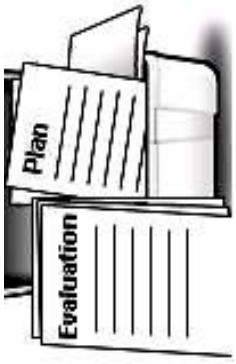
Community Engagement & Behaviour Change Evaluation Toolbox

A Short Guide to Monitoring & Evaluation



www.evaluationtoolbox.net.au

This short guide complements the information provided in the Community Engagement Evaluation Toolbox.

1st Edition January 2011

Disclaimer

The content of this publication is provided for educational purposes only. No claim is made as to the accuracy or authenticity of the content. The information in this publication is proved on the basis that all persons accessing it undertake responsibility for assessing the relevance and accuracy of its content. No responsibility is taken for any information or services which may appear on any linked websites. If using any information provided in this manual, please ensure proper acknowledgement is noted.

Neither the National Centre for Sustainability or Swinburne University of Technology accepts any liability to any person for the information or advice (or the use of such information or advice) that is provided in this publication or incorporated into it by reference.

If you believe that information of any kind in this publication is an infringement of copyright, in material in which you either own copyright or are authorised to exercise the rights of a copyright owner, then please advise us by contacting the National Centre of Sustainability at Swinburne University of Technology at ncs@swin.edu.au.

National Centre for Sustainability (NCS) and Swinburne University value input from Industry groups and Educational organisations into the development of learning resources. The area of sustainability is a rapidly evolving field, which creates challenges in providing up to date resources. If you feel that certain information could be included or removed from future editions, please contact NCS at ncs@swin.edu.au.

national centre for sustainability

SWINBURNE UNIVERSITY OF TECHNOLOGY

Table of Contents

Monitoring and Evaluation **1**

What is evaluation? *1*

Why evaluate? *1*

Evaluation Questions *2*

Terminology *3*

Types of evaluation *5*

Project Evaluation Cycle *6*

Participatory Monitoring and Evaluation *6*

Roadmap to Undertaking an Evaluation *8*

Goals & Indicators of Success *9*

Types of data *9*

Planning & Conducting an Evaluation **11**

Developing a Monitoring and Evaluation Plan *13*

Key Learnings *15*

References **15**

Appendix A. M&E Plan Template **16**

Monitoring and Evaluation

What is evaluation?

There are many definitions of evaluation in the literature and websites. For the purpose of this guide, we will define evaluation as **a structured process of assessing the success of a project in meeting its goals and to reflect on the lessons learned**.

> ***"Anyone who has never made a mistake has never tried anything new".***
>
> **Albert Einstein**

An evaluation should be structured so that there is some thought and intent as to what is to be captured, how best to capture it, and what the analysis of the captured data will tell us about our program.

Another term that is widely used is monitoring. **Monitoring** refers to setting targets and milestones to measure progress and achievement, and whether the inputs are producing the planned outputs. In other words, monitoring sees whether the project is consistent with the design.

> **This guide generally uses the term project but this can be interchanged with program, or any other term that relates to an intervention and its activities and tasks.**
>
> **A project typically relates to a set of specific activities within a set timeline. A program typically has a broader scope, and can consist of several ongoing projects within a broader timeframe.**

The key difference between monitoring and evaluation is that evaluation is about placing a value judgement on the information gathered during a project, including the monitoring data. The assessment of a project's success (its evaluation) can be different based on whose value judgement is used. For example, a project manager's evaluation may be different to that of the project's participants, or other stakeholders.

Why evaluate?

Conducting an evaluation is considered good practice in managing an intervention. The monitoring phase of project evaluation allows us to track progress and identify issues early during implementation, thus providing and opportunity to take corrective action or make proactive improvements as required. End of project evaluation allows you to manage projects and programs based on the results of the activities you undertake, and therefore provides accountability to those that fund projects. It also allows you to repeat activities

that have been demonstrated to work, and you can improve on, or let go activities that do not work.

