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# **The Resource Management Framework Part 2 of 2 – Attachments**

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For Victorian Government departments  
and certain agencies

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## Introduction

The Resource Management Framework (RMF) comprises two books:

- Part 1 – Main document
- Part 2 – Attachments

This book is Part 2 of the RMF. It contains the attachments that accompany Part 1 of the RMF.

Both this book (Part 2) and Part 1 of the RMF can be accessed on the DTF website.

## Changes since the last published version

There have been no content changes to this book of attachments since the last published version. This book has only been updated for the new 'Effective From' date.

# Attachment 1: Further guidance for developing departmental objectives

## 1.1 Clear and concise

Objectives should focus on a single achievement and not include too many target groups or areas. Objectives that are too broad or attempt to include too many components may be confusing and difficult to measure. Use of the word 'and' should be minimised as it may encourage the inclusion of lists of sub-objectives. Objectives should be informative to a wide range of users.

## 1.2 Focus on the result or impact the Government is seeking to achieve

Objectives should be consistent with the Government's priorities, and any statement of outcomes by a service area, department or the Government.

Objectives should clearly identify what is to be achieved (result), rather than strategies, discrete services or products, activities or processes. Results are not things a department can do, but are *changes* expected to be observed in the community, environment or economy.

Objectives should be expressed as the impact on the community that a group of outputs can reasonably achieve over the medium to long term. This will minimise the impact of external influences (factors outside the department's control).

### Examples



Reduced impact of major bushfires and other extreme events on people, infrastructure and the environment



Improving the efficiency of court processes [implies a public good and appropriate objective for department but does not note the final impact on the community]

## 1.3 Strategic focus

An objective should have a strategic focus and be aligned with the department's vision and mission. It should not be pitched at too high a level. If every objective can be linked to every output, then it is likely objectives are too high level. Each objective is likely to have a number of supporting outputs (refer to Figure 6 of the main document: *Performance management concepts*).

## 1.4 Focus on the standard of expected service delivery

An objective should reflect the desired standard of service quality the department is expecting to deliver, and this should be quantifiable. Words describing delivery standards such as 'high quality', 'excellent' or 'good' should be defined or replaced by quantifiable ambitions.

## 1.5 Identify the target group/s that will benefit

Describe the clients/recipients who are to benefit from the achievement of the objective.

## 1.6 Measurable within a specific time frame

Ensure progress towards achievement of the objective can be measured/quantified through departmental objective indicators over the medium to long term.

Ensure an explicit relationship between departmental objectives and outputs.

Articulate how output delivery will contribute to the achievement of the objective.

Examples					
✓	<table border="0"> <tr> <td style="vertical-align: top;"><b>Departmental objective</b></td> <td style="vertical-align: top;"><b>Output</b></td> </tr> <tr> <td>Reduced impact of major bushfires and other emergencies on people, infrastructure and the environment</td> <td>Fire and emergency management</td> </tr> </table>	<b>Departmental objective</b>	<b>Output</b>	Reduced impact of major bushfires and other emergencies on people, infrastructure and the environment	Fire and emergency management
<b>Departmental objective</b>	<b>Output</b>				
Reduced impact of major bushfires and other emergencies on people, infrastructure and the environment	Fire and emergency management				
<b>Tip</b>	Although it is recognised an output may contribute to multiple objectives, each output should be linked to the objective that is expected to have the greatest impact				

### Checklist: objective characteristics

A departmental objective of good quality will meet the criteria below.

Criteria	Checklist
Clear, concise and specific	<ul style="list-style-type: none"> <li>• Is it unambiguous?</li> <li>• Does it clearly articulate:               <ul style="list-style-type: none"> <li>– what is being delivered/developed?</li> <li>– the target audience?</li> <li>– expected standard?</li> <li>– when it will be achieved?</li> </ul> </li> </ul>
Focus on results	<ul style="list-style-type: none"> <li>• Does it accurately reflect Government's service delivery ambitions?</li> <li>• Is the objective realistically achievable?</li> <li>• If all outputs are successfully delivered will this achieve the departmental objective?</li> </ul>
Measurable and timely	<ul style="list-style-type: none"> <li>• Is the objective readily measurable through choice of appropriate indicators?</li> <li>• Will demonstrable progress towards achieving this objective be possible in the medium term?</li> </ul>

# Attachment 2: Further guidance for developing departmental objective indicators

This attachment outlines five areas of focus in setting useful objective indicators.

## 2.1 Attributable

Departmental objective indicators should focus on impacts that can reasonably be achieved through delivery of outputs. Indicators should be set at a level that minimises the extent of factors outside the department's control and identifies what is to be achieved, rather than what outputs are delivered or what processes are followed.

There are many tools to assist in developing performance information, including Program Logic and the Investment Logic Model (ILM).<sup>1</sup>

## 2.2 Focus on measurable results

Seek a clear and explicit alignment of outputs to departmental objectives. Good quality indicators demonstrate how output delivery contributes to achieving the departmental objective. Indicators should be relevant and reflect what the department is trying to achieve, not simply what is measurable.

## 2.3 Pitch at a level to best inform performance analysis and decision making

Set departmental objective indicators at a level that will best support the analysis of performance and decision making. This should be determined on a case-by-case basis having regard to existing indicators and the costs associated with developing new indicators.

## 2.4 Use existing data sets

Wherever possible departments should consider existing indicators, data sets and measures that could be used to demonstrate the contribution of outputs towards the achievement of departmental objectives.

This could include performance information provided to the national reporting framework for the Council of Australian Governments, information in the Report on Government Services, or other measures used in departmental reporting. If additional data collection is required, the costs involved should be balanced with the benefits (usefulness) of using the data collected.

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<sup>1</sup> Further information on the ILM can be found on the DTF website.

## 2.5 Describe a change

Indicators reflect the effectiveness of the department's outputs in contributing to achieving the objectives and they should help determine whether the target group/community is 'better off'.

### Examples of good quality vs. poorer quality objective indicators

✔	<p>'Year 12 or equivalent completion rates of young people'</p> <p>'Property loss from structure fire (current year dollars per person)'</p>
✘	<p>'Leads policy development on key priority issues' <i>[is this measurable/quantifiable?]</i></p> <p>'The prevalence of selected chronic disease risk factors is reduced' <i>[lacks specificity – which chronic disease factors should be measured?]</i></p>

### Checklist: objective characteristics

A departmental objective of good quality will meet the criteria below.

Criteria	Checklist
Attributable	<ul style="list-style-type: none"> <li>Is the indicator reflecting the impact of the contributing outputs?</li> <li>Is the indicator influenced by external factors outside the control of the department?</li> </ul>
Available	<ul style="list-style-type: none"> <li>Will data be available in a timely manner – at least annually and over the entire forward estimates period?</li> <li>Does it already exist?</li> <li>Is it sufficiently robust?</li> </ul>
Comparable	<ul style="list-style-type: none"> <li>Does the indicator allow for comparisons over time, between target groups and across jurisdictions?</li> </ul>
Influenced by key stakeholders	<ul style="list-style-type: none"> <li>Have those responsible for delivering the outputs been consulted, such as non-departmental service providers?</li> <li>Has the Minister responsible for delivering the outputs been consulted?</li> </ul>
Manageable	<ul style="list-style-type: none"> <li>Have the costs of data collection been considered?</li> <li>Does the benefit created by gathering data outweigh the burden?</li> <li>Have other more cost-effective indicators been considered?</li> </ul>
Verifiable	<ul style="list-style-type: none"> <li>Is the methodology and process for data collection and indicator reporting clearly documented?</li> <li>Are processes in place to maintain performance records to a standard that allows an independent auditor to verify integrity?</li> </ul>

## Attachment 3: Further guidance for developing outputs

### 3.1 Identify the range of goods and services being provided

Departments should review all of the goods and services being delivered and determine which can be grouped as similar services or those trying to achieve the same objective. This should also occur when new funding for a program or initiative is being considered by Government.

### 3.2 Test the size of the output

Consolidation of goods and services reduces transparency and accountability and makes it difficult to assess performance. For example, an output with too many services or programs bundled together diminishes the usefulness of performance measures, as indicators of true performance for each service or program. Departments should review the size of the output using the following criteria:

- Discrete products or services – are the services closely related or homogenous in nature?
- Targeted – are the services targeting a specific problem for the same customer?
- Purpose – is the purpose of the services the same?
- Size/materiality – is the output less than 10 per cent of the department's total output cost and less than 0.5 per cent of the State's total budget?
- Control/influence – to what extent can a single person be directly responsible for the performance of the output?
- Function – does the output deliver a legislated function or lend itself to machinery of government changes? (e.g. Consumer Affairs)

If answering no to one of the first four questions, the output is too large.

Another consideration is whether an output reflects an agency with specific legislated functions. Agencies may be established to deliver a specific objective, which lends itself to being a separate output. Depending on the size of the agency, it may be appropriate to have multiple outputs.

### 3.3 Describe the output

Output descriptions should be clear and concise and use language that is suited to a general audience. They should detail the range of goods and services provided and the programs and activities undertaken.

Explicit references should be made to the broad activities, targeted beneficiary of the goods or services, and the intended impact of successful service delivery.

Output descriptions should demonstrate alignment with one departmental objective.

Output titles should make clear the nature of services being delivered. Where possible, it should encapsulate what is being delivered and to whom and describe a deliverable rather than a problem.

Examples – Titles	
✔	<ul style="list-style-type: none"> <li>Prisoner Supervision and Support</li> <li>Ports and Freight Network Improvements and Maintenance</li> </ul>
✘	<ul style="list-style-type: none"> <li>Aboriginal Affairs</li> <li>HACC Primary Health, Community Care and Support</li> </ul>
Examples – Description	
✔	<ul style="list-style-type: none"> <li>Provide community-based supervision, healthcare and support services to divert young offenders from the youth justice system and minimise the likelihood of further offending. <i>[Identifies activity, beneficiary and result]</i></li> </ul>
<b>Tips</b>	<ul style="list-style-type: none"> <li>Write output titles and descriptions in plain English</li> <li>Abbreviations, jargon and technical language should not be used</li> </ul>

## Checklist: objective characteristics

A departmental objective of good quality will meet the criteria below.

