importance.
- Managers must be committed to improvement; not to the measurement system or to an aspect of it, such as benchmarking.

2. *Involvement*

- Information on performance must be developed and used as participatively as possible. The team that produces the results should be responsible for:
 - developing the measures;
 - managing the process of collecting the performance information; and
 - reporting the results.
- The greater the involvement of staff in the process of creating a performance measurement system:
 - the more likely it is that changes in performance will occur as a result of staff having access to performance information; and
 - the easier it will be to implement future changes based upon the measurement of performance.
- The measures must focus on what employees, at the relevant level, can translate into direct corrective action.
- Stakeholders should be involved in the process of identifying expectations for performance and of selecting criteria against which performance will be measured. The measures must:
 - focus on what is important strategically; and
 - adequately reflect the views and expectations of key stakeholders.

3. *Integration*

- Performance information must be managed at the corporate level and be integral to the agency's corporate and operational planning, reviewing and reporting processes.
- Performance measures need to be developed and managed as part of a strategically focused performance information system that supports the management process and is integrated with the agency's planning, budgeting and accountability cycle.

- The measurement system must be built upon definitions of key concepts that are operationally focused, are well understood within the agency and are used consistently.
- Responsibility for reporting on achievement, and for ensuring that the quality of the measures and targets is maintained, must be delegated to those who are accountable for delivery against the measures.

4. *Improvement*

- The system for managing performance information must be integral to the agency's decision-making and problem-solving processes and support and enhance performance improvement on a continuous basis throughout the agency.
 - The measures must reflect the major improvements expected for the agency.
 - The measures need to focus on the aspects of performance that are most important and most likely to improve once people start paying attention to them.
- Establishing an effective performance information system must be acknowledged by management as a long term process.
 - Time has to be allowed for technical adjustment to both the system and the measures.
 - Premature use of measures must be avoided, where possible, particularly for the purpose of accountability.
- Management must focus on improving the capability of the agency to develop and use performance information. Capability can be improved through
 - identifying gaps in staff skills and knowledge;
 - investing in providing staff with the appropriate training and experience;
 - collaborating with other agencies to develop and use measures;
 - involving the agency in national initiatives; and
 - buying-in specialised skills, as required.

5. *Accountability*

- The performance information system must be managed so that those responsible for the delivery of the Outputs are held accountable for results.
- The performance information management system must be able to provide reliable and relevant high-level Output performance information for external accountability reporting, on time and in the appropriate format.
- Accountability for maintaining and updating the performance measures and performance information must be clearly identified and communicated, and processes established to ensure that the performance information and the measures remain trustworthy and relevant.

6. *Appropriateness*

- To be appropriate, performance measures need to be well matched to purpose, audience, the nature of the Output and the type of decision to be made on the basis of the information provided by the measure.
- The performance measures must be relevant to the production and delivery of Outputs and to the achievement of *Government Outcomes*.
- Measures must be valid and reliable, with the report on performance available on time and developed on the basis of robust evidence.
- Measures reported for external accountability must be accessible: that is, the information must be meaningful to both policy makers and the public, widely accepted as valid, and user friendly.
- Measures reported internally for improvement purposes must focus on what employees, at each relevant level, can translate into direct corrective action.

7. *Coverage*

- The set of performance measures developed for each Output must relate to relevant aspects of performance for the specific Output, and provide both quantitative and qualitative information.
- The set must provide a balanced picture of Output performance, and provide only information that is relevant to the decision-making purpose for each measure.
- Measures must be capable of disaggregation for use at different levels within the agency. Where relevant, disaggregation should be possible against variables such as gender, age, geographic location and socio-economic status.
- Bias in the available performance information must be avoided, but can be difficult to identify at the time the measures are developed.
 - Managers need to establish procedures that will ensure that the performance information system does not have a bias, for example, towards measures of process or activities at the expense of assessment of effectiveness. For example, the agency may be collecting extensive information on activities and efficiency (ie time and cost to undertake processes) but nothing on quality.
 - Information might also be biased to the short term at the expense of long term issues, or the system may not be able to provide information about unintended results.
 - Bias can also occur when the characteristics of the Output or the client group that have been selected as the focus for measurement have not been aligned with the purpose for which the measure will be used.
 - Bias is more likely to occur when only available measures and easily measured aspects of an Output form the basis for reporting performance.