REASONS TO UNDERTAKE AN EVALUATION

- To assess whether a project has achieved its intended goals
- To understand how the project has achieved its intended purpose, or why it may not have done so
- To identify how efficient the project was in converting resources (funded and in-kind) into activities, objectives and goals
- To assess how sustainable and meaningful the project was for participants
- To inform decision makers about how to build on or improve a project

Evaluation is not just about demonstrating success, it is also about learning why things don't work. As such, identifying and learning from mistakes is one of the key parts of evaluation.

Evaluation can be a confronting undertaking, especially if you come to it unprepared. This guide, along with the online evaluation toolbox, will allow you to plan and undertake an evaluation of your project. An important thing to consider, and something that may lighten the load, is to remember that evaluation is not about finding out about everything, but about finding the things that matter.

Evaluation Questions

Evaluation questions should be developed up-front, and in collaboration with the primary audience(s) and other stakeholders who you intend to report to. Evaluation questions go beyond measurements to ask the higher order questions such as whether the intervention is worth it, or could if have been achieved in another way (see Table 1). Overall, evaluation questions should lead to further action such as project improvement, project mainstreaming, or project redesign.

In order to answer evaluation questions, monitoring questions must be developed that will inform what data will be collected through the monitoring process. The monitoring questions will ideally be answered through the collection of quantitative and qualitative data. It is important to not leap straight into the collection of data, without thinking about the evaluation questions. Jumping straight in may lead to collecting data that provides no useful information, which is a waste of time and money.

Downloaded from the Evaluation Toolbox www.evaluationtoolbox.net.au

Table 1. Broad types of evaluation questions

After Davidson & Wehipeihana (2010)

Type of evaluation	Evaluation question
Process	How well was the project designed and implemented (i.e. its quality)
Outcome	Did the project meet the overall needs? Was any change significant and was it attributable to the project? How valuable are the outcomes to the organisation, other stakeholders, and participants?
Learnings	What worked and what did not? What were unintended consequences? What were emergent properties?
Investment	Was the project cost effective? Was there another alternative that may have represented a better investment?
What next	Can the project be scaled up? Can the project be replicated elsewhere? Is the change self-sustaining or does it require continued intervention?
Theory of change	Does the project have a theory of change? Is the theory of change reflected in the program logic? How can the program logic inform the research questions?

Terminology

The language and terms used in evaluation can make the whole process quite daunting. This is accentuated by many references providing different definitions for the same term. The important thing for you to do is not to get bogged down in all the jargon, but to make sure you use the same terms consistently within your evaluation. It may help to provide a brief

definition of the terms you select in your evaluation report (see Table 2), so that readers know what you mean when you use words that may have different meanings.

Table 2. Evaluation Terminology

Activities	The tasks that are required to be done in order to achieve project outputs (eg. run a workshop, conduct and audit)
Efficiency	Refers to the extent to which activities, outputs and/or the desired effects are achieved with the lowest possible use of resources/inputs (funds, expertise, time)
Effectiveness	The extent to which project meets its intended outputs and/or objectives.
Impact	Refers to the measures of change that result from the outputs being completed, such as responses to surveys, requests for further information, or number of products taken up (eg. lights installed). Impact is sometimes used in place of short-term outcomes
Qualitative	Refers to data that consists of words, or communication (whether that is text, voice, or visual).
Quantitative	Refers to data that are counts or numbers.
Outcome	Measures the change in behaviour or resource use in relation to goal of the project. Outcomes are usually considered in terms of their expected timeframe: • Short–term (or immediate), • Intermediate, and • Long-term. Without thorough outcome evaluation, it is not possible to demonstrate whether a behaviour change project has had the desired effect. It is important to capture both intended and unintended outcomes.
Outputs	Products or services delivered as part of the project's activities (eg. workshops, audits, brochures).
Relevance	The extent to which the project purpose and goal meet the target group's needs or priorities.