Criteria	Checklist
External focus	<ul style="list-style-type: none"> <li>Does the output deliver services to an external customer?</li> <li>Does the external customer derive a benefit from the delivery of services?</li> <li>Is the output externally focused and not measuring or reflecting departmental inputs?</li> </ul>
Objective focus	<ul style="list-style-type: none"> <li>Does the output contribute to the achievement of departmental objectives?</li> <li>Can a link be demonstrated between the output and its impact on the achievement of departmental objectives? Is it sufficiently robust?</li> </ul>
Clear	<ul style="list-style-type: none"> <li>Does the output assist Government to understand what it is funding and what it will receive for its money, which is described through performance measures in terms of:               <ul style="list-style-type: none"> <li>the cost per unit of the output</li> <li>the quantity of the output units to be delivered</li> <li>levels of quality of the services to be delivered</li> <li>the timing or frequency of the delivery of products and services?</li> </ul> </li> <li>Does the output inform Parliamentarians and the community of government performance about what services are being delivered, to whom and why?</li> <li>Does the output enable departments (and managers and staff in departments) to understand what they must deliver and why?</li> </ul>

Criteria	Checklist
Measurable	<ul style="list-style-type: none"> <li>Does the output have an impact on the department's objectives that can be measured?</li> <li>Can the output demonstrate the impact it is designed to achieve?</li> <li>Can the output be routinely measured so Government will know if it is receiving what it paid for?</li> </ul>
Comparable	<ul style="list-style-type: none"> <li>Does the output enable Government to consider whether there are alternative providers for the output by enabling comparison/benchmarking of performance for delivery of similar services?</li> </ul>

## Assessment tool: output disaggregation

The assessment approach and summary ratings for output disaggregation are mapped out below. If an output meets most of the criteria then it is less likely to be suitable for disaggregation. A summary assessment along the spectrum of suitability for disaggregation will be made on the basis of the assessment against each of the criteria. If an output could not be disaggregated, departments must assess the individual output performance measure to test its completeness and appropriateness.

Output disaggregation				
Assessment criteria	Key considerations	Summary ratings		
		Disaggregate	Partially disaggregate	Do not disaggregate
Does the output represent an appropriate proportion of the department's/ State budget?	Does the output cost meet the Resource Management Framework guidance regarding 10 per cent of total departmental or 0.5 per cent of government expenditure?	More than 10 per cent of the department's or 0.5 per cent of the State's budget	n.a.	Less than 10 per cent of the department's or 0.5 per cent of the State's budget
Does the output line up with the organisational and/or delivery agency's structure using a consistent service delivery model?	<ul style="list-style-type: none"> <li>Can the output and its performance measures be easily attributed to core functional responsibilities and service delivery mechanisms in the department or portfolio agency?</li> <li>Does the output line up to homogenous service delivery mechanisms?</li> </ul>	Limited (if any) alignment between output and structure and inconsistent service delivery model	Some degree of alignment between output and structure and relatively consistent service delivery model	Strong alignment between output and structure and consistent service delivery model
Is aggregating the output likely to provide improved transparency regarding the departmental expenditure/ performance?	Is aggregating the output likely to provide users an improved understanding of how the funding is allocated across core services and expenditure types and what is delivered in return?	Disaggregated output likely to provide users with an improved understanding of expenditure/ performance	Disaggregated output may provide users with an improved understanding of expenditure/ performance	Disaggregated output unlikely to provide users with an improved understanding of expenditure/ performance

<b>Output</b> [text]	<b>Output cost</b> [\$]
<b>Output description</b>  [Description]	<b>per cent of dept. budget</b> [%]
	<b>per cent of State budget</b> [%]

<b>Output disaggregation</b>		
<b>Assessment criteria</b>	<b>Summary assessment</b>	<b>Comment</b>
Does the output represent an appropriate proportion of the department's/State budget?	[Copy relevant summary rating from the output disaggregation assessment table]	
Does the output line up with the organisational and/or delivery agency's structure using a consistent service delivery model?	[Copy relevant summary rating from the output disaggregation assessment table]	
Is disaggregating the output likely to provide improved transparency regarding the departmental expenditure and performance?	[Copy relevant summary rating from the output disaggregation assessment table]	
<b>Summary</b>	[Findings, actions and recommendations]	

# Attachment 4: Further guidance for developing performance measures

## Performance measures: quantity, quality, timeliness, cost

Departments should consider four key attributes when developing performance measures:

### 4.1 Quantity performance measures

Describe outputs in terms of how much, or how many. Quantities will conceptually be different for each output type. However, quantity could take the form of the number of discrete deliverables or capacity provided. They also tend to demonstrate the volume of work being undertaken.

A quantity measure can be:

- wholly in the control or influence of the department (e.g. compliance services) or is a known activity (e.g. State elections)
- affected by demand to a certain extent, but the target can reasonably be forecast/quantified (e.g. number of students enrolled in public schools, court cases heard, family services cases provided to Aboriginal families)
- measuring capacity or capability for outputs where this is the primary function being purchased by Government. For example, emergency management permanent operational staff, or staff (or time) engaged in policy development may be appropriate measures when there is wide volatility of goods and services delivered between years.

Quantity measures can often be converted into efficiency measures by combining them with cost to show the unit cost. This may not be appropriate in all situations.

### 4.2 Quality performance measures

Describe how well a service is being delivered (i.e. whether output delivery has been up to the expected standard of performance). Standards might be contained in legislation, agreements, or other requirements. Quality measures can also demonstrate if output delivery has met comparable better practice benchmarks associated with departmental objectives and intended results.

Measurement of compliance with legislated standards should be used sparingly, as this is usually a basic minimum standard rather than the quality of service desired by Government. These measures do not allow for continuous improvement from year to year. However, where the main function of the output is delivering a legal requirement, it may be appropriate to use compliance with legislation as a measure.

A fundamental aspect of quality is the assumption the product or service is defect-free and fits the purpose for which it was intended. Quality can be achieved through using specific criteria (e.g. accuracy, completeness, accessibility, customer satisfaction, continuity or equity of supply).

## 4.3 Timeliness performance measures

Provide parameters for how often, or within what time frame, outputs will be delivered.

Timeliness may be a measure of either:

- efficiency, measured by turnaround times
- effectiveness, measured by waiting or response times.

## 4.4 Cost performance measures

Reflect the full accrual cost to a department of producing an output. The cost measure for each output is the total cost and includes state appropriation revenue, as well as funding from other sources to produce the output.

### Other areas of consideration

#### Balanced set of measures

The mix of quality, quantity, timeliness and cost measures for each output should give a balanced and complete performance picture of what the output is trying to achieve and how the delivery of the output will be measured.

Interaction between measures can provide insights into service performance. It is important to have measures that are closely linked to individual bundle of services in an output. These measures need to be presented in a way that allows inference to be drawn by signalling the interaction to stakeholders. For example, by using language, terms and/or presenting them together.

#### Cover all the major activities

The department should select measures that assess all the important aspects of the output being delivered, such as key deliverables and critical activities to explain whether the department has efficiently and effectively delivered these outputs.

#### Alignment with objective indicators

There should be alignment between output performance measures and objective indicators. Performance measures, in conjunction with objective indicators, should help demonstrate a department's achievements compared to intentions.

#### Use existing data sets

Departments should consider existing measures and data sets that could be used to demonstrate output performance. This could include performance information under the national reporting framework for the Council of Australian Governments, information in the Report on Government Services, or other measures used in departmental reporting.

#### Assumptions and methodology

Departments should document the assumptions and methodology underpinning the performance measures. These should include how the supporting data is calculated or derived, source and frequency of data collection, as well as any other business rules and assumptions.

## Setting targets

Targets should be realistic and achievable. They should provide meaningful information on the expected level of goods and services to be delivered, and enable Government to prioritise actions, set agreed direction, focus attention and resources and provide evidence of performance. Targets should not be stretch or aspirational targets, as the final performance statement is a delivery contract between Government and a department.

In developing output performance targets, departments should:

- be clear about what is to be delivered
- examine past trends, variations in performance and the performance of other providers
- formulate targets drawing on existing measurement data from a range of sources, where possible
- consider the extent of influence the department can exert over the service to be delivered
- consult with relevant ministers where required.

Performance measures should remain consistent over time to enable comparison of performance. However, targets should be reassessed and amended where:

- there is constant over or underperformance against the current target
- a policy change makes the current target unachievable
- there is a change in the funding allocated to the delivery of goods and services in an output.

Note a target that is too ambitious may encourage misrepresentation of performance. This could occur where desire to meet an unrealistic target results in an overstatement of actual performance.

### Examples



'Service provision rating (Commissioner assessment of Secretariat performance)'  
*[clear data source]*

'Timely handling of objections (within 90 days)' *[defines how it is being measured]*



'Arts portfolio public body annual reports tabled in Parliament by the required statutory dates'  
*[not challenging enough as this is a basic legislated requirement]*

'Progress of Regional Rail Link'  
*[not clear whether the measure relates to proportion of funding spent, milestones met, track laid etc.]*

## Examples

### Tips

- Performance measures should be written in plain English and be obvious to the public as to whether the outcome was positive or negative.
- Targets of 0 or 100 per cent should not be used in most cases as they have no capacity to demonstrate continuous improvement from year to year and may not be sufficiently challenging.
- Targets involving wide ranges should not be used in most cases as they allow a wide range of performance to be considered a positive result and may not be sufficiently challenging. For example, if a (fictitious) performance measure 'customer satisfaction with delivery of services' was set with a target ranging between 50 per cent and 100 per cent, this would be considered too wide and not sufficiently challenging.<sup>2</sup>

## Checklist: performance measurement characteristics

The eight accurate criteria below indicate a better practice standard in public sector output performance measurement information. The following checklist should be used to assess the quality of each output performance measure and whether the set of performance measures achieves a faithful representation of the output performance. An output performance measure of good quality will meet all checklist items.

Criteria	Checklist
<b>Attributable</b> High-quality output performance measures should not be unduly influenced by changes in external factors, such as economic and environmental conditions. Successful delivery of the activities/programs in an output should be attributable to the actions of the organisation.	<ul style="list-style-type: none"><li>• Is the output performance measure directly attributable to programs and/or activities delivered by the organisation under the output?</li></ul>
It is recognised that in some outputs, external factors can impact on the quantity, quality, timeliness and cost of service delivery. For example, ambulance services and court cases, where the level of demand may be primarily determined by factors outside the organisation's control. However, measures of these services are appropriate where the delivery of these services is within the actions of the organisation and responsibility for performance is considered to rest with the organisation.	<ul style="list-style-type: none"><li>• For outputs affected by demand, has the organisation put in place mechanisms to forecast and manage demand?</li></ul>

<sup>2</sup> This addresses Recommendation 28, p198 in the Public Accounts and Estimates Committee's *Report on the 2016 17 Budget Estimates*, Chapter 9: Performance Management.

