

# Cost Benefit Analysis of Government Advertising: A User Guide

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## 1. Purpose of the User Guide

This User Guide aims to outline the role of Cost Benefit Analysis (CBA) in government advertising and provide agencies with advice on how they should be conducted.

The User Guide lists key questions agencies should ask in conducting a CBA and provides practical information on applying the CBA Framework for Government Advertising and Information Campaigns (the Framework). Together, the User Guide and Framework describe what 'best practice' cost benefit analysis of government advertising campaigns should look like, whilst recognising that the Framework will be applied by agencies in a manner suitable for each campaign.

The User Guide should be read in conjunction with the *Government Advertising Act 2011*, the *NSW Government Advertising Guidelines* and the *NSW Government Advertising Handbook*.

## 2. Requirements of completing a CBA

Where the cost of a campaign is likely to exceed \$1,000,000, Section 7 (1) of the *Government Advertising Act 2011* requires a CBA to be carried out before the campaign commences. Requirements outlined in the *NSW Government Advertising Guidelines* must also be followed.

In addition, agencies should also refer to the *NSW Government Guide to Cost-Benefit Analysis* (TPP17-03)

The Department of Premier and Cabinet's advertising website includes information on how to schedule a CBA into a broader campaign timeline.

Agencies should also include an Executive Summary for each CBA, using the template found at **Attachment A**.

## 3. CBAs and decision-making in government advertising

The *NSW Government Advertising Guidelines* outline a range of objectives that government advertising can be used for, including encouraging changed behaviours or attitudes that will lead to improved public health or quality of life, raising awareness of planned or impending initiatives and encouraging use of government products and services. A CBA helps evaluate the benefits and costs of these activities.

Before a government advertising campaign commences, an agency head must certify that the campaign:

- Complies with the Act, Regulations and Guidelines
- Contains accurate information
- Is necessary to achieve a public purpose and is supported by analysis and research, and
- Is an efficient and cost-effective means of achieving the public purpose.

In addition to certification by an agency head, the Cabinet Standing Committee on Communication and Government Advertising must also approve campaigns over \$1,000,000.

A CBA is an important requirement to help inform decision-making on government advertising. However, not all aspects of the decision-making process can be captured in a CBA alone and other public policy factors should be considered where relevant.

For example, a CBA does not aim to quantify the value of solely raising awareness of planned or pending initiatives where there is no positive behavioural change associated with raising

awareness alone. The amount of existing evidence on new or emerging issues of importance to the community can also in some cases be limited, which may impact the ability to conduct a 'best practice' CBA but would not preclude the need for an advertising campaign (this is discussed in more detail in Question 9 of this document).

As such, decision-making on advertising should be supported by a range of information sources, which in addition to a CBA could include:

<i>The public interest or importance of the issue</i>	<ul style="list-style-type: none"> <li>- Is the campaign in the public interest? Is this supported by research and analysis?</li> <li>- Is there a need for the community to be informed about a new or emerging issue which may affect them? What evidence supports this?</li> </ul>
<i>Complementary analysis and research</i>	<ul style="list-style-type: none"> <li>- Are there other potential effects not captured in the CBA?</li> <li>- Are there additional studies, research or information sources which were considered during campaign development?</li> </ul>
<i>The outcomes of peer review</i>	<ul style="list-style-type: none"> <li>- Has the campaign need, strategy and management (including campaign budget) been assessed by peers to be sound?</li> </ul>

This information could be provided to agency heads or included in a submission to the Cabinet Standing Committee (alongside a Cost Benefit Analysis).

## 4. Key questions to ask when completing a CBA

### Question 1: What is a CBA and why should it be completed?

*Beyond the legal and policy requirements, a CBA helps inform government decision-making on advertising.*

A CBA of a government advertisement aims to evaluate the net economic cost or benefit of the campaign and indicate to decision makers how the campaign will affect the wellbeing of NSW residents overall. In doing so, a CBA considers a range of market and non-market factors such as economic, social and environmental factors.

A CBA uses a Benefit-Cost Ratio (BCR) or Net Present Value (NPV) to quantify the costs and benefits of a particular campaign. The BCR and NPV are standard measures used to present the final results of a CBA in this type of analysis. Qualitative outcomes can also be included where supported by research.

A CBA can be used to assess the range of options available when considering how best to achieve the objectives that the campaign is aiming to address. It should assist agencies to achieve the greatest impact with their advertising budget and help ensure government resources are being used effectively and efficiently.

Campaign development should be supported by a range of information sources and best-practice methods of evaluating advertising should be applied after advertising has concluded.

## Question 2: What is the aim of a government advertisement?

*Agencies should focus on objectives that define delivering positive outcomes through behavioural change.*

Government advertising or information campaigns broadly aim to contribute positive outcomes for the citizens of NSW. Advertising campaigns are frequently targeted at behaviours that do not optimise the overall welfare of society, although some campaigns are focused solely on raising awareness. In the latter case, the behaviours that are likely to result from raising awareness should be further identified to undertake a CBA.