8. *Expectations and Criteria*

- The performance information system must include a structured approach to identifying client and stakeholder expectations and requirements.

- The purpose for measuring client satisfaction is to have access to information that will enable services to clients to be improved in ways that are consistent with other criteria.
- The focus on client views is not meant to imply that clients have to be satisfied or happy with the service in order for the service to be judged effective or appropriate.
- The performance measures must be capable of adequately reflecting the customers' points of view about a range of specific aspects of the delivery of the service.
- The performance criteria - targets, standards and benchmarks - derived from stakeholder expectations must be feasible, challenging, appropriate and relevant.
- Standards for levels of service must be clearly defined and justified, and this information communicated to clients and stakeholders.

9. Useability

- Performance measures must focus on what is important strategically, and what is of value to clients and stakeholders.
- The audience, or user, and the purpose for gathering performance information must be clearly defined, and the performance measure matched to purpose and user requirements.
- The cost benefit of collecting performance information is an important consideration when making decisions about the use of particular performance measures.
- Performance measures must be relatively inexpensive to use, easy to maintain and readily accessible to users.
- In developing and scheduling performance measures, managers need to take into account the intervals at which base data can be generated internally, and the availability of data from external sources, such as the census and State and national surveys conducted by the ABS.
- Performance measures must be meaningful to the audience and user, widely accepted as valid, and user friendly.
- Performance measures need to be developed so that they are sensitive to change over time, and to differences among subgroups, and capable of demonstrating long term trends as well as short term changes.

10. Monitor and Maintain

- Performance measures must be reviewed and updated on a systematic basis.
- When strategies and Outputs change, measures must also change. The rate at which each measure's key variables may reasonably be expected to change must also be taken into account.
- To ensure continuity of the measurement of Output performance over time, all changes to the measure must be recorded as part of the documented measurement procedure, and links established so that the sets of measures will be able to be compared in the future.

11. *Do not stop at measurement*

- The policies and procedures for managing performance information must be written down and communicated.
- Management must ensure that a schedule for the use of the performance information generated by each measure is developed and adhered to, and that a systematic process is in place for reviewing and updating measures and information.
- Time must be allocated to the analysis of the information generated by the Output measures.
- Knowing what has been achieved is not sufficient. Managers also need to know reasons for the level of performance and identify where improvements can be made that are likely to impact on performance.
- It is important to ensure that any deficiencies in the measure have been identified and action initiated to implement required changes.
- The results of measurement must be effectively communicated, not only to users, but to all stakeholders for whom the information is relevant.
- Outstanding achievement should be celebrated. Comment, analysis and feedback should be encouraged at appropriate levels in the agency.
- Proposed improvements, along with the performance information on which the proposal has been based, should be widely publicised particularly within the agency, and feedback encouraged.
- Time and resources must be allocated to ensuring that the required changes to procedures and behaviour have occurred and also to monitoring the impact of the changes on the delivery of the Output.

10. Checklist for Assessing Performance Measures

Some questions for use in assessing the useability, quality and adequacy of performance measures.

Are the measures useable?

- Has the purpose for collecting the information been clearly articulated and communicated?
- What decisions need to be made on the basis of the information?
- Is the measure appropriate for use in making this decision?
- Can the information be provided at the appropriate time?
- Is the measure a feasible way of obtaining the required information?
- Is the measure a cost effective way of obtaining evidence about performance?
- Can the agency afford to use the indicator?
- Is the measure continuing to provide the information that was originally specified as required?
- Are performance reports available on time?
- Are the performance reports presented in a simple format and are they easy to understand?
- Do the performance reports clearly identify where action is required?

Is there a basis of comparison for each measure?