Downloaded from the Evaluation Toolbox www.evaluationtoolbox.net.au

Sustainability	In terms of a project, sustainability refers to the likelihood of the change continuing once the intervention activities have ceased.

Types of evaluation

Evaluation can be characterised as being either **formative** or **summative** (see Table 3). Broadly (and this is not a rule), formative evaluation looks at what leads to an intervention working (the process), whereas summative evaluation looks at the short-term to long-term outcomes of an intervention on the target group. Formative evaluation takes place in the lead up to the project, as well as during the project in order to improve the project design as it is being implemented (continual improvement). Formative evaluation often lends itself to qualitative methods of inquiry. Summative evaluation takes place during and following the project implementation, and is associated with more objective, quantitative methods. The distinction between formative and summative evaluation can become blurred. Generally it is important to know both how an intervention works, as well as if it worked. It is therefore important to capture and assess both qualitative and quantitative data.

Table 3. Types of evaluation

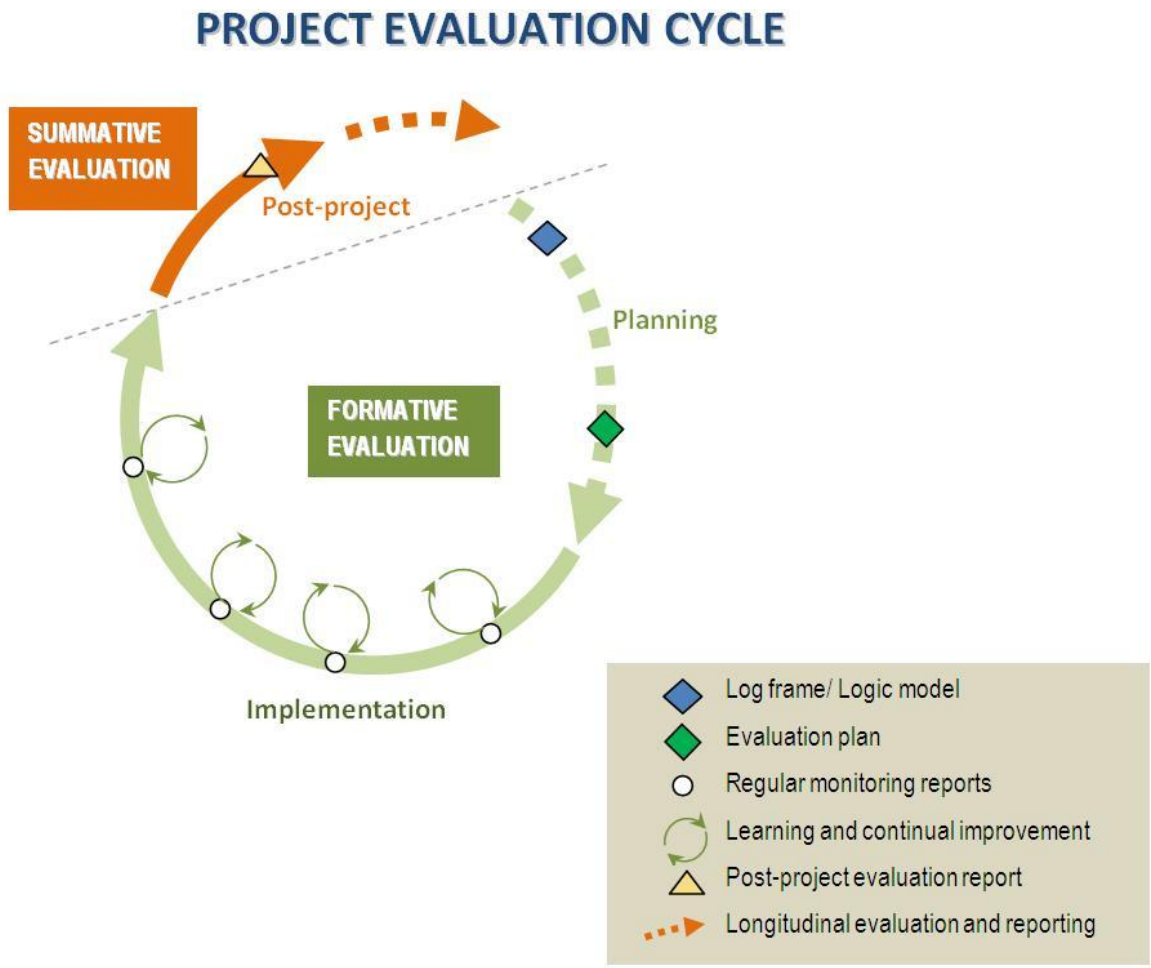
AFTER OWEN & ROGERS (1999)