Criteria	Checklist
<p><b>Clear</b></p> <p>High-quality output performance measures should be written in clear, concise, and non-technical language so they can be easily understood and easily related to the performance of the output. There should be no ambiguity about what is being measured.</p>	<ul style="list-style-type: none"> <li>• Is the measure written in clear language and unambiguous?</li> <li>• Is the measure readily interpretable by Parliament and the community?</li> <li>• Is it clear what the measure is intended to show and why it is important?</li> <li>• Is it clear whether exceeding, precisely achieving or coming under the target is a good result?</li> </ul>
<p><b>Comparable</b></p> <p>High-quality output performance measures should allow an organisation to demonstrate how its service delivery compares to past performance, performance across similar outputs, and performance in services delivered by other providers. This enables Government to assess whether the output represents value for money.</p>	<ul style="list-style-type: none"> <li>• Does the measure allow for comparisons of the output's performance: <ul style="list-style-type: none"> <li>– over time?</li> <li>– across similar programs, program areas or initiatives?</li> <li>– across similar jurisdictions?</li> <li>– between similar outputs delivered by other providers?</li> </ul> </li> <li>• Does the measure enable benchmarking between providers of similar outputs?</li> </ul>
<p><b>Useful</b></p> <p>Performance measures should be capable of being used in a variety of ways. In addition to assessing and reporting performance, they should also inform decision making by the organisation and by Government as well as helping other stakeholders understand the organisation's performance. The data should be available to meet relevant planning and reporting timeframes.</p>	<ul style="list-style-type: none"> <li>• Can the measure be used to inform government decision making?</li> <li>• Can the measure be used for internal management, and for external reporting and decision making?</li> <li>• Does the measure and target clearly set out performance expectations for the output?</li> <li>• Have key stakeholders been consulted (i.e. relevant Ministers, managers and staff responsible for service delivery)?</li> <li>• Do key stakeholders regard the measure as useful?</li> <li>• Can the data be collected at a frequency that aligns with planning and reporting cycles?</li> </ul>
<p><b>Relevant</b></p> <p>High-quality output performance measures should be a measure of the services delivered. Performance measures should align with both the departmental objectives and the relevant output.</p>	<ul style="list-style-type: none"> <li>• Does the measure accurately reflect performance against what is intended to be achieved?</li> <li>• Does the measure align with departmental objectives?</li> <li>• Does the measure provide a good indication of success?</li> <li>• Does the set of measures provide coverage of the key aspects of performance?</li> <li>• Is it clear how achieving the target will assist in achieving departmental objectives?</li> </ul>

Criteria	Checklist
<p><b>Achievable</b></p> <p>Performance targets need to be challenging (i.e. represent best value for money), but still achievable. Targets should act as a driving goal for those working to achieve it. This is a balancing exercise: on the one hand, targets that are too achievable do not encourage continuous improvement, and, on the other hand, targets that are impossible to achieve will not provide Parliament and the public with useful information. Targets should not be stretch/aspirational targets but delivery targets.</p>	<ul style="list-style-type: none"> <li>• Does the performance measure provide a challenging, but realistic target for the organisation to achieve?</li> <li>• Can the performance target be altered to address under or over performance, in line with Government budgetary decision making from year to year?</li> </ul>
<p><b>Transparent</b></p> <p>Performance measures need not only to be transparent themselves, but the information collected also needs to be transparent.</p> <p>It must be clear how the performance data is collected (and in some circumstances why), and any limitations must be disclosed. Information must also reflect new initiatives and new funding, must be reflected by changes in performance measures and/or targets. (Note, this information is maintained by departments, but not published in the departmental performance statements).</p>	<ul style="list-style-type: none"> <li>• Is there a clear management audit trail of data treatment, calculation and reporting?</li> <li>• Has the measure been tested for unintended consequences?</li> <li>• Have counterbalancing measures been considered where unintended incentives have been identified?</li> <li>• Can the performance measure target be changed to reflect increased funding?</li> <li>• Have any data shortcomings and/or limitations been disclosed?</li> </ul>
<p><b>Evidence based</b></p> <p>High-quality output performance measures should have a sound evidence base. Data should be available so results against the performance measures can be observed and reported.</p>	<ul style="list-style-type: none"> <li>• Have a common set of current data definitions and key terms been communicated to all involved in the collection of data?</li> <li>• Have the methodologies (data collection, processing and monitoring procedures) been documented?</li> <li>• Are there standards and procedures for the collection, storage and retrieval of data?</li> <li>• Are processes in place to retain performance records to a standard that allows an independent auditor to verify information integrity?</li> <li>• Are processes in place to reassess the measure (and the associated output) each year for the annual State budget process?</li> <li>• Have the data and methodology underpinning performance measures been verified for accuracy prior to publication?</li> </ul>

## Documentation and reporting of performance measures

Measuring performance requires timely and relevant collation and analysis of data. Data must be collected at set timeframes and must be accurate and comparable to achieve a meaningful picture of the performance.

The utility of performance information can be optimised if they are integrated back into planning and decision making. It is vital departments provide DTF with the following output information required in the publication of budget papers:

- output that the performance measure relates to
- performance measure code
- performance measure name
- unit of measure
- type of measure – quantity, quality, timeliness or cost measure.

To support this information, departments also need to keep a record of the following:

- business purpose of the performance measure and what the measure is assessing
- detailed definition of the terms used
- how the data is collected, measured and calculated
- frequency of measurement.

### Examples of policy and advisory-related performance measures

Performance measure	Target
Technical quality of policy advice papers assessed by a survey with a methodical robustness of 90 per cent.	At least an average of 70 per cent
The satisfaction of the relevant Minister with the policy advice service, per the common satisfaction survey.	At least 70 per cent
The total cost per hour of producing outputs	\$
All new significant operating expenditure proposals are subject to cost benefit analysis or similar.	100%
Audit opinion issued by the Victorian Auditor-General on the Financial Statements of the Government.	Unqualified
Compliance with risk management policies and parameters for management of Crown lending and Crown bank accounts	No breaches
Annual Report, including financial statements, is produced in line with the <i>Financial Management Act 1994</i> requirements and free from material errors.	Achieved
Advice to entities and ministers on budget processes was provided within agreed timeframes.	100 per cent compliance
Degree of compliance with deadlines of briefings to the ministers, and or senior executives following release of public reports	100 per cent compliance

## Assessment tool: performance measures – completeness

The performance measure completeness consideration tests whether the outputs performance measures represent the main components of expenditure and whether there are relevant units of accountability for performance and/or efficient/effective service delivery.

Performance measure completeness – general criteria				
Assessment criteria	Key considerations	Summary ratings		
		Yes	Partial	No
<b>Overarching consideration</b> Does the mix of performance measures reflect the main expenditure components of the output?	Are the respective performance measures across the output representatives of the main components of expenditure and are there relevant units of accountability for performance and/or efficient/effective service delivery?  If <b>No</b> – what additional measures should be incorporated?	Yes	n.a.	No – Key components are missing.  (Recommend additional measures are added)

Performance measures completeness – Does the mix of performance measures reflect the main expenditure components of the output?				
Output	Activities	Key elements	Captured under current BP3 reporting?	
[Output title]	[Activity 1]	[measurable element]	[Is the element currently captured?]	
		[measurable element]	[Is the element currently captured?]	
		[measurable element]	[Is the element currently captured?]	
	[Activity 2]	[measurable element]	[Is the element currently captured?]	
		[measurable element]	[Is the element currently captured?]	
		[measurable element]	[Is the element currently captured?]	
	[Activity 3]	[measurable element]	[Is the element currently captured?]	
		[measurable element]	[Is the element currently captured?]	
		[measurable element]	[Is the element currently captured?]	
Summary	[Summary]			
Suitability for disaggregation	Suitable			Unsuitable
	<b>Instruction:</b> Based on your assessment, position the dot to reflect the output's suitability for disaggregation.			

Organisation structure
[Group/division]
Area 1
Area 2
Area 3
Area 4
Area 5
Area 6
Area 7

**Instruction:** Resize the red area to reflect the proportion of the division/area covered by the output.

## Assessment tool: performance measures – appropriateness

The performance measure appropriateness consideration assessment approach and summary ratings comprise general and specific considerations. The general consideration tests whether the suite of measures reflect the main expenditure components of the output. The specific consideration is sequential and considers the existing measures individually to ascertain if:

- a measure is providing directly relevant and detailed information, then it is recommended to be maintained
- a measure is not providing relevant information, consideration is given to other more detailed available information that may be relevant
- there are no alternative information sources, then consideration is given whether to discontinue the measure or another more relevant measure can be developed.

Performance measure appropriateness – (specific) sequential criteria				
Assessment criteria	Key considerations	Summary ratings		
		Yes	Partial	No
Does the performance measure provide relevant information to facilitate informed analysis?  <b>If Partial or No</b>	Does the performance measure provide the level of detail required into departmental performance to assist users?  If <b>Yes</b> – then maintain as is.	Measure provides directly relevant and detailed information to support user analysis.  (Recommend measure is maintained)	Measure provides information that may support user analysis.	Measure does not provide information to support user analysis.
Is there (or is it likely) more granular/relevant data/information related to the specific measure or activity available to facilitate informed analysis?  <b>If Partial or No</b>	Does the department have further information and detail that aggregates up and/or provides more relevant performance information than that currently reported?  If <b>Yes</b> – then recommend measure is disaggregated or revised.	More detailed and relevant information is available.  (Recommend measure is disaggregated or revised)	More detailed information may be available and of relevance.	Further detail is not currently collected or reported by the department.
Is there another more relevant measure that can be developed that would facilitate informed analysis?	Is there a more relevant measure or data point that would better facilitate informed analysis?	(Recommend a relevant replacement measure)	n.a.	Relevant measure cannot be easily replaced.  (Recommend measure is discontinued)

Performance measures appropriateness						
Performance measure	Unit of measure	201X-1X target	Assessment criteria			Comment
			Facilitates informed DTF analysis and advice?	Is more granular data/ information available?	Should measure be replaced or discontinued?	
<b>Quantity</b>						
Quantity measure 1			[assessment rating]	[assessment rating]	[assessment rating]	
Quantity measure 2			[assessment rating]	[assessment rating]	[assessment rating]	
Quantity measure 3			[assessment rating]	[assessment rating]	[assessment rating]	
<b>Quality</b>						
Quality measure 1			[assessment rating]	[assessment rating]	[assessment rating]	
Quality measure 2			[assessment rating]	[assessment rating]	[assessment rating]	
Quality measure 3			[assessment rating]	[assessment rating]	[assessment rating]	
<b>Timeliness</b>						
Timeliness measure 1			[assessment rating]	[assessment rating]	[assessment rating]	
Timeliness measure 2			[assessment rating]	[assessment rating]	[assessment rating]	
Timeliness measure 3			[assessment rating]	[assessment rating]	[assessment rating]	
<b>Summary</b>						

## Attachment 5: Overview of medium-term planning process

The medium-term planning process revolves around four key stages, which are outlined in detail below.