Will the performance measure be used to assess:

- the extent to which the agency has achieved a predetermined standard or target?
- the trend in performance over time?
- the performance of the agency relative to the performance of similar agencies?
- performance using some other form of comparison?

Are the measures of the appropriate quality?

- Will the selected measures provide relevant information?
- Will the measure provide reliable information?
- Will the measure provide trustworthy and valid information?
- Will use of the measure lead to goal displacement?
- What are the consequences if the measure lacks credibility?

Are the Output measures adequate?

- Can the agency monitor the provision of the Output at each level of decision making?
- Will the agency be able to account for what has been achieved?

- Can managers assess whether the right things are being done?
- Do the measures provide information on Output effectiveness?
- Will the measures provide information for identifying where improvements can be made?
- Can positive and negative impacts on clients be identified?
- Do the measures highlight deficiencies and problem areas?
- Can service problems be distinguished from funding problems?
- Do managers have access to information that enable them to manage for change?
- Are there measures that enable changes in the external environment that affect the delivery of Outputs to be identified?
- Are managers able to have access, at the appropriate time, to information about the impact of external changes on Output provision?
- Are the sets of Output measures manageable?

11. Some Common Problems in Developing and Using Performance Measures

Problem	Comment
<p>Concentrating solely on easily measured indicators, typically the ones that just happen to be around</p>	<p>While existing information and data should be used to the fullest extent possible, its uncritical use is likely to lead to performance measures that do not focus on appropriate aspects of performance, are not robust, or have little explanatory power.</p>
<p>Selecting and using only measures of quantity</p>	<p>Quantitative measures should never be used on their own. Both quantitative and qualitative measures are needed to provide information that will enable a balanced assessment of performance to be made.</p> <p>Qualitative information on performance is almost always essential, either to report on difficult-to-quantify aspects of performance or to provide needed explanatory information.</p>
<p>Focusing on throughput</p>	<p>Staff and managers may continue attempting to meet process performance targets, even when this has a negative effect on the achievement of intended results.</p>
<p>Goal displacement</p>	<p>Goal displacement occurs when a few performance targets - typically numerical ones - replace the actual intentions (the objectives) for the delivery of the service. See above, 'Focusing on throughput'.</p>
<p>Using measures of work activity as if they were indicators of performance</p> <p><i>For example:</i> The number of cases/files processed is a measure of an important environmental factor - the demand for the service. It does not report how well the service is responding to this demand, ie how well it is performing.</p>	<p>Workload measures indicate how hard people are working. This may be important contextual information but workload measures do not provide information about what is being accomplished.</p> <p>An appropriate performance indicator for internal use may be the number of cases/files processed per person-year at a given level of service, with explanatory information indicating other external factors that have had an impact on changes in the observed level of performance.</p>
<p>Measuring Output performance using only one measure for each Output</p>	<p>Much of the controversy and lack of acceptance surrounding the use of performance indicators results from attempts to make a very complex problem appear too simple.</p>

	<p>A single measure will rarely document sufficiently even one aspect of the performance of an Output. Rather, a set of measures is needed, covering a number of criteria, to provide a balanced view of performance. It is often useful to have indicators which pull in opposite directions.</p>
Using a very large number of indicators	<p>Initial attempts to identify indicators usually lead to the selection of a large number. These all may play some useful role in providing information about performance. However, to be meaningful, any one report on performance will need to focus on a small set of critical indicators. Selectivity, in relation to purpose and audience, is the key to success in using performance indicators.</p>
Reporting the performance measure without providing contextual information or guidance on how to interpret the meaning of the achieved level of performance	<p>Meaningful reporting of performance measures requires a descriptive interpretation. This should include:</p> <ul style="list-style-type: none"> • a contextual discussion about the environment; and • an interpretative analysis which includes a discussion of the significance of the measure. <p>Simple numbers - such as reports from a management information system - say very little and can mislead.</p> <p><i>Outside factors.</i></p> <p>As part of the explanation of performance, it can be useful to include measures of outside factors that influence performance. For example, changes in the nature or volume of demand by clients (workload changes) while not in themselves indicators of Output performance, provide important information about environmental changes.</p>
Not taking external factors into account	<p>Changes in the economic, social and demographic environment can affect efficiency and effectiveness. These changes may include the loss of key staff, budget constraints, changes in legislation, and policies that restrict the agency's capacity to hire and retain qualified employees.</p>
Failing to prevent service providers from manipulating the performance figures	<p>For example, service providers may improve their performance according to what is measured at the expense of what is not measured.</p>
Not allocating the cost of inputs accurately	<p>This can be a major problem with central overheads, but also where costs are being attributed across a number of Outputs.</p>