Type of evaluation	**Formative**				**Summative**
	Proactive	**Clarificative**	**Interactive**	**Monitoring**	**Outcome Evaluation**
When	Pre-project	Project development	Project implementation	Project implementation	Project implementation and post-project
Why	To understand or clarify the need for the project	To make clear the theory of change that the project is based on	To improve the project's design (continual improvement) as it is rolled out	To ensure that the project activities are being delivered efficiently and effectively	To assess whether the project has met its goals, whether there were any unintended consequences, what were the learnings, and how to improve

Project Evaluation Cycle

Evaluation should not be considered a stand-alone activity. It should rather be thought of as a set of linked tasks that are undertaken from the start to the end (and beyond) of a project. This is diagrammatically represented in the **project evaluation cycle** (see Figure 1).

Figure 1.



Project evaluation cycle adapted from TORQAID Project Management Cycle

Participatory Monitoring and Evaluation

Participatory monitoring and evaluation refers to getting all project stakeholders, particularly the target group, involved in a project evaluation (and also the design of the evaluation). The level of participation can vary, from the getting the target group to set objectives, targets, and data sources themselves, to getting participants to gather data, tell their story, and interpret results. Participatory evaluation generally requires good

facilitation skills and commitment from all the stakeholders, including the participants, to the process.

Participatory evaluation is about valuing and using the knowledge of insiders (target group and other stakeholders) to provide meaningful targets and information, as opposed to solely relying on objective and external indicators of change. It also refers to getting stakeholders involved in the collection and to interpretation of results.

Participatory evaluation is not always appropriate in every project. There are a number of constraints which may impact on the quality of the process, and hence its overall value to the evaluation. These include:

- Cost and time involved in building capacity to implement participatory evaluation
- Cost and time involved in collecting and analysing data
- The process can be unpredictable and result in unexpected consequences and this may require facilitation skills and risk management processes.

Downloaded from the Evaluation Toolbox www.evaluationtoolbox.net.au

Roadmap to Undertaking an Evaluation

Ideally, you are at the project planning stage, so the whole world of M&E is wide open to you.

We recommend that you undertake some formative evaluation in the form of a problem/solution tree analysis and a program logic to clarify the project's likelihood of success and its theory of change.

Develop an M&E plan that identifies who the evaluation audience is, and what they want to know (the evaluation questions). This will lead to the identification of relevant monitoring questions, and what information is required to answer them.

Perhaps you are well into your project, or even at its conclusion….. and are now tasked to evaluate it.

Identify the main evaluation audience(s), and what they want to know. This will lead to identifying the monitoring questions, and the information that needs to be collected in order to answer the monitoring questions.

Once you know what type of information is needed, you can select the most appropriate tool to collect the required data.

Collect and analyse the data. If you are still implementing your project, you can make improvements to the implementation (formative evaluation).

Collect and analyse the data. If you are evaluating your project's outcomes, this is called summative evaluation.

Present your evaluation findings in a clear format that is appropriate to the evaluation audience.