### 5.1 Setting a clear direction establishing vision, mission, objectives and indicators

This process of planning entails developing the department's vision, mission, goals and objectives. The mission statement clarifies the department's purpose in the context of the Government's objectives. It is important to note this stage of planning occurs before the State budget as the departmental objectives are endorsed during the budget process. The finalised plan reflects objectives consistent with the budget papers.

The departmental objectives are measured by supporting indicators. With these measurable indicators, departments can monitor progress and make necessary adjustments each year. A further task is to consider outputs or deliverables needed to achieve the department's objectives. The associated output performance measures objectively measure the degree of success of output delivery.

Throughout this process of setting and refining the strategic direction for the department, departments may engage with Minister/s and key stakeholders as required.

### 5.2 Assessing the operating environment: situation analysis

A range of external and internal factors can affect the achievement of departmental objectives and outputs. These should be considered during medium-term planning, with relevant risk mitigation strategies developed to ensure desired priorities can be achieved. Planning takes into account the impact of cross-portfolio issues. However, the finalised plan is specific to the relevant portfolio. Departments can use horizon scanning to assess opportunities and identify limitations and capabilities to deliver the outputs and achieve departmental objectives.

External analysis includes:

- forecasts of economic conditions
- sector-specific inflationary pressures
- longer-term changes to the determinants for demand
- inconsistent/variable demand for services provided
- demographic and population changes
- anticipated technological developments
- actions by other governments
- the regulatory environment.

Internal analysis includes:

- the department's culture and structure
- capacity and capability to deliver
- resources, including the available technology and condition of assets
- physical location of output delivery providers.

With the external and internal analysis, departments can consider strengths, weakness, opportunities and threats.

### **5.3 Strategy formulation**

After analysing the department and the environment in which it operates, strategies and implementation plans can be developed to meet output delivery and departmental objectives, taking into consideration government policies and internal activities. Formulating strategies and implementation plans should involve the whole business (including portfolio agencies) to ensure the emerging drivers, risks, challenges and opportunities are identified and addressed.

Some areas for consideration include:

- output restructures e.g. output mix
- demand and supply factors
- use of technology and innovation
- minimising operating costs and achieving operational efficiency
- workforce planning to improve capability
- planning to manage and achieve optimal value from the asset base
- engaging markets in maximising value from procurement and external service providers
- addressing specific government policies and targets.

Resource planning is also an integral part of medium-term planning process through the inclusion of specific targets for planning purposes.

### **5.4 Feedback, control and reporting**

Objectives and output delivery strategies and actions should be continuously assessed by setting standards, monitoring performance and acting to manage any variances. Modifications should be made from time to time to address significant change not foreseen, including the use of innovation, market mechanisms and technology.

# Attachment 6: Departmental performance statements – performance measure footnotes guidance

This attachment provides further guidance on the preparation of performance measure footnotes as part of the preparation of departmental performance statements.

## Wording for standard footnotes

The following wording is suggested to be used:

### New performance measures

'New performance measure for 20xx-yy to reflect Government priorities regarding <xyz>/new funding/etc.'

### New budget initiatives

'The higher 20xx-yy target reflects new funding in the 20xx-yy Budget for the <xyz> initiative.'

### Renamed/edited performance measures

'This performance measure replaces the 20xx-yy performance measures <xyz>. The new measure is the same as the previous measure except for <xyz> and measures the same activity.'

'This performance measure renames/edits the 20xx-yy performance measures <xyz>. The new measure reports on the same activity as the previous measure, however has been amended for increased clarity.'

**Note:** renamed/edited performance measures are published in the performance statements. The previous measures are not required to be published as a proposed discontinued or substantially changed measure.

### Replacement or consolidation of performance measures

'This performance measure is proposed to replace the 20xx-yy performance measure <xyz>. It has been amended/replaced to more accurately reflect <xyz>.'

'This performance measure is proposed to consolidate the 20xx-yy performance measures <xyz> and <xyz> into a new measure for 20xx-yy. These measures have been consolidated to <xyz>.'

**Note:** previous year performance measures that are proposed to be replaced or consolidated are required to be published as a proposed discontinued or substantially changed measure.

### Proposed discontinued measures

'This performance measure is proposed to be discontinued as <it is no longer relevant/it has been replaced by the 20xx-yy performance measure '...'/previous budgets did not allocate funding for the program beyond 30 June 20xx>.'

### Proposed discontinued measures as a result of a machinery of government change

'This performance measure is proposed to be discontinued due to machinery of government changes effective <day month 20xx>. This measure was previously presented as part of the <xx objective> of the former <Department>. Reporting on this measure is no longer <appropriate/relevant> as <it was a function of the former department/a proportion of the measure relates to Department x/....>.'

**Note:** this footnote is intended to capture full and partial transfers and functions to and from departments as a result of a machinery of government change.

### Performance measures transferred between outputs

'This performance measure is transferred directly from the <xyz> output.'

### Machinery of government change

'This performance measure has been introduced as a result of machinery of government changes that resulted in the transfer of <xyz> functions <out of/into> the department.'

### Significant and/or material movements (a) in targets between years; (b) between targets and expected outcomes within or between financial years; or (c) output costs between years

'The higher/lower 20xx-yy target reflects <additional services or funding/the effect of...>.'

'The 20xx-yy expected outcome is <lower/higher> than the 20xx-yy target due to <....>.'

**Note:** footnotes explaining changes in targets or the setting of targets must include:

- at a minimum, whether the change is due to changed government policy, funding or program delivery, or changed external circumstances (i.e. Commonwealth, consumer trends etc.)
- factors that have contributed to any targets being set at levels that could be reasonably interpreted as being significantly understated compared to the previous year.

### Footnotes involving per cent and percentage point

A percentage point is the unit for the arithmetic difference of two percentages. e.g. going from 80 per cent to 84 per cent is a 4 percentage point increase (not a 4 per cent increase).

This means if the target is 80 per cent and the expected outcome is 84 per cent, the variance is 5 per cent, which requires a footnote.

# Attachment 7: The Departmental Funding Model

## Calculation of output price in the DFM

As part of the Departmental Funding Model (DFM), output prices are generally indexed (except for some exclusions) so a department's ability to deliver services is not eroded over time by inflation.

In the budget and forward estimates, this is reflected in two sets of 'prices':

- **base output price** – these prices are indexed by an indexation factor throughout the forward estimates, to reflect general price movements in the economy
- **fixed output price** – these prices remain fixed through the forward estimates and are not indexed.

Total output price is defined in the following equation:

$$\text{Total output price} = (\text{Base output price} - \text{exclusions}) \times \text{indexation factor} + \text{exclusions}$$

## Indexation factor used in the DFM

The DFM allows for indexation based on the official State Government forecast of the *Consumer Price Index (CPI) – All Groups, Melbourne*, or an alternative rate, determined at the Treasurer's discretion.

## Exclusions to the application indexation under the DFM

Some components of output delivery are not subject to uniform indexation, or else are subject to different price indexation, as a result of:

- explicit Government decisions (e.g. non-wage health specifics such as drugs and prosthetics)
- special arrangements, such as Commonwealth/State matching arrangements (e.g. young people in nursing homes)
- existing contracts to deliver outputs negotiated through a tender process (e.g. public transport contracts).

The General Efficiency Dividend<sup>3</sup> is also not subject to indexation under the DFM.

Further discussion on the exclusions to the application of DFM indexation are outlined below.

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<sup>3</sup> The General Efficiency Dividend is an efficiency measure applied by departments to non frontline wage and non wages costs.

## Output delivery contracts

Existing major output delivery contracts are excluded from uniform indexation for the life of the existing contract term where the price for an agreed level of service on a no-policy change basis is subject to differing indices prescribed in the existing contract.

For such contracts, when the estimate of the price needs to be revised during the forward estimates period, DTF and the relevant department agree any upward or downward movement based on the indexation methodology prescribed in the contract. Should the methodology require the use of forecast indices, the forecasts must be agreed with the Treasurer, in a similar manner to the uniform indexation forecasts.

Future contracts to deliver outputs will not be excluded from the uniform indexation arrangements unless there is an explicit government decision to do so.

## Specification and pricing of outputs partly funded externally

A number of departments charge users directly for some products or services, with this revenue meeting either part or the whole of the cost of the product or service delivery.

In other cases, an external service provider (this could be a public non-financial corporation or a non-government entity) provides products or services directly to the public and charges the users an amount which covers only part of the cost, with the difference funded by government contribution.

If an output appears to be a clearly definable item with a readily identifiable cost, the important issue for management purposes is the total net cost to Government of the delivery of that output.

After identification of the total delivery cost and expected demand and hence revenue received from external users, the department can then consider the net price of the output to Government.

The department and Government should seek to minimise the total output delivery cost while balancing:

- the charges imposed directly on customers for the product or service (as per Standing Direction 3.8 – refer to the Cost Recovery Guidelines)
- any aspects of the service which Government will fund as a Community Service Obligation (CSO)
- the net output price to Government
- any National Competition Policy issues.

# Attachment 8: Applying the correct appropriation accounts in SRIMS as part of the DFM

## DFM appropriation accounts

There are a number of 'annual appropriation' accounts in the State Resource Information Management System (SRIMS):

- **Account 71210 (Constant Output Price)** – used for appropriation revenue that is subject to indexation under the DFM.
- **Account 71220 (Escalation Increment)** – used for the indexation component provided to departments under the DFM.
- **Account 71200 (Revenue from Annual Appropriations (fixed price))** – used for appropriation revenue in the following instances:
  - revenue provided for specific Government decisions where indexation differs from the DFM indexation rate  
*or where no indexation applies*
  - special Commonwealth/State matching arrangements
  - existing contracts to deliver outputs negotiated through a tender process.



The Departmental Funding Model

## General comments

Departments are responsible for identifying the correct revenue streams associated with the provision of outputs and assigning the revenue to the correct DFM appropriation accounts. If the accounts are not applied correctly, material distortions to the estimates may arise over time.

Departments are advised to discuss with their DTF contact if guidance on the use of these accounts for specific transactions is required.