<p>Not recording quality changes</p>	<p>If the full range of quality attributes attached to all levels of input and Output are not accurately recorded, efficiency and effectiveness are likely to be misreported.</p>
<p>Mistaking average efficiency for marginal efficiency</p>	<p>This may cause extra resources to be allocated to an Output where average efficiency seems high, but with little net effect on delivery.</p>
<p>Information not being always accurate, complete or current</p>	<p>Any constraints on the accuracy or completeness of the information obtained through use of a measure should be explained in the descriptive interpretation that forms part of the report against the measure.</p> <p>Unless a systematic process for reviewing and updating all measures has been adopted then it is likely that many measures will quickly cease to accurately reflect current performance.</p>
<p>Failing to specify and implement a systematic process for reviewing and updating performance indicators</p>	<p>It is in the nature of social and economic life that the indicators appropriate to an Output will frequently change over time, even if the Output remains largely unchanged. Interests change, as does understanding about the nature of a service and its performance. This further reinforces the need to include an interpretative analysis.</p> <p>Measures of performance are incomplete unless a meaningful updating strategy is specified and implemented.</p>
<p>Failure to take action in response to performance reports</p>	<p>Reports are distributed periodically and updated but no action is taken when performance is seen to be below target. Just as planning is not taking action, neither is reporting and reviewing performance information. In responding to performance reports, the action required has to be planned, communicated, resourced, monitored and reviewed to ensure that required changes are implemented and that they do make a difference.</p>

Glossary

<i>Accountability Reporting</i>	Measures used for accountability reporting are concerned with measuring either something that an agency's managers need to know, or something that is required to be reported externally. In Tasmania the key requirements for external accountability reporting relate to the preparation of the Budget, the process of resource allocation involving Estimates Committees and Parliament, the preparation of Annual Reports, and Departmental Quarterly Performance Assessments. Requirements for agency internal accountability reporting are determined by the individual agency.
<i>Activity</i>	What an agency does to convert inputs to Outputs.
<i>Appropriateness</i>	The extent to which the intended outcomes (or the objectives) for an Output are the correct ones; that is, whether they match the real needs of clients and stakeholders. Appropriateness may focus on whether objectives for the service have been met, or on the way that the service meets its objectives. Measures of appropriateness address questions such as whether there are realistic alternatives to government provision and funding of the Output, and whether the Output is aligned with government policy priorities. Appropriateness can be measured in terms of adequacy, <i>relevance</i> (qv), <i>sustainability</i> (qv), and policy or outcome achievement.
<i>Benchmarking</i>	A systematic process to identify and introduce best practice into an organisation by making valid comparisons with other processes or organisations.
<i>Benchmarks</i>	Standards derived from the performance levels achieved by other Government agencies in comparable jurisdictions, by businesses in the private sector, by Government agencies in the same jurisdiction, or by other sections in an agency. Benchmarks are used as best practice <i>standards</i> (qv), or as challenging <i>targets</i> (qv) for performance.
<i>Budgeting for Outputs</i>	The process of allocating resources on the basis of the <i>Outputs</i> (qv) to be produced or delivered.
<i>Budget Information</i>	Information which is used in the resource allocation process.
<i>Business Plan</i>	Strategic and/or annual operating plans for an agency or business unit. These plans specify the goods and services to be provided and costs.
<i>Corporate Plan</i>	A medium term strategic plan for an agency.
<i>Community Outcomes</i>	High level policy objectives of the Government derived from the Government's perception of community expectations.
<i>Clients/Customers</i>	The people, organisations and government agencies that use services or consume goods provided by an agency.
<i>Criteria</i>	Provide the basis for establishing how performance against a measure is to be judged. Criteria can be in the form of targets, standards or benchmarks. They are derived from stakeholders' expectations for the performance of the Output.
<i>Direct costs</i>	Direct costs are expenses that are directly accountable to the Output. Direct costs can include the costs of intermediate Outputs produced within an agency.