The focus of a CBA should be to use the available evidence to assess whether a campaign is likely to achieve these behavioural outcomes (in some cases as a result of raising awareness) and the value of doing so.

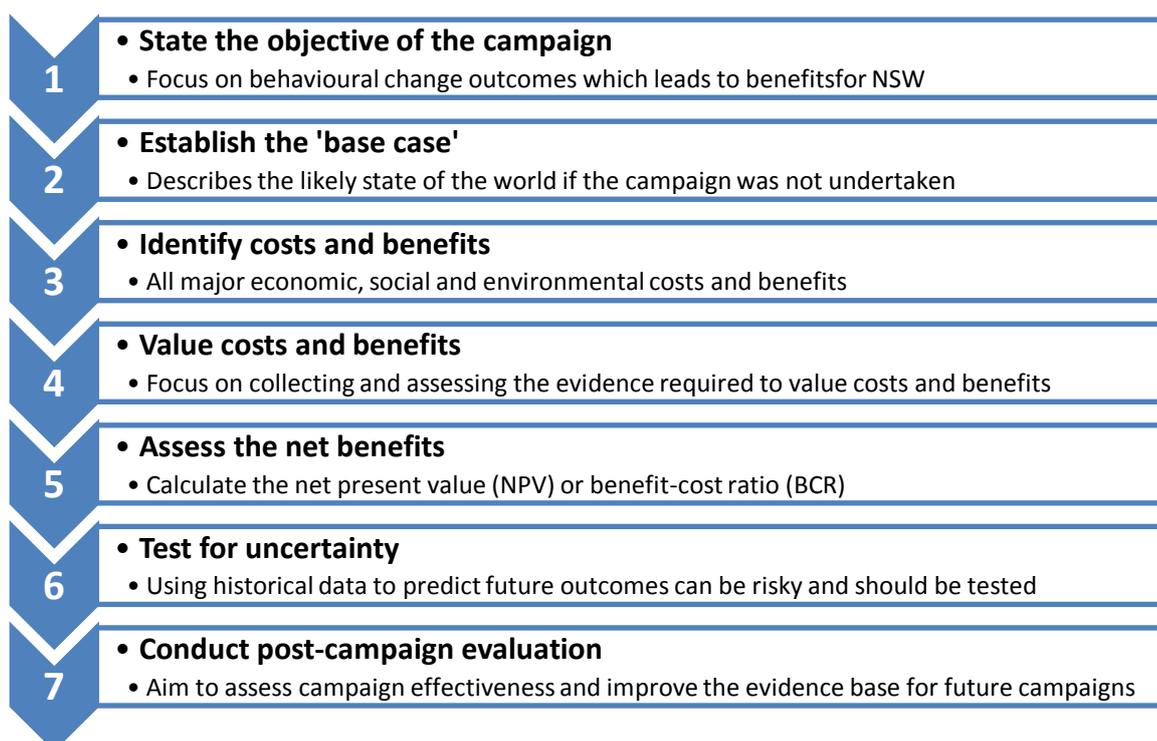
## Question 3: What steps are needed to complete a CBA?

*Once an agency has been able to identify the positive behavioural change outcomes that a Government advertisement aims to achieve, the steps needed to complete a CBA are relatively straightforward (see Figure 1 below). However, each key step requires careful consideration.*

Agencies should seek further guidance on completing a CBA by referring to the Framework, TPP17-03 or obtaining advice from Treasury.

While Figure 1 provides a starting point for the analysis, agencies may face some complexities specific to government advertising and information campaigns. The following questions aim to address these issues and assist agencies to work through the steps in Figure 1. Answers to some questions illustrate the application of the methodology using a hypothetical advertising campaign.

### **Figure 1 – Key Stages of Analysis for a Government Advertising CBA**



## Question 4: How should the campaign objective be stated?

*The answer to this question requires defining the objective in terms of positive behavioural change outcomes.*

A CBA seeks to assess whether a campaign is likely to deliver benefits to NSW residents. This is generally achieved through meeting specific objectives or behavioural change outcomes. The CBA needs to clearly state these objectives so that the impact of a campaign can be measured and valued. For example, the objective of a drink driving road safety campaign is to reduce road accident fatalities or injuries and associated costs to directly affected individuals and the NSW economy.

Whilst some NSW Government advertising campaigns are specifically focused on raising awareness of an issue or initiative, any behaviours that are intended to result from this awareness need to be outlined further in a CBA. These do not necessarily have to be the primary objectives of the campaign itself, but they should be aligned to the broader program or policy objectives that the advertising is contributing to.