Goals & Indicators of Success

In terms of 'indicators of success', two different measures can be used (GSR, 2007):

- goals-based evaluation, and
- goals-free evaluation.

Goals-based evaluations have objectively set targets.

Goals-free evaluation do not set targets, and look for emergent properties (such as unintended consequences).

A key point to consider in setting goals and indicators of success is the validity of the indicator. This is especially important when you are looking to measure a largely "unobservable" behaviour (for example, those that happen within the home, and cannot be readily objectively observed). In such cases, proxy indicators are often used (for example, household electricity use) but these indicators may be gross measures that consist of many varied behaviours, of which only one may be of interest. The question is how to establish meaningful indicators?

Types of data

Data that is collected as part of monitoring and evaluation can be categorised as either being **quantitative** or **qualitative**. Quantitative data, as the name suggests, deals with obtaining counts or numbers. Qualitative data deals with words, or communication (whether that is text, voice, or visual). Both quantitative and qualitative data have strengths and weaknesses, and the use of one type of data set is not exclusive to using the other. In fact, combining both provides a way to provide a measurement of change, as well as providing context for the change.

Torture numbers, and they'll confess to anything (Gregg Easterbrook)

98% of all statistics are made up (Author Unknown)

Statistics are like bikinis. What they reveal is suggestive, but what they conceal is vital (Aaron Levenstein)

Source http://www.quotegarden.com/statistics.html

The UNDP Guidebook on Participation[1] notes that it is important to move beyond traditional evaluation approaches (eg. change in resource use) in order to evaluate the process of change. This is particularly relevant for behaviour change projects, as these interventions are about people participating in a change process. Traditional quantitative approaches are

[1] UNDP Guidebook on Participation *www.*preval.org/documentos/00483.pdf

noted to be inadequate for understanding the outcomes and effect of participatory development projects. In comparison, qualitative methods allow the study of motivations, and provide rich data on how individuals interact with their environment and cope with change (GSR, 2007). This entails moving from a focus on measurements (quantitative) to describing the process of change and the change that has taken place (qualitative). The key elements proposed by the UNDP Guidebook are outlined below (Table 4).

Table 4. Key principles in monitoring and evaluating

Qualitative as well as quantitative	Both dimension of participation must be included in the evaluation in order for the outcome to be fully understood
Dynamic as opposed to static	The evaluation of participation demands that the entire process over a period of time be evaluated and not merely a snapshot. Conventional ex post facto evaluation, therefore, will not be adequate
Central importance of monitoring	The evaluation of a process of participation is impossible without relevant and continual monitoring. Indeed monitoring is the key to the whole exercise and the only means by which the qualitative descriptions can be obtained to explain the process which has occurred
Participatory evaluation	In the entire evaluation process, the people involved in the project have a part to play; the people themselves will also have a voice

The benefit of qualitative evaluation is that it takes evaluation 'beyond the numbers game' (UNDP Guide, p3), and provides a story behind any numbers that are collected. As previously mentioned, quantitative data collected as an evaluation of unobservable behaviour is a proxy indicator, and based on an inferred link between behaviour and the quantitative data. Yet, numbers may not adequately indicate the success or otherwise of a project. The prevalence of quantitative data in many behaviour change projects is a reflection of the reductionist theory of science that has been the dominant paradigm in recent history. In contrast, qualitative evaluation is holistic and inductive, and is more to do with the process of change (UNDP Guide).

Whilst qualitative data can reveal insights not captured by 'the numbers', the approaches you choose to use will be influenced by a number of factors outside of 'best approach'. For example, there is often additional time and associated cost required to capture, read, interpret, categorise, score and summarise qualitative data. If your project involves thousands of participants then obviously collecting a 'story' form each one will be problematic and you may need to revert to collecting qualitative data from only a representative sample of participants.