<i>Direct measures</i>	<p>Direct measures provide evidence of the actual results of specific activities, processes or Output delivery systems. They focus on what has been achieved in relation to targets and provide information about what has been done, what has been delivered, the demand for the service and the workload involved.</p> <p>Direct Measures are not <i>indicators (qv)</i> of performance. They actually measure whether the Output has been provided as intended. They are the measures used when providing information about the quantity (eg volume, level of supply); cost (eg cost per unit and total cost); timeliness (eg delivery and/or response time); and other aspects of quality (eg to an agreed standard) of a good or service.</p>
<i>Economy</i>	Economy focuses on the input-use achieved in delivering a service. It is a direct measure defined as ‘cost per unit of input’ and is about minimising the use of resources.
<i>Effectiveness</i>	<p>The extent to which objectives are being achieved. Effectiveness is determined by the relationship between an organisation and its external environment.</p> <p>Effectiveness indicators relate Outputs to impacts and to outcomes. They can measure the steps along the way to achieving an overall objective or an <i>Outcome (qv)</i>, and test whether Outputs have the characteristics required for achieving a desired objective or a <i>Government Outcome (qv)</i>.</p>
<i>Efficiency</i>	<p>Efficiency is about producing more services or better quality services with the same or fewer resources. Efficiency is determined mainly by the internal structure and operations of an organisation. Efficiency indicators relate resource <i>inputs (qv)</i> to resulting <i>Outputs (qv)</i>. They indicate how well an activity or operation is being performed.</p> <p>Measures of efficiency can focus on either operational or outcome efficiency.</p>
<i>Equity Measures</i>	See <i>Social Justice Measures</i>
<i>Evaluation</i>	Evaluation is the process of determining merit, worth and value. In relation to the measurement of Output performance, evaluation is a systematic and disciplined process through which trustworthy information is gathered to enable judgements to be made about appropriateness, effectiveness, efficiency, responsiveness and social justice.
<i>Government Outcomes</i>	<i>Government Outcomes</i> are the short or medium term <i>Outcomes</i> or results desired by Government that are expected to be achieved largely through the resourcing of Government agencies to produce specified Outputs. <i>Government Outcomes</i> provide the link between the high level and visionary <i>Community Outcomes (qv)</i> and agency <i>Outputs (qv)</i> .
<i>Government Strategic Priorities; Government strategic directions</i>	Government statements of medium term policy priorities.
<i>Indirect (relational) measures</i>	Measure how well results at one level in the process of providing an Output translate into results at the next level of performance. Indicators are indirect or relational measures.
<i>Indicator</i>	See <i>Performance Indicators</i> and <i>Indirect measures</i> .