## Attachment 9: Depreciation equivalent – asset funding sourced from provision of outputs appropriation diagram

Operating Statement for the Provision of Outputs for the Department. Authority codes between 2005 and 2220		Amount (\$)	Balance Sheet	Amount (\$)	Comment	
<b>Revenue</b>			SAU inter-entity account 45000			
			SAU inter-entity account opening balance	200 000	SAU inter-entity account opening balance covering prior-years depreciation equivalent per SAU inter-entity Dissection Statements.	
			Current year actual depreciation expense equivalent	50 000		Department receives appropriation for the provision of outputs which is deposited in its SAU inter-entity account.
			<b>Total available depreciation equivalent</b>	<b>250 000</b>		
Appropriation for the Provision of Outputs – Accounts 71050–71200	(1 000 000)		Appropriation covering current year other output expenses	950 000		
<b>Total Appropriation Revenue for the Provision of Outputs received during the current year</b>	<b>(1 000 000)</b>		<b>Total Appropriation funding available in the SAU inter-entity account</b>	<b>1 200 000</b>		
<b>Expenses (outputs)</b>			<b>Payments</b>			
			SAU inter-entity account payments comprising:			
			• payment for property, plant and equipment (additions to the Net Assets Base) from previous year's depreciation equivalent	(200 000)	Payment for property, plant and equipment from previous year's depreciation equivalent. In this instance, the Treasurer's approval under s.33 of the <i>Financial Management Act 1994</i> is required.	
Depreciation (includes amortisation) – Accounts 81000–81950.	(50 000)		• payment for property, plant and equipment (additions to the Net Assets Base)	(50 000)	Payment for property, plant and equipment from current year's depreciation equivalent.	
Other expenses – Accounts 80100–80985, and 82000–90800	(950 000)		• payments for output expenses	(950 000)	Normal payments for output expenses from the Provision of Outputs appropriations.	
<b>Total expenses</b>	<b>1 000 000</b>		<b>Total draw-downs from the SAU inter-entity account</b>	<b>(1 200 000)</b>		
<b>Total operating result</b>	<b>0</b>		<b>Total Balance in the SAU inter-entity account</b>	<b>0</b>		

# Attachment 10: Pro-forma journal entries for long service leave transactions

## 10.1 Accruing of long service leave by employees

The provision for long service leave (LSL) progressively increases as a result of accumulating LSL expense.

**Dr** Long service leave expense (other than revaluation of present value of LSL) – account 80500 (transaction flows)

**Dr** Long service leave expense – gains (losses) on revaluation account 80550

(Annual appropriation authority codes must not be used with this account).

**Cr** Long service leave provision (liability)

Departments receive funding for the payment of LSL (other than revaluation of present value of LSL – account 80550) as part of the revenue received for the delivery of outputs. This revenue is recorded in the form of a deposit in the SAU inter-entity account.<sup>4</sup>

**Dr** SAU inter-entity account LSL (asset)

**Cr** Revenue for outputs (revenue)

## 10.2 Recognition of long service leave resulting from previous employment outside the Victorian budget sector

Employees in the Victorian public service (VPS) may have a period of service with a previous employer that was outside the VPS but is still recognised for LSL purposes.

**Dr** LSL expense (expense)

**Cr** LSL provision (liability)

## 10.3 Pay out of leave: employee resigns, retires or takes a payout in lieu of leave

Upon resignation, retirement or by request, an employee receives a payment in lieu of LSL if he/she is recognised as having seven or more years of service and has not fully drawn down on his/her available LSL entitlement:

**Dr** LSL provision (liability)

**Cr** Cash at bank (asset)

Cash at bank would be reimbursed from the SAU inter-entity account:

**Dr** Cash at bank (asset)

**Cr** SAU inter-entity account LSL (asset)

---

<sup>4</sup> Appropriation revenue is not provided for LSL gains/(losses) on revaluation due to changes in the present value resulting from the discount (bond) rate applied.

## 10.4 Employee resigns or retires – no pay out of leave provision as a result of not accruing a sufficient entitlement to a payout under their conditions of employment

An employee who resigns or retires is not entitled to receive a payment in lieu of LSL if they are not recognised as having at least seven or more years of service and is not entitled to pro rata payment in lieu of LSL upon cessation of employment.

In this situation the LSL provision is written back against LSL expense and no reduction is made to the deposit with the SAU inter-entity account.

**Dr** LSL provision (liability)  
**Cr** LSL expense (expense)

## 10.5 Deposits accrued in the SAU inter-entity account are sufficient to fund long service leave

It is expected that there will generally be sufficient SAU deposits accrued to fund LSL as it falls due for payment. The following transactions would normally apply:

**Dr** LSL provision (liability)  
**Cr** Cash at bank (asset)

Cash at bank would be reimbursed from the SAU inter-entity account as follows:

**Dr** Cash at bank (asset)  
**Cr** SAU inter-entity account LSL (asset)

Refer *Representation of long service leave funding flows* for an illustration of how the SAU inter-entity account is funded for LSL expense.

## 10.6 Deposits accrued in the SAU inter-entity account are insufficient to fund LSL over the long term

There may be occasions where deposits accrued in the SAU inter-entity account will be insufficient to pay LSL over the long term due to some unforeseen condition arising. There are two specific times when this can occur:

1. there is an increase in the number of staff taking LSL in a particular year
2. due to the age profile of staff in a department, a significant number of staff who have accrued LSL fall due for retirement.

For both conditions noted above:

Reduction in liability (provision for LSL)

**Dr** LSL provision (liability)  
**Cr** Appropriation<sup>5</sup>  
**Cr** SAU balance (to the extent that existing balances are available)

---

<sup>5</sup> This example assumes that additional output appropriation has or will be made available.

## **10.7 The transfer of an employee's accrued LSL entitlement when that employee secures employment outside of a department to an organisation not covered by agreements for the transfer of LSL funding**

Circumstances may arise where an employee secures employment outside a department and their accrued LSL provision is recognised by the new employer. Unless employment arrangements exist for the payment of LSL on a pro rata basis upon resignation the following applies:

- Dr** LSL provision (liability)
- Cr** LSL expense (expense)

## **10.8 LSL accruals for salaries paid from Special Appropriations or trust funds**

Normally salaries and employee entitlements will be funded out of output revenue. However, there will be some cases where the source of funds will be either from special appropriations or trust funds. In these circumstances it will be necessary to charge LSL expense against the Special Appropriation or trust fund with a corresponding increase in the SAU inter-entity account.

(a) LSL is accrued:

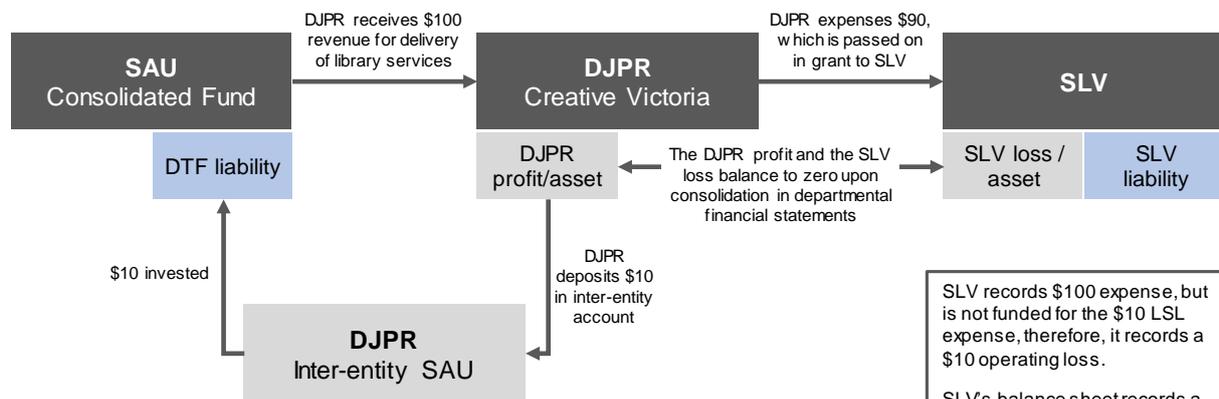
- Dr** LSL expense (expense)
- Cr** LSL provision (liability)

(b) Transfer of funds equal to LSL expense into the SAU inter-entity account:

- Dr** SAU inter-entity account LSL (asset)
- Cr** Special Appropriation (revenue)

# Attachment 11: Representation of long service leave funding flows

(The Department of Jobs, Precincts and Regions (DJPR) and State Library Victoria (SLV) are used in this example)



DJPR receives \$100 revenue from the SAU for delivery of SLV outputs. SLV's costs are \$10 for LSL expense and \$90 for other expenses.

DJPR does not fund SLV for the \$10 LSL expense because SLV will not spend this as cash in the budget year. Accordingly, DJPR records a \$90 expense (current grant to SLV) and a \$10 profit held as a **receivable/asset** in its inter-entity SAU account.

The balance in the DJPR inter entity account is invested in the DTF SAU, the DJPR profit and the SLV loss balance to zero upon consolidation in departmental financial statements.

SLV records \$100 expense, but is not funded for the \$10 LSL expense, therefore, it records a \$10 operating loss.

SLV's balance sheet records a \$10 **liability** equal to the increase in their LSL provision, and a \$10 decrease in **accumulated funds** equal to the unfunded \$10 held by DJPR.

SLV needs to provide a business case proving that it requires the \$10 before it will be passed on from DJPR.

## Attachment 12: Template for cash and actuals reconciliation in SRIMS

This template gives departments the opportunity to show any reconciling items and should reflect the reconciliations currently undertaken by departments.

Monthly reconciliation between cash and actuals ledger in SRIMS

Department of \_\_\_\_\_

Monthly reconciliation as at \_\_\_\_/\_\_\_\_/20\_\_

Entity	Account	Authority	Actuals ledger amount	Cash ledger amount	Variance amount	Comment
XXXX	XXXXX	XXXX				
	45000					
	45500					
	46000					
	47000					
	48001					
	50010					
	50015					
	50020					
	50030					
	50040					
	50127					
	71050					
	71200					
	71400					
	79900					

Entity	Account	Authority	Actuals ledger amount	Cash ledger amount	Variance amount	Comment
	90500					
	90800					
	11000					
	14100					
		<b>Total</b>				

\_\_\_\_\_  
 Chief Finance Officer (or delegate)  
 \_\_\_\_/\_\_\_\_/\_\_\_\_

By the 10th business day of the new calendar month this reconciliation must be returned to DTF via email to [cashmanagement@dtf.vic.gov.au](mailto:cashmanagement@dtf.vic.gov.au)

# Attachment 13: Planning, designing and conducting effective evaluations

## Step 1: Define the purpose of the evaluation

Clearly defining the purpose of an evaluation helps in identifying who will use the evaluation results, when the evaluation should be conducted, and who should conduct the evaluation.