Table 5. Examples of quantitative and qualitative data sources

Quantitative Data Sources	Qualitative Data Sources
Resource consumption (metering, billing etc)	Interviews / Focus groups
Observation counts	Diaries
Closed-answer surveys	Stories, blogs
Self-reporting	Visual
Expenditure	Literature

Planning & Conducting an Evaluation

You should ideally plan your evaluation at the same time as you design your project. Your project design should guide the evaluation by clarifying what activities you will undertake to achieve your purpose, and based on this, what indicators or information you will use to monitor and evaluate your project.

Though they represent a linear pathway of cause-effect relationships, problem trees and program logics provide a road map that identifies the destination, obstacles, and a planned route. This provides a base for identifying what needs to be evaluated and what can be monitored.

Conducting a problem tree/solution tree analysis provides a means to review the existing understanding of the causes to a specific problem. A problem tree may identify multiple branches of cause and effect relationships that may lead to a problem. This may reveal branches (cause & effect relationships) that are not addressed by the currently preferred intervention. For example, existing regulations may be a factor in the problem, but this may not be impacted upon by the planned intervention. This may result in the failure to achieve project objectives. It could be that impacting upon regulation is not achievable and thus out of scope for the project. If this is the case, then the evaluators need to account for this when the intervention is evaluated. A problem tree analysis should ideally be conducted prior to selecting a behaviour change intervention. When conducted before an intervention has been implemented, the problem tree analysis can be considered as formative evaluation (Table 3).

Program logic is similar to the problem tree analysis in that it identifies the cause-effect relationships that lie behind a planned intervention effecting the desired change (Figure 3). The main difference is that the program logic does not necessarily consider all the possible cause-effect relationships that are believed to lead to a problem occurring.

We recommend that you undertake both problem/solution tree and program logic as part of your project planning and formative evaluation (Figure 4).

Figure 3. Program logic provides a diagrammatic representation of the steps leading to an intervention meeting its desired outcome(s)

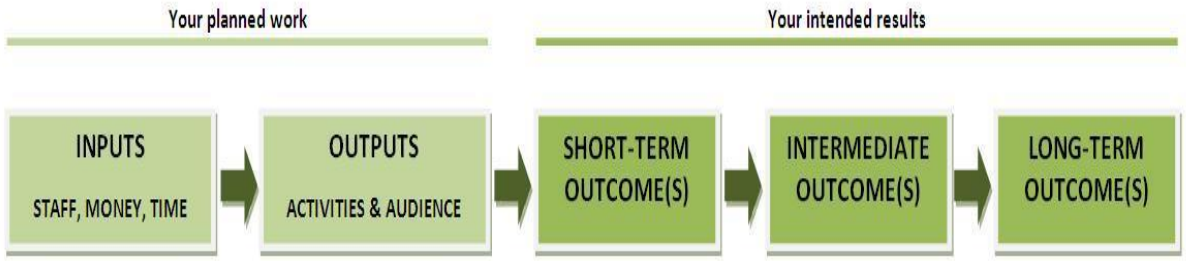
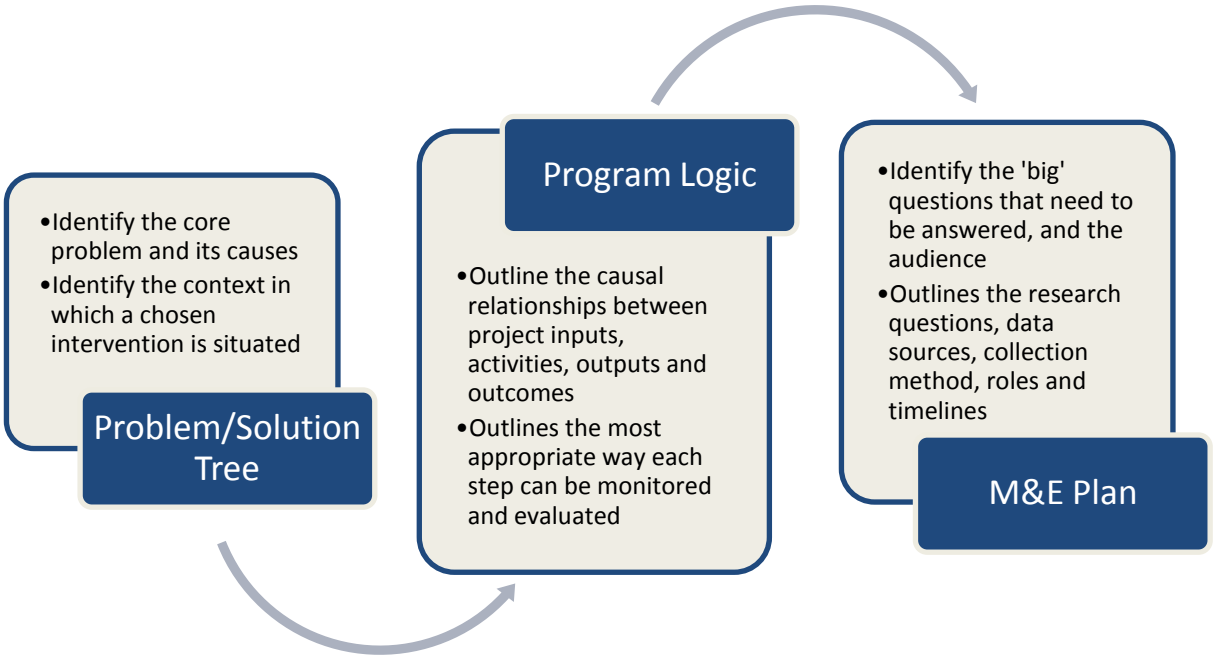