<i>Indirect Costs</i>	Costs that relate to more than one Output, such as the salary of the Head of Agency. There is no direct relationship between the cost and one Output. Indirect costs include costs that have in the past been referred to as overheads, such as the provision of support services (for example Corporate Services).
<i>Inputs</i>	Items such as labour, materials, office space and other non capital or non-balance sheet items purchased by the agency for use in producing an Output.
<i>Intermediate Outputs; Sub-Outputs</i>	Goods and services produced by or delivered within an agency which in combination with other internally delivered goods or services, contribute to the provision of Outputs. They are the ‘output’ of sub-systems within an agency (for example ‘trained staff’ or ‘research reports’) that become inputs to systems that produce the Outputs provided to external clients.
<i>Internal Management Measures</i>	Measures that focus on those things that need to be monitored, contained or managed within the agency.
<i>Measure</i>	A measure identifies the focus for measurement: it specifies what is to be measured.
<i>Measurement Procedure</i>	An explanation of how and when required information is to be collected and reported, which identifies who is to be involved in the process of collecting and reporting, and specifies a process for ensuring that both the data and the measure are updated on a regular basis.
<i>Outcomes</i>	<ol style="list-style-type: none"> 1. High level and long term policy objectives of the Government derived from the Government’s perception of community expectations (see <i>Community Outcomes</i>). 2. The short to medium term results desired by Government that are expected to be achieved largely through the resourcing of Government agencies to produce specified Outputs (see <i>Government Outcomes</i>). 3. Intended impact or effect on the community of the activities and policies of Government.
<i>Outputs</i>	Goods and services provided by an agency for clients outside the agency.
<i>Output Aggregation</i>	<p>The level at which an Output is specified for a particular decision making or accountability purpose.</p> <p>An Output specified at a very general level (see <i>Output Group</i>) represents the aggregation of a number of Outputs that will have been specified in detail for other purposes.</p>
<i>Output Adequacy Measure</i>	Information about effort and performance relative to measures of community need or demand.
<i>Output Costs</i>	The cost of producing an Output consists of both direct and indirect expenses (see also <i>Direct Costs</i> ; <i>Indirect Costs</i>).
<i>Output Groups</i>	Groups of homogenous Outputs which contribute to a common service, have the same clients, and usually relate to a discrete <i>Government Outcome (qv)</i> . [Groups are aggregated <i>Outputs (qv)</i>].

<i>Output Methodology</i>	Managing an agency (or whole-of-Government) through focusing on the goods and services (the Outputs) delivered for external clients, and on ensuring that client needs are satisfied, within a framework of policy objectives specified as <i>Outcomes (qv)</i> . The methodology involves the processes of Outcome clarification, Output specification and costing; resource allocation; and performance specification and measurement. The major vehicles for managing by Outputs are <i>Corporate Plans (qv)</i> and <i>Business Plans (qv)</i> , Operational Plans; Purchase, Service, Performance and Ownership Agreements, Budget information, quarterly reporting, Annual Reports, and performance management processes. (See also <i>Budgeting for Outputs</i>).
<i>Output Delivery(or Production) System</i>	The processes through which an Output is produced and delivered.
<i>Overheads</i>	See <i>Indirect Costs</i>
<i>Performance</i>	Achievement in relation to objectives, plans or intentions.
<i>Performance Criteria</i>	Criteria provide the basis for establishing how performance against a particular measure is to be compared and judged. They represent an agreement about desired levels of performance based on the expectations of clients and key stakeholders. Performance criteria are usually expressed in the form of <i>standards (qv)</i> , <i>targets (qv)</i> , or <i>benchmarks (qv)</i> . They can be specified in quantitative terms or as qualitative statements of expectation.
<i>Performance indicators</i>	<ol style="list-style-type: none"> 1. Explicit statements that define how success is to be measured, and identify the criteria, or benchmarks, to be used in judging success. They are expressed in the form of an index, a ratio, a per unit measure or some other form of comparison. 2. Information about a selected aspect of performance, collected in order to assess performance against predetermined targets, which enables a relationship to be inferred between what is measured and other aspects of the agency. Indicators enable general inferences to be made about agency performance; it is the inference that is of major interest, not the information about the specific aspect measured. <p>Performance indicators provide a guide to performance where causal links are not obvious and where changes in performance are difficult to measure directly.</p>
<i>Performance Information</i>	Quantitative and qualitative information collected systematically and used as evidence for making judgements about achievement in relation to objectives, plans or intentions. It is information about performance that is suitable for use as evidence in making decisions. Performance information consists of a measure, criteria, contextual and explanatory information, underpinned by a clearly defined measurement procedure.
<i>Performance Measurement</i>	Any activity through which performance is gauged.
<i>Performance Measures</i>	<ol style="list-style-type: none"> 1. Explicit statements that define how success is to be measured, and identify the criteria, or benchmarks, to be used in judging success. 2. Discrete and predetermined information collected in order to assess performance against targets.