The method of evaluation, communication, timing and use of results largely depends on the purpose of the evaluation.

The most important part of this step is firstly making sure that it is understood what the policy or program is all about i.e. what is the expected outcome or result of the policy or program?

A good understanding of the program will help to identify why the evaluation needs to be done, how the evaluation will be used and who should conduct the evaluation.

### Examples of evaluation purpose

Purpose	Description
Improve and inform policy	To review policy effectiveness on an evidence basis, develop future options and alternatives.
Support and improve budget priorities	To identify cost effectiveness, efficiencies and/or resource allocation options.
Drive organisation learning and improvement	To make adjustments and improvements to existing or future programs and policies.
Improve accountability and transparency	To ensure a robust system of performance measurement and management.

Sometimes it can be unclear what a program is trying to achieve, or the aims may never have been set out at the beginning of the program's implementation. A useful way to identify a program's objectives would be to consider these key evaluation questions:

- What are the service needs that are being met? Who are the recipients of the service?
- What problem or issue is the program trying to address?
- Is the program delivery a new or improved service? Has the program replaced other services?
- What are the outputs being delivered in terms of quantity, quality, timeliness and cost?

Information that may be useful to answer these questions could be contained in government policy statements, ministerial press releases, departmental corporate and business plans, departmental

## Step 2: Decide when the evaluation should be conducted

Evaluations may be conducted before, during or after a program has been implemented, depending on the purpose. As a general guide:

Timing	Purpose
Pre-program implementation	To inform decisions to proceed and support budget priority decisions.
During-program implementation	To monitor project performance and identify possible improvements.
Post-program implementation	To assess achievement of project objectives, inform and improve policy.

## Step 3: Decide who should conduct the evaluation

This step involves determining who should be responsible for conducting the evaluation and implementing its outcomes. A trade-off may need to be made between using external or internal resources or evaluators to evaluate the policy or program. Internal evaluators will generally have a deeper understanding of the program context so it is more likely that organisational learning will occur, while external evaluators are more objective in their approach to the program. To ensure independence, evaluations should not be conducted by a party involved in the delivery of the program under evaluation.

Determining who should conduct the evaluation depends on the purpose of the evaluation. As a general guide:

Who	Purpose
Central agencies	When the objectives are to assist and improve budget priority decisions and resource allocation decisions.
Department/agency self-evaluation	When the objectives are organisational learning and improved implementation. Examples include department evaluation unit, program managers and officers, department internal audit. Can be limited by time and resources.
Independent examination and performance assessment	When the objectives are to improve accountability, transparency and provide alternative perspectives. Can include policy practitioners, management consultants, public bodies, community groups and auditors. The focus can be more on accountability than improvement.
External experts and policy expertise	When the objectives are to assess policy evidence and effectiveness, provide new perspectives on public policies or specialised evaluation skills. Examples include policy practitioners, research bodies, academics and management consultants.

## Step 4: Decide how the evaluation should be conducted

Deciding how to conduct an evaluation depends on the intended use of the evaluation results and the nature of the program itself. The design, approach and method should fit the purpose of conducting the evaluation.

As a result, decisions need to be made about:

- what information, data collection and evaluation methodology would provide the right evidence to best inform the people making decisions on the evaluation?
- what methods and data will produce the best evidence to support the intended purpose of the evaluation – on time and within budget?

Some considerations include:

- social, economic and financial impacts of the program
- risks associated with the program and how these are being managed
- different service delivery options available to government.

Most programs will generate a lot of useful information during the course of program planning and implementation that can be used to address these evaluation questions.

## Step 5: Consider how to determine the success of an evaluation

As part of designing an evaluation program, consideration should be given to whether the intended purpose has been met. Some questions that may guide this assessment include:

- Is the evidence presented sufficient to make this decision?
- Has the program accomplished what it was designed to do? Why, or why not?
- What recommendations and options for future change or improvement can be made depending on the intended purpose?

It is also important to clarify the differences between measuring the success of the evaluation and measuring the success of the program under evaluation.

## Step 6: Consider how to report the findings and recommendations

Determining how the evaluation will be reported depends on the original purpose of the evaluation and the intended use of the evaluation results. Different communication formats may be required for different stakeholders. Evaluation findings may also be integrated into other reporting formats, for example, progress reports during the development of the program could be used within final reports post-program implementation.

The main types of reporting are:

Reporting type	Intended use
Formal published document/report	To communicate findings for significant programs or policy. This can include formal reports to stakeholders, the public and management.
Less formal communication	To transfer learnings, to improve the program or to assess operational performance. This can include formal oral briefings, workshops, stakeholder forums, meetings and briefings to management and staff.

## Step 7: Using the evaluation findings

Evaluation reporting is not just about the communication of results. It is important to ensure that the findings are used to achieve the purpose for which the evaluation is intended. This may include tailoring the findings to match the needs of stakeholders.

Some useful questions to help to identify the evaluation audience include:

- Who is going to make decisions about the program and its future, based on the evaluation?
- What do the end-users want to know about the project?
- Why is this information important to the end-users?
- When do the end-users want this information?

### How should the evaluation be conducted?

There is no particular way to choose the most appropriate method to evaluate a program, given that most methods of data collection and analysis have some bias or limitation. For example, using more sophisticated models can deliver thorough and insightful results, but the trade-off is usually the need for more time, expert knowledge and resources. Cost, time, resources and skill availability should be considered when determining design, approach and method

The type of evaluation approach used should be commensurate with the size and importance of the program, for example, additional expertise and evidence may be required for larger, complex and more costly programs.

As a useful guide, remember:

- Often the most appropriate evaluation approach and method is a combination of methods.
- The most important part of any evaluation is to document the purpose and the process.

### Characteristics of best practice evaluation

Characteristics	
Focused on key issues that inform decision making	To ensure that an evaluation will be used to inform future decision making, it is important that it focuses on the key issues that matter to the relevant stakeholders and decision makers. In the planning stage it is important to identify the stakeholders that have an interest in the program and obtaining their commitment to be involved in the evaluation or to use the findings. Defining the terms of reference early in the evaluation planning process will also help ensure that those involved are clear from the beginning on what is being evaluated and why.
Robust and rigorous – systematic, evidenced-based approach to assess performance	The most effective evaluations are comprehensive and get to the core of the program. However, given time and resources limitations, a trade-off will need to be made between the amount, type and extent of the evidence that is collected and analysed. The best way to approach this decision is to be clear about what is being measured and why, and what information will address the purpose of the evaluation. In the planning stage it is important to determine what existing data is available, what new data will be required and whether any requisite specialist skills are available. This will help avoid a difficult trade-off between collecting more information and the cost of collecting that information.

## Characteristics

Reliable, useful and relevant	The real test of an effective evaluation is whether the results can be understood and used by decision makers and stakeholders. This includes making sure that the results can be relied on, and that any assumptions, underlying calculations or projections and conclusions are documented and explained. The way in which evaluation results are reported and presented is also very important. Good evaluation reports are clear, succinct and easily understood. Recommendations should make sense, be practical and be informed by sound and objective information and analysis.
Timely	The impact that evaluation results can have on decision makers and stakeholders is dependent on the timely availability of results. An evaluation should be timed to fit in with departmental and whole of government planning and resource allocation processes.

## Common methods and approaches used to collect data and conduct an evaluation

It is important to ensure that the selected methods and approaches fit the purpose of the evaluation and will be suitable for providing data to answer the key evaluation questions. No single method or data collection approach will be suitable to answer all evaluation questions, and a combination of methods and approaches may be needed to comprehensively evaluate a program.

Level of sophistication	Evaluation data and method types	Potential uses	Constraints	Common applications
Lowest	Literature search/ best practice models	<ul style="list-style-type: none"> <li>Identify what is happening in other jurisdictions, new and best practice ideas.</li> <li>Enhance understanding of causes of various problems and identify future strategies and options.</li> </ul>	<ul style="list-style-type: none"> <li>Causal relationships can be difficult to test.</li> <li>Often needs supplementary information and analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Starting point in all evaluations.</li> <li>Cheap and easy way to collect information.</li> <li>Useful in the program planning phase to identify service delivery options, community needs and to improve and inform policy.</li> </ul>
	Pilots and case studies	Identify what works and what doesn't to guide future program development and implementation – without having to fully examine or implement a program.	<ul style="list-style-type: none"> <li>Can be difficult to broadly apply the learnings from specific pilot and case</li> <li>Can be costly and time consuming to conduct an in-depth pilot study. Case studies are generally easier to do because they rely on historical information.</li> </ul>	<ul style="list-style-type: none"> <li>Useful for all evaluations.</li> <li>Most useful to generate information to drive organisational learning and improvement, make adjustments and improvements, share and transfer learnings.</li> </ul>

Level of sophistication	Evaluation data and method types	Potential uses	Constraints	Common applications
	Internal performance reports such as: <ul style="list-style-type: none"> <li>• surveys</li> <li>• internal and external reports</li> <li>• other compliance reports</li> <li>• management reports</li> <li>• program files.</li> </ul>	Measure progress achieved against initial expectations and performance measures.	<ul style="list-style-type: none"> <li>• Can be difficult to make clear inferences about causal relationships and impacts of programs.</li> <li>• May need supplementary information and analysis.</li> <li>• Can require some expertise to interpret.</li> </ul>	<ul style="list-style-type: none"> <li>• Most useful in providing a starting point and background information for all evaluations.</li> <li>• Input to cost-benefit and net impact analysis.</li> <li>• Useful to improve accountability and transparency and drive organisational learning and development.</li> </ul>
	Benchmarking/performance measurement	<ul style="list-style-type: none"> <li>• Measure program performance relative to comparable performance standards.</li> <li>• Identify best practice performance and how to adopt these practices to improve the program.</li> </ul>	<ul style="list-style-type: none"> <li>• Requires comparable performance measures.</li> <li>• Requires program performance measures to be identified upfront.</li> <li>• May need supplementary information and analysis.</li> <li>• Requires expert knowledge and time to identify relevant measures and analyse results.</li> </ul>	Useful to support and improve budget priorities, improve accountability and transparency, and drive organisational learning and development.
	Review of statistical collections	<ul style="list-style-type: none"> <li>• Identify quantitative and qualitative economic, social and environmental impacts of a program.</li> <li>• Inform the generation and testing of alternative models and options.</li> </ul>	<ul style="list-style-type: none"> <li>• May require supplementary information and analysis.</li> <li>• Not all program results can be quantified.</li> <li>• Requires expertise to perform data analysis.</li> <li>• Availability of data can vary.</li> </ul>	<ul style="list-style-type: none"> <li>• Most useful as an input to evaluations that measure cost-benefit or the net impact of programs.</li> <li>• Useful to improve and inform policy, and support and improve budget priorities.</li> </ul>
	Cost benefit analysis	<ul style="list-style-type: none"> <li>• Identify and quantify full range of program costs and benefits.</li> <li>• Quantifies inputs and outputs.</li> <li>• Objective way to compare and rank alternative programs.</li> <li>• Depends on a reliable source of predictive data generated by other methods.</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on quantitative measures and costs of a program – some costs and benefits may not be able to be measured in dollar terms.</li> <li>• Requires expertise in statistical modelling and use of cash flow techniques such as NPV and discounted cashflow.</li> </ul>	Particularly useful to support and improve budget priorities, identify cost effectiveness and efficiencies, and guide resource allocation decisions.