The objectives will dictate the types of evidence an agency needs to gather to establish whether a campaign will achieve positive outcomes and benefits to society.

## Question 5: What sort of evidence is required and how should it be applied?

*Once an agency has appropriately defined the campaign objective, the agency needs to identify how the initial advertisement flows through to positive behavioural change outcomes. The flows identified need supporting evidence.*

The Framework shows a sequence or chain of impacts through which an advertising campaign flows through to behavioural change and ultimately leads to improvements in welfare.

When conducting a CBA an agency should provide evidence to support the linkages from the campaign through to the net economic benefit or cost. Agencies should pay particular attention to gathering evidence that supports the 'base case' or the expected state of the world without the campaign, and the key assumptions that underpin that expectation.

Agencies should also find evidence to show how factors external to the advertising campaign, such as other government policies or social norms, influence behavioural change separately from the impact of campaign effects.

For example, a drink driving road safety campaign 'base case' would need to account for the long term trend of falling road fatalities, as well as evidence to indicate how increased enforcement or penalties along with other policy changes have impacted the rate of drink driving related accidents. This evidence would establish the baseline from which the impact of the campaign can be measured.

Once the 'base case' and external factors have been addressed, the most critical piece of evidence an agency needs is to establish the effect of an advertising or information campaign on behavioural change. This evidence should:

- Indicate how the effect changes during and after the campaign (referred to as the 'decay profile')

- Account for the separate impact of external factors, and isolate the part of the total behaviour change that is attributable solely or mainly to the advertising campaign (referred to as the 'attribution rate').

The Framework covers these topics in more detail. Agencies should also consider seeking advice from Treasury.

## Question 6: What sources of evidence should agencies use?

*Once an agency has identified the evidence required and considered how to apply it, the agency should consider the sources of evidence that should be used, applying a hierarchy that ranks the evidence suitable for policy making, ranging from the most rigorous (e.g., randomised controlled trials) to the least rigorous (e.g., individual expert opinion).*

The data required to show the impact of campaigns on behavioural change may be available from academic or other independent research, internally collected datasets of the agency, or publicly available datasets. When choosing and applying the data to a particular campaign, agencies should assess any differences in the legal, policy, regulatory and social context. The timing and seasonal differences between the data sources and the campaign being assessed may also be relevant.

Box 1 provides a practical example of how this could be applied.

### **BOX 1 – Collecting Evidence to Identify and Value Benefits and Costs**

The benefits that would be anticipated from a drink driving road safety campaign will generally flow from the reduced risk of fatalities, injuries and other crash related costs. These benefits would include the value of saving a life, along with avoiding the costs of injury, emergency or ongoing health care. The costs associated with the Campaign would include any of the financial costs faced by the Government that would be required to produce and distribute the advertisement, as well as increased demand for Government services attributable to the campaign.

In order to value the costs and benefits of the Campaign, a number of pieces of evidence are required. The following data would be essential for the drink driving campaign:

1. Data on current trends and policies predicting the path of drink driving related accidents, fatalities and injuries. This data helps to define the 'base case'.
2. Evidence of the impact advertising campaigns have on drink driving related accidents, which could possibly be supported by data that measures overall drink driving rates. This helps to establish the total level of behavioural change.
3. Additional data to distinguish the attribution rate. For example, are other policies, regulations or enforcement changing? Are there seasonal or timing impacts?
4. Evidence that shows how reduced accidents result in lower deaths, injuries and damage. This data helps link behavioural change to benefits.
5. Data that values the statistical value of a life, the cost of accident damage or injuries that are avoided. This data helps to value the benefits.
6. Data that supports a plausible measure of the costs that an agency expects to face in producing and airing the advertisements. This data helps to value the costs.

## Question 7: How should behavioural change be valued?

*This depends on the nature of the behavioural change being considered.*

Monetary values should be given to the behavioural change associated with an advertising campaign. These values should be based on relevant and reliable evidence. This evidence will generally be sourced from external research, where relevant values are available. However, circumstances may arise where primary data may be required to value the behavioural impact of a campaign. Agencies should address this on a case by case basis and consult Treasury as required.

Agencies should refer to TPP17-03 and the Framework for further technical guidance on valuing the costs and benefits of a campaign.

## Question 8: How should uncertainty be addressed?

*A conservative approach should be taken for the central estimate and a worst case scenario also be estimated.*

Basing predictions of the future impact of a campaign on historical or context specific data can be associated with uncertainty. Undertaking analysis that considers this uncertainty is important for informed decision making. Therefore, agencies should test how sensitive the net economic benefit of a campaign is to changes in the key assumptions, particularly those that are most uncertain.

As a CBA is based on expectations and assumptions, there is a degree of uncertainty surrounding the results. Examples of uncertainty in relation to a drink driving road safety campaign could be the proportion of avoided accidents attributable to the campaign (attribution rate) and the period of time over which this occurs (decay profile).