<i>Performance Information Management System</i>	A systematic process for managing the development and use of performance information on an ongoing basis. The management system consists of a strategic plan, a framework for the performance information, a guideline for developing performance indicators, a set of performance indicators, and a process for managing the information. The management system should be part of the agency's corporate and operational planning, reviewing and reporting processes.
<i>Policy Objectives</i>	The Government's high level, intended <i>Outcomes</i> for the community. Both the public and the private sector contribute to the achievement of policy objectives through the provision of goods and services.
<i>Processes</i>	The operational policies, strategies, procedures, rules and regulations used by agencies.
<i>Productive Efficiency</i>	Information about how effort is organised so as to get best performance and adequacy. Productive efficiency is measured in terms of the ratio of inputs needed per unit of Output produced and the relationship between variations in the mix of inputs and variations in the mix of Outputs.
<i>Provider</i>	The provider is the agent who delivers the agreed Outputs.
<i>Purchaser</i>	The purchaser is the agent who decides what will be produced and the criteria (standards and targets) for judging performance.
<i>Quality of Service</i>	Service quality relates to the characteristics by which an organisation, product or service is judged by <i>clients</i> (qv) or <i>stakeholders</i> (qv). The dimensions of quality that performance measures can cover include: accuracy, completeness, accessibility, timeliness, risk coverage, compliance with legal standards and satisfaction of client needs.
<i>Relevance</i>	The relationship between intended result and actual impact, measured either quantitatively or qualitatively.
<i>Resource Allocation</i>	The process by which the Government makes decisions on allocating the funds, or the use of the funds, to purchase goods and services for achieving policy objectives.
<i>Responsiveness</i>	Indicators of 'responsiveness' measure the extent to which the demand and preferences of the public are satisfied. They focus on the <i>quality of service</i> (qv) or the <i>standard of service</i> (qv).
<i>Service agreements; Service Level Agreements</i>	<ol style="list-style-type: none"> 1. Intra public sector contracts; and intra-agency contracts. 2. Formal arrangements entered into by a purchaser and a provider for the purchase of Outputs. 3. Explicit or implicit contracts in which the purchasing agency, or section, 'exchanges' budgetary funds for the delivery of specified services by the provider agency or section. <p>Intra-public sector and intra-agency service agreements are based on the creation of an internal exchange relationship through the separation of purchaser, funder and needs assessment responsibilities from the service provision and management responsibilities.</p>

<i>Social Justice Measures</i>	Sometimes referred to as equity measures. These measures focus on the social impact of a service in terms of equity of service delivery, and equality of access and participation. These indicators measure the distribution of services, especially in relation to demographic characteristics and in accordance with various generally accepted criteria of fairness.
<i>Stakeholders</i>	People, organisations and agencies, other than those that are clients or customers, whose interests are affected by the provision of Outputs.
<i>Standards</i>	<p>Predefined levels of excellence or performance. Standards are often specified as minimum levels of excellence or performance.</p> <p>Standards relate to specific aspects of a product or service, such as the level and quality of client service, and can also be set for inputs, processes, various aspects of service delivery, and objectives.</p> <p>For Outputs, standards are set with the aim of defining a level of performance that is appropriate for the service and is expected to be achieved.</p>
<i>Standard of Service Measures</i>	Measures of the quality of service to clients focus on aspects such as client satisfaction with the way they are treated; comparison of current standards of service with past standards; and appropriateness of the standard of service to client needs.
<i>Sub-Outputs</i>	See <i>Intermediate Outputs</i> .
<i>Sustainability</i>	The persistence of impact or results over time.
<i>Targets</i>	Targets are agreed levels of performance to be achieved within a specified period of time. Targets are usually specified in terms of the actual quantitative results to be achieved or in terms of productivity, service volume, service-quality levels or cost effectiveness gains. Agencies are expected to assess progress and manage performance against targets. A target can also be in the form of a <i>standard (qv)</i> or a <i>benchmark (qv)</i> .
<i>Workload Measures</i>	Measure process and effort. Examples of workload measures are throughputs, production rates, and activity counts. These measures provide evidence of how hard people are working and are useful in managing an organisation. They may also provide information helpful in understanding the performance of an agency and the context within which it operates. However, they do not measure performance and, therefore, do not provide evidence about whether the agency is accomplishing anything.