Figure 4. The relationship between different elements in the development of a behaviour change project and M&E plan



Developing a Monitoring and Evaluation Plan

A monitoring and evaluation (M&E) plan builds on the program logic and basically outlines what you will collect, when and by whom it is to be collected, what question the information will answer, and the audience you are reporting to. There may be several key audiences that require reporting to and each may have their unique requirements as identified in your stakeholder analysis. For example, the organisation's management team may be interested in knowing if the program achieved its intended outcomes, whereas the funding bodies may place just as much emphasis on the efficiency and effectiveness of the program, or return on investment (eg. $ per measurable indicator). Other stakeholders and the target group or participants may also have unique questions that they want answered through the evaluation.

It is important to **scope out your evaluation**. This means **setting boundaries** as to what you seek to answer, and what sort of data you will collect. From your program logic, you may have the ultimate outcome occurring in a time frame which extends past the funding period for a project. It may therefore be impractical to set an evaluation question that relates to an ultimate outcome, or seek to collect data to answer an ultimate outcome. However identifying these longitudinal evaluation requirements upfront can help build a business case to justify spending more funds on a longer term monitoring & evaluation program post project implementation. **Reporting timelines** may also dictate how long you have to collect data, and report on it, which again will affect the evaluation question and data collection. Scoping the evaluation and setting boundaries sets out what you are expected to be accountable for, and what is beyond your existing evaluation plan (eg. long term evaluation).

It is also sometimes impractical (too costly or timely) to collect in-depth data for a range of research questions or indicators. As such, you need to make tradeoffs between the quality and extent of your monitoring and evaluation. This is all about setting priorities that align with the evaluation requirements set by the audience (whether it is internal, external). Assumptions and trade-offs that are made can be included in your evaluation report to qualify the **validity** and **reliability** of the findings.

The M&E plan outlines the tasks and roles required to answer the high level evaluation questions as outlined previously in Table 1. Broadly, evaluation should be about both accountability for the implementation of the project, as well as identifying learning (how to improve).

Downloaded from the Evaluation Toolbox www.evaluationtoolbox.net.au

The evaluation plan should set out the objective(s), specific questions that sit under the objective(s), what is to be collected to answer the questions (indicator of success), and where the information will come from (data source). It is also advisable to assign responsibility for the data collection so that everyone is clear of their roles and responsibilities. You may also want to note any requirements that are needed to collect the data (staff, budget, facilities to run a workshop etc). An evaluation plan template is provided in Appendix A.