Level of sophistication	Evaluation data and method types	Potential uses	Constraints	Common applications
	Net impact evaluation or outcome-based evaluation	<ul style="list-style-type: none"> <li>Assess net effect of a program by comparing against a 'do nothing' position. Identify what would happen if the program had not occurred.</li> <li>Identify extent to which a program or policy has achieved its desired outcomes once it has been implemented.</li> <li>Review unintended consequences and impacts of programs.</li> </ul>	<ul style="list-style-type: none"> <li>Time and resource intensive.</li> <li>Potential reliance on proxies to measure alternative outcomes – can be difficult to find good proxies for outcome measures.</li> <li>Can be difficult to collect accurate historical data and evidence.</li> <li>Requires specialist expertise, knowledge or input such as economic and social research skills.</li> </ul>	<ul style="list-style-type: none"> <li>Particularly useful to improve and inform policy by providing evidence to develop alternatives and future policy options.</li> <li>Useful to also improve accountability, improve budget priorities and drive organisational learning and improvement through identifying potential improvements.</li> </ul>
Highest	Cost effectiveness	<ul style="list-style-type: none"> <li>Quantify program costs and benefits when they cannot be valued in dollars – qualitative analysis. Unlike cost benefit analysis, measures outputs and outcomes in both quantitative and qualitative terms.</li> <li>Identify potential impacts to reduce the costs of a program.</li> <li>Useful to compare and rank programs in terms of their costs for reaching given outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Requires specialist economic or social research expertise and program knowledge to objectively assess effectiveness.</li> <li>Need clear measures or proxies for outcomes – it can be difficult to find good proxies for outcome measures.</li> <li>Can be time and resource intensive.</li> </ul>	<ul style="list-style-type: none"> <li>Particularly useful to improve and inform policy by providing evidence to develop alternatives and future policy options.</li> <li>Useful for improving accountability and budget priorities and driving organisational learning and development through identifying potential improvements.</li> </ul>

## Attachment 14: Guidance on lapsing programs evaluations

While the following is intended as guidance to support the questions posed in mandatory requirement 6.1.2, departments are advised to follow the guidance as closely as practicable in preparing their evaluations.

### **Question 1 – Justification/problem: What is the evidence of continued need for the program and role for government in delivering this program?**

The evaluation should address and provide evidence of:

- the extent to which the program continues to address a demonstrable need and is responsive to the needs of Victorians
- the extent to which the department has investigated other options to address the identified need or problem
- why the program continues to be the best way to respond to the problem and deliver the intended outcomes
- how economic, environmental and social conditions have changed since the program was funded and how continuation of the program will meet these conditions
- the marketplace not being able to deliver the program
- no similar services being provided by the Victorian Government, the Commonwealth, or non-governmental organisation sector that have commenced since the program's inception
- the capacity (resources and monetary) and capability of the department to continue the program while responding to any changes found as a result of the evaluation.

### **Question 2 – Effectiveness: What is the evidence of the program's progress toward its stated objectives and expected outcomes, including alignment between the program, its output (as outlined in BP3), departmental objectives and any Government priorities?**

The following information should be provided as a minimum:

- clearly articulate the stated objectives of the program and outcome it was seeking to achieve
- (at start up and any revisions), why the program approach was considered the best way to achieve the outcomes. If the objectives of the program were not clearly articulated at start up, supplementary explanatory information is required
- demonstrated alignment between the program's stated objectives, its output, departmental objectives, intended outcomes/impacts and any stated Government priorities
- clear articulation and demonstration of the impact of the service on clients

- provide performance results based on quantitative output and outcome data (e.g. number of clients seen, targeted client survey). Qualitative data may also be provided, however greater weighting will be given to quantitative information provided<sup>6</sup>
- where full year data is not available, departments are required to provide any available data along with any assumptions made
- where appropriate, external factors outside of the department's control should be identified to provide context for evaluation results around the achievement of outcomes
- describe any quantifiable unintended benefits and costs.

**Question 3 – Funding/delivery: Has the program been delivered within its scope, budget, expected timeframe, and in line with appropriate governance and risk management practices? What were the challenges in delivery of the program? How were these challenges addressed?**

The following information should be provided at a minimum:

- detail the original scope and any scope changes (including associated funding and objective/performance adjustments) agreed by the relevant Cabinet committee
- total approved budget (including but separating out from original approval any agreed scope variations), program costs and major cost drivers
- list of the price paid by Government and all additional funding provided to the program over the past three years (as applicable)
- list the total costs incurred for the delivery of the program (including disaggregation by expense category) for each of the three previous years (as applicable)
- a breakdown of program expense categories
- all entities which charge expenses to the program cost
- brief timeline and status of program delivery implementation. If not delivered on time or on budget, a clear explanation of why. If any variations to the timeline for program delivery have been approved by Government over the life of the program this should be highlighted
- demonstrate why the governance and risk management practices surrounding the program are appropriate. If considered not appropriate, explain why and describe proposed changes.

**Question 4 – Efficiency: Has the department demonstrated efficiency and economy in the delivery of the program?**

Provide a brief statement of the extent and level of any efficiencies realised in the delivery of the program (e.g. how the program is being delivered at lowest possible cost without compromising quality, any improvements that have led to downstream efficiencies).

For larger programs (\$20 million or greater) – provide data and evidence of improved efficiency and economy (demonstrating that the program is being delivered at lowest possible cost without compromising quality, highlighting improvements that have led to downstream efficiencies).

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<sup>6</sup> Qualitative data may be sourced from open ended interviews, direct observation or written documents), and qualitative analysis methods (identifying themes, concepts and patterns from the data) may also be provided.

### **Question 5 – Risk: What would be the impact of ceasing the program (e.g. service impact, jobs, community) and what strategies have been identified to minimise negative impacts?**

Provide an outline of:

- how the department could successfully exit from delivering the program if Government so desired
- what the impact would be (both internal and external and direct and indirect)
- what strategies have been identified to minimise these impacts.

Departments are not required to look at alternate policy/program options in answering this question.

### **Question 6 – If further funding was provided: Reassess funding required to deliver the program using data collected through service delivery. Does the initial funding allocated reflect the true cost required to deliver the program?**

The following information should be provided at a minimum:

- identify cost drivers and gaps between estimated and actual costs
- comparable benchmarking of program costs and processes
- expected changes in funding needs if further funding was provided. For example, the cost of delivering a program is generally expected to be higher in the first few years due to initial set up costs and training costs.

For programs of about \$20 million or greater, data and evidence of any discrepancies of the initial funding allocation, the actuals and the estimated additional funding required, should be provided.

Data and evidence for this may include, but not be limited to:

- results benchmarking cost of delivering similar services within the organisation or an industry benchmark
- actual demand versus estimated demand for the program/service
- costs associated with addressing the actual demand (at an aggregated level, e.g. broad average costs)
- a list of assumptions used in cost analysis.

### **Question 7 – If further funding was provided: What level of efficiencies could be realised?**

Provide an outline of the level of efficiencies which ongoing funding could provide including clear explanation as to how this information was derived.

# Attachment 15: Additional guidance on evaluating lapsing programs – quantifying the effect of programs

## Key points

- The **causal effect** of a program is the extent to which it has changed outcomes for participants, compared with what would have been the case without the program. The Neyman-Rubin Causal Model formalises this in a statistical framework.
- Accurately quantifying the effect of a program depends on deliberate decisions during program design. Good evaluation should be part of a program's design from the outset.
- A program evaluation report should explain and address potentially significant **confounding factors** – characteristics that affect both a person's outcome and their likelihood of being in the program. The effect of these factors on participants' outcomes needs to be distinguished from the effect of the program itself.
- As most Government programs are targeted in some way, it is generally not adequate to examine only data from participants, or to compare group outcomes between participants and non-participants. More sophisticated techniques need to be employed, informed by the types of confounding factors likely to be of concern, available data and program design.
- A program evaluation report should explain the limitations of the analysis used and what they mean for the conclusions of the report.
- Sometimes, isolating the causal effect of a program may not be feasible. In these cases, the Neyman-Rubin Causal Model is still useful in describing the effect that should be approximated to the degree feasible.

## 15.1 Causal effect of a program

The causal effect of a program on outcomes is a primary concern in program evaluation. For the purpose of lapsing program evaluations, DTF refers to the Neyman-Rubin Causal Model (NRCM) interpretation of causality. This model is recognised by bodies across the world, including the World Bank, as the standard by which government programs are evaluated.

The NRCM frames causality in terms of the following question:

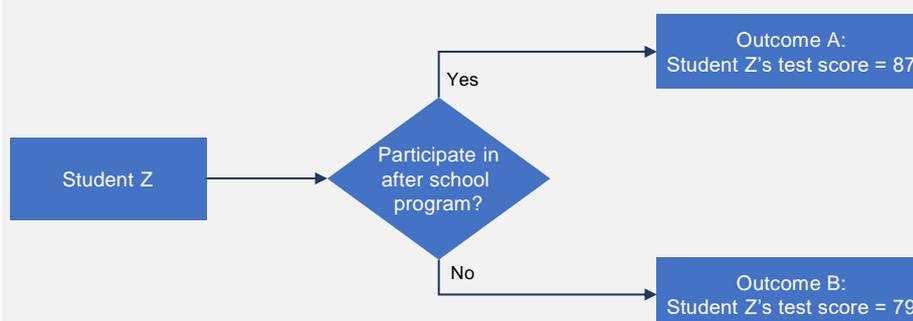
*How has the program changed outcomes for participants, compared with what they would have been without the program?*

The NRCM formalises the definition of a program's effect in a simple mathematical framework. For the purposes of program evaluation, it provides a mathematical statement of the above question. This allows practitioners to understand when certain statistical techniques will accurately isolate the effect of a program, and when they will be misleading.