References

- Auditor-General 1996. *Special Report No 14 Review of Performance Indicators in Government Departments*, Tasmanian Audit Office, Hobart.
- Australian National Audit Office 1996. *Performance Information Principles Better Practice Guide*, Department of Finance, Commonwealth of Australia, Canberra.
- ACT Office of Public Administration and Management 1995. *ACT Public Service A Guide to Performance Measures for Outputs*, Chief Minister's Department ACT, Canberra.
- City of Grande Prairie 1996. *Performance Measurement*, City of Grande Prairie Internet Home Page, Alberta, Canada.
- Cuttance, Peter 1995. 'Education Evaluation: Integrating Best Practice and Performance Indicators to Benchmark the Performance of a School System' in *Evaluation News and Comment* Volume 4 Number 1 June 1995, Australasian Evaluation Society, Canberra.
- Department of Finance, 1994. *Doing Evaluations. A Practical Guide*. Commonwealth of Australia. Canberra.
- Department of Treasury and Finance 1995. *A Guide to Output Specification and performance Measurement*, State Government of Victoria, Melbourne.
- Government of Alberta 1996. *Measuring Up '96 Second Annual Report by the Government of Alberta*, Alberta Legislative Assembly Internet Home Page.
- Government of Alberta 1996. *Introduction to Accountability*, Alberta Legislative Assembly Internet Home Page.
- Kaplan, R and Norton, D. 1992. 'The Balanced Scorecard - Measures that Drive Performance', *Harvard Business Review*, January-February 1992 (71-79).
- Kaplan, R and Norton, D. 1993. 'Putting the Balanced Scorecard to Work', *Harvard Business Review* September-October 1993 (134-147).
- Kaplan, R and Norton, D. 1996. 'Using the Balanced Scorecard as a Strategic Management System', *Harvard Business Review* January-February 1996 (75-85)
- Love, A 1991. *Internal Evaluation. Building Organisations from Within*, Sage Publications Inc. California.
- Miles, M and Huberman, M. 1994. *Qualitative Data Analysis* Second Edition. Sage Publications. California.
- New Zealand Treasury 1995. *Purchase Agreement Guidelines, with best practices for Output Performance Measures*, New Zealand Treasury Internet Home Page.

- New Zealand Treasury 1996. *Output based Management - Guidelines for Agencies*, Government of New Zealand, Wellington.
- Office of the Comptroller General (1991). *Measuring and Monitoring Program Performance and Service to the Public: Developing Useful Performance Indicators*, Canadian Government, Ottawa.
- Owen, J. 1993. *Program Evaluation. Forms and Approaches*, Allen and Unwin, New South Wales.
- Ryan, B. 1996. 'Performance Information: Not Reinventing the Wheel', *Communiqué* 68, November 1996.
- Sharp, Colin 1994. 'Industry Best-Practice Benchmarking in the Evaluation Context' *Evaluation News and Comment Volume 3 Number 1 May 1994*, Australasian Evaluation Society, Canberra.
- Steering Committee for the Review of Commonwealth/State Service provision 1997. *Report on Government Service Provision 1997 Volumes 1 and 2*, Commonwealth of Australia, Canberra.
- Treasury Department of Western Australia 1996. *Output based Management (OBM) Guidelines to Assist Agencies*, Government of Western Australia.
- Walsh, P 1995. 'Managing Performance Indicators. Part I: Measuring Business as Usual', *Benchmark* 10 February 1995.
- Walsh, P 1995. 'Managing Performance Indicators. Part II: Process Thinking.', *Benchmark* 11, May 1995.
- Walsh, P 1995. 'Managing Performance Indicators. Part III: Outcomes and Drivers.' *Benchmark* 12, August 1995