Budgeting for an evaluation can be difficult. It is important to provide estimated costs for data collection in order to ensure that there is adequate funds to collect the required information to evaluate with confidence.

As a rough rule of thumb, up to 10% of a project's budget should be allocated to evaluation.

The evaluation plan should be able to be picked up by anyone involved in the project at anytime and be clear as to what is happening in terms of data to be collected during monitoring and what is to be evaluated. It is advisable to circulate an evaluation plan amongst the intended audience and project stakeholders to ensure that the plan meets all the requirements and is feasible.

Referring back to the monitoring and evaluation data cycle (Figure 2), it is important to revisit your evaluation questions and the data that is collected to see if they meet your needs and the needs of the evaluation audience. There may be times when evaluation questions are replaced or removed.

It is important to remember that evaluation is about 'values'. You may want to clarify whose values will be used to evaluate the data that is collected, and how other audiences or stakeholders, such as participants, will feel about such values. There is a potential risk that the results of the evaluation may negatively impact upon the organisation, or on stakeholders. For example, participants may find a project very worthwhile, whereas the project proponent may consider the return on investment to be poor. Alternatively, an evaluation may indicate the project did not meet its intended needs or objectives, therefore potentially reflecting badly on the organisation. It is therefore important to consider how the evaluation results will be communicated, and what **risk management** is in place in case of negative feedback. A classical risk management matrix

Reliability is about ensuring results are consistent when measured. Eg. two people reading the same meter will have the same figure.

Validity refers to ensuring that the results obtained allow an accurate conclusion to be made. Eg. is measuring the change in electricity consumption a good indicator of a change in behaviour, or is a change in knowledge a good predictor of a change in behaviour?

can be used to help identify and quantify risks whilst formulating planned responses should any of the identified risks eventuate.

Key Learnings

The key learnings from this guide can be summarised as follows (also see Figure 6):

- Developing a monitoring and evaluation plan should be undertaken as part of your project planning process.
- The problem/solution tree analysis provides an indication of the context in which your planned intervention is situated, and this can provide some guide as to factors that may impact on the project's success, and what evaluation questions may be asked.
- The program logic flows on from the problem/solution tree and identifies the causal relationship between the inputs, activities, outputs, short-term, intermediate and long-term outcomes.
- The program logic provides a guide as to the most appropriate indicators that you may want to monitor and evaluate at each step.
- The M&E plan builds on the program logic by providing the detailed information as to what are the evaluation questions and the audience, and what data will be collected, by whom, and at what time.
- The M&E plan allows you to set the scope and boundary for your evaluation, and provides a roadmap that should be able to be understood by all the appropriate project personnel.

References

Davidson J & Wehipeihana, N (2010) *Actionable Evaluations: A Bootcamp for Commissioners, Managers and Evaluators*. Presentation at the ANZEA Regional Symposium Workkshop, http://realevaluation.co.nz/pres/ActionableEvaluationBootcamp-anzea10.pdf

Government Social Research (GSR) Unit (2007) *The Magenta Book: guidance notes for policy evaluation and analysis*.
http://www.gsr.gov.uk/professional_guidance/magenta_book/index.asp

Owen, J & Rogers, P (1999) *Program Evaluation: Forms and Approaches.* Allen & Unwin, St Leonards.

Appendix A. M&E Plan Template

Evaluation	Monitoring						Evaluation		
Broad Evaluation Questions	What do we want to know? (Monitoring Question)	How will we know it? (Indicator)	Where will the data come from? (Data Source/Method)	Who will capture the data? (Responsibility)	When will data be captured? (Timeframe)	Estimated cost?	Who will be involved?	How will it be reported?	When will the evaluation occur? (Timeframe)