NRCM compares actual outcomes for an individual that received a given treatment, with the potential had that individual not received the treatment. NRCM defines the difference between the actual and potential outcomes as the causal effect of the treatment. A detailed example of the NRCM, associated violations, and implications for program evaluation in practice is detailed in Box 1, below.

### Box 1: Example of the NRCM and violations of NRCM

Assume that the Government introduces an after-school study program for students, and we are interested in how this program affects student test scores, as illustrated in **Chart 1**:



#### The NRCM definition of identifying causal effect

In this hypothetical example, the NRCM defines the causal effect of the after-school study program on Student Z as:

$$(1) \quad \text{Causal effect}_{(\text{true})} = \text{Student } Z_{(\text{Outcome A})} - \text{Student } Z_{(\text{Outcome B})}$$

$$\rightarrow 8 = 87 - 79$$

#### Approximation of NRCM

However, in reality, you cannot observe counterfactual outcome. That is, you cannot observe both Student  $Z_{(\text{Outcome A})}$  and Student  $Z_{(\text{Outcome B})}$ . Student Z either participated or didn't participate in the after-school program. Only one can be true.

Given this, analysts usually use the following approximation, which compares the observed outcome of a student that didn't participate in the after-school program with a student that did:

$$(2) \quad \text{Causal effect}_{(\text{observed})} = \text{Student } Z_{(\text{Outcome A})} - \text{Student } Y_{(\text{Outcome B})}$$

If the approximation is valid, we would expect the following:

$$(3) \quad \text{Causal effect}_{(\text{true})} = \text{Causal effect}_{(\text{observed})}$$

Substituting (1) and (2) into (3):

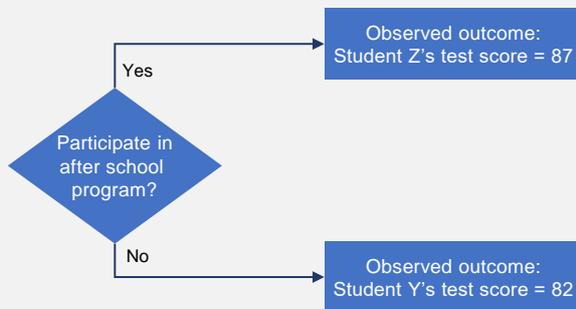
$$\text{Student } Z_{(\text{Outcome A})} - \text{Student } Z_{(\text{Outcome B})} = \text{Student } Z_{(\text{Outcome A})} - \text{Student } Y_{(\text{Outcome B})}$$

$$(4) \quad \text{Student } Z_{(\text{Outcome B})} = \text{Student } Y_{(\text{Outcome B})}$$

The above equality represents the fundamental requirement of the NRCM. That any approximation of the causal effect of a program is only valid if Student  $Y_{(\text{Outcome B})}$  is representative of Student  $Z_{(\text{Outcome B})}$ . Sections 2 and 3 of this document outlines statistical approaches that by its general design, seeks to satisfy this equality.

### Violation of NRCM and a fundamental problem of observational statistical analysis

In practice, there are a range of distorting factors that would distort **(4)** such that  $Z_{(\text{Outcome B})} \neq Y_{(\text{Outcome B})}$ . For example, take the following observation and assume that in reality, we only observe Student Z participating in the program and Student Y not participating, as outlined in **Chart 2**, below:



As shown, Student Y's observed test score is 82 (Student Y did not participate in the after-school program). This may be due to the fact that Student Y has a higher academic ability. Given student Y's higher ability, he has not chosen to participate in the after-school program. Therefore:

$$\text{Student } Y_{(\text{Outcome B})} > \text{Student } Z_{(\text{Outcome B})} = 82 > 79$$

and

$$\text{Causal effect}_{(\text{observed})} = 87 - 82 = 5$$

A clear distortion has been introduced into the observed effect, since:

$$\text{Causal effect}_{(\text{true})} > \text{Causal effect}_{(\text{observed})}$$

$$[ (87-79) = 8 ] > [ (87-82) = 5 ]$$

This illustrates a fundamental problem of observational statistical analysis. A selection bias problem has been created, where those who choose not to participate, tend to be students who have a higher academic ability and would score highly on tests, thereby distorting the measured causal effect of the after-school program.

In this case, we refer to a student's academic ability as a 'confounding' factor, which is hidden and not measured in the comparison, but which is correlated to both a student's probability of participating in the program and his test scores, thereby distorting the measured effect of the program.

The magnitude of the distortion/selection bias can be quantified by **(4)**:

$$\text{Student } Y_{(\text{Outcome B})} - \text{Student } Z_{(\text{Outcome B})} = 82 - 79 = 3$$

Traditional statistical techniques are highly vulnerable to confounding variables, as these are not designed to holistically account for confounding variables. Program evaluations relying on these techniques will, therefore, likely misestimate causal effects. DTF has set out a range of recommended statistical approaches in Section 3, aimed at overcoming these issues.

## 15.2 Designing a program evaluation

Most programs' effects cannot be measured directly. A program evaluator does not observe what the outcome would have been for program recipients, had they not been in the program. Statistical techniques attempt to address this by constructing a counterfactual benchmark, representing a comparable group who did not receive the program.

The quality of a statistical analysis depends on the quality of data available. A good program evaluation depends on deliberate decisions that may not otherwise arise during program design. As many potential weaknesses in a statistical analysis cannot be addressed retroactively, **good evaluation must be designed up-front.**

The construction of a counterfactual benchmark requires that **data must be collected from non-participants.** Only using data from participants will undermine an evaluation's ability to isolate the effect of the program on participants' outcomes. For example, an improvement in employment may arise due to participation in a program, or it may be due to an overall improvement in the economy.

A program evaluator must pay attention to **confounding factors:** characteristics of participants that affect both their outcomes and their likelihood of being in a program. These will be present for most Government programs, which target or are used by people with some (dis-)advantage. For example, an employment program may target people most at risk of poor employment outcomes, or it may target vulnerable people closest to being job-ready.

Potential confounding factors need to be identified before a program is rolled out, so that data can be collected on them. It is not possible to retroactively address a certain (dis-)advantage if appropriate data has not been collected during the program.

## 15.3 Statistical techniques for program evaluation

The presence of confounding factors means it is often misleading to compare group outcomes of program participants with outcomes for some wider population. Doing so will conflate the effect of the (dis-)advantage that brought people into the program with the effect of the program itself.

There are several statistical techniques which, by its general design, try to isolate the effect of a program by constructing a comparable benchmark.

Listed below are some common ones (supporting academic papers are in the reference list):

- **Difference-in-difference** studies look at the changes in outcomes for people who have and those who have not received the program. If confounding factors largely do not change before and after a program, focusing on the change in outcomes removes their effect.
- **Propensity score matching** groups people according to how likely they are to have been in the program, based on observed characteristics. Within each group, those who received a program can be compared with those who did not.

- **Regression discontinuity** makes use of the fact that confounding factors generally do not change abruptly around the cut-off points for program eligibility. They attribute any sharp change in outcomes for people near the cut-off point to the abrupt change in program eligibility.
- **Randomised control trials** attempt to create the benchmark by randomly assigning people into a program. Random assignment means the effect of any confounding factor does not consistently influence the benchmark in any one direction.
- **Synthetic control:** similar to a difference-in-difference approach but with a more rigorous method for selecting appropriate 'control' groups based on observing outcomes.

These techniques are conceptually simple, well explored in contemporary academic literature, can be implemented through most statistical software packages, and have been used in past lapsing program evaluations. These provide greater transparency compared with propriety modelling approaches, such as in CGE and input-output modelling, which are constructed from up to thousands of equations/inputs and are difficult to objectively verify.

Because the causal effect of a program must be indirectly estimated, no technique will produce a perfect estimate. Each has its own trade-offs and will be appropriate in different situations. Residual confounding factors may be unavoidable and will be of less concern if they are unlikely to substantially distort results. A program evaluation report should **explain the limitations** of the analysis and what they mean for the conclusions of the report.

Sometimes, accurately identifying the causal effect of a program may not be feasible. In these cases, the causal effect of the program should be approximated as closely as possible. The NRCM provides a framework for understanding the consequences of the approximations used. An evaluation report should discuss this and how a program may be modified to allow a more robust estimate of its causal effect.

## 15.4 Modelling approaches that do not satisfy the NRCM

There are some commonly used modelling approaches in program evaluation, which, by themselves, do not adequately approximate the causal impact of programs. These include:

- **Computable general equilibrium (CGE) modelling**, which is constructed using a series of equations that represent assumed consumer and producer behaviour. Linkages within industries and between industries and consumers are parametrised through National Accounts input output tables, though these linkages at the regional/state level are largely assumed and not based on robust data. CGE is effectively a theoretical approach to modelling, often used to estimate how the benefit from a single program propagates to the rest of the economy. By itself, it cannot represent the causal effect of a program given there is little/minimal real data input.
- **Input-output (IO) modelling** essentially constructs multipliers from the National Accounts input-output tables to extrapolate program level benefits to economy-wide benefits. By itself, IO modelling cannot establish the causal effect of a program, as it is only used to generate multipliers with which to extrapolate a program's direct benefit. DTF does not endorse the use of IO modelling for any purpose, as the multipliers make unrealistic assumptions such as unlimited supply of production inputs at the current price, and constant industry input and household consumption structures.

- **Most time series approaches, including vector auto regressions (VARs)** which naively compare correlations between variables. This approach may be sufficient for forecasting purposes, where causal links between variables is a secondary consideration to the primary objective of predicting the absolute value of a given variable. However, it does not eliminate confounding factors by design, and therefore, does not approximate causal effects.
- **Naïve regression approaches** which seek to control for specific confounding variables by including them as explanatory variables in a regression. These do not treat confounding variables in a general manner, through the design of the identification strategy. Coupling this with the difficulty in obtaining appropriate data for all relevant confounding variables, this approach increases the risk of selection bias.
- **Other assumptions-based approaches** which directly assume a causal relationship between the program and some outcome, without demonstrating this empirically using evidence. CGE modelling and simpler, spreadsheet-based approaches fall under this category.