While a range of reasonable scenarios should be tested, the best approach is to give decision makers an idea of the 'worst case scenario' in addition to a central 'best guess' estimate. For example, if the central estimate assumes that a campaign continues to encourage individuals to quit for up to 1 year, then a possible worst case scenario could recalculate the results assuming this occurs for only 6 months.

Additionally, a worst case scenario may also consider other policy impacts. For example, while the central estimate may be based on the evaluation of a previous campaign, an upcoming campaign may occur at the same time as a large increase in alcohol taxes. This situation may result in fewer accidents as a result of tax increases rather than the campaign. The CBA should test for a scenario where the campaign is less effective to address this case.

## Question 9: What should be done when evidence isn't available?

*If no evidence is available, consideration should be given to the size of the campaign*

Circumstances can arise when limited relevant or reliable data means that an agency cannot complete a best-practice CBA. This often occurs when evidence is not available to support major assumptions estimating the impact or value of behavioural change. Under these circumstances, consideration should be given to the appropriate size of a campaign.

If an agency head determines that a large scale campaign should proceed (for example, to respond to new challenges or government changes), agencies should identify the best-possible evidence available to inform conservative assumptions which could underpin a CBA.

In this scenario, Treasury's assessment of a CBA may note any limitations around the evidence (including the need for post-campaign evaluation to build the evidence base), and an agency head would need to be satisfied that the requirements of the *Government Advertising Act 2011* have been met. As outlined in Section 3 of this document, decision-making on advertising should be supported by a range of information sources.

As an alternative, agencies could choose to undertake a smaller scale campaign and focus attention on using the post campaign evaluation to gather data. In addition to evaluating whether the campaign effectively increased welfare or delivered benefits, this data would help to provide the necessary evidence to complete a CBA of future, possibly larger scale, campaigns.

## Question 10: When and how should agencies undertake post-evaluation of campaigns?

*Post evaluation should start as soon as the campaign implementation begins via monitoring and data collection processes. This should be followed by data analysis and a final evaluation. The final evaluation forms a feedback loop and creates evidence that can then be used to help answer the questions in this Guide for future campaigns, and support broader campaign evaluation.*

In order to assess a campaign's effectiveness, agencies should design post-campaign reviews to generate relevant and reliable data for future use. Agencies should aim to create repeatable processes that can be easily completed for all campaigns. This may be achieved through refining post implementation reviews over time.

### Figure 3 – Key Evaluation Steps



Figure 3 sets out the key steps that should be included in a post-campaign review to deliver useful information for a CBA. It should be noted that the overall review will also focus on other factors that are less applicable to CBA:

1. *Data Collection* – Agencies should design evaluation processes to collect data that measures the behavioural change of individuals over time, i.e. before, during and after the campaign. This data will also enable the agency to assess how the impact of the campaign decays over time. While behavioural change data is critical, relevant data that evaluates other impacts of a campaign should also be collected. For example, an evaluation of a drink driving road safety campaign is likely to gather data on a range of measures. Possible sources of information might include number of drink driving related accidents, deaths or injuries before, during and after the campaign. Ideally, as a general rule, agencies should aim to expressly build data collection mechanisms and processes into the design of the campaign to facilitate post evaluation.
2. *Data Analysis* – Raw data collected through program monitoring processes will likely need to be converted into usable information and evidence. This could involve undertaking some

further analysis and may also need to consider the impact of factors other than the campaign on behavioural change (e.g., long term social trends and the effect of other Government policies). This additional data may be sourced from external research, but will often need to be considered prior to the review (before Step 1) and included in the original data collection and analysis conducted through the post implementation review. The aim of the analysis should be to isolate the behavioural change that is attributable solely or mainly to the campaign.

3. *Final Evaluation* – The data collected and analysed to assess the behavioural change will ultimately need to be combined with other data to establish a monetary value of behavioural change. Information on monetary values will often be sourced from external sources, such as the avoided costs of health care and emergency services or from willingness to pay surveys. In some circumstances, however, the post evaluation may need to also gather this type of data as it relates to the particular campaign. Agencies should refer to the Framework for further guidance on developing this information through the post-implementation review. Agencies should apply the same degree of rigour to evaluating the costs and the benefits of a campaign.

## Attachment A - Template for Executive Summary

Agencies should provide a one-page Executive Summary on the front of each Cost Benefit Analysis report, using the below template. This ensures that key details of each report are clearly summarised for readers.

<b>Campaign Name</b>	
<b>Description</b>	
<b>Target Audience</b>	
<b>Budget</b>	
<b>Timing</b>	
<b>Benefit to Cost Ratio</b>	
<b>Net Present Value</b>	
<b>Key drivers of benefits</b>	
<b>BCR range of previous (repeat or similar) campaigns</b>	