

Summary

Recent approaches to transport planning have shifted the focus towards a process which is objective-led and which relies on a much greater level of public involvement throughout. Monitoring and evaluation play vital roles in determining the success of both local projects and overall transport strategies in achieving the established objectives.

Successful monitoring is best achieved through the development of a monitoring regime using key performance indicators (KPIs) clearly linked to the established objectives. The nature of the KPIs and targets should be achievable yet challenging.

Project monitoring and evaluation will generally encompass the collection, analysis and interpretation of data relating to any number of established indicators. The amount of effort and expenditure required should be appropriate to the scale and nature of the proposed intervention.

The monitoring regime itself should be subject to review and adapted as necessary to changing circumstances, most notably the progress towards achieving objectives.

The term evaluation is used in this chapter to describe a detailed, one-off and objective driven review or audit of a project's performance whereas monitoring is essentially an ongoing process of watching over the performance, identifying problems as they arise and taking appropriate action.

Two forms of evaluation are described:

- *Process evaluation* is carried out early in the life of a project, before its full effects are known and concentrates on whether input (activity) and output objectives are being/have been met;
- *Outcome evaluation* is carried out once sufficient time has elapsed for the project to have delivered its principle outcomes, and assesses whether the outcome objectives have been achieved, and whether this has been done effectively and efficiently.

The process of formal evaluation should generate reliable and insightful conclusions as to the extent to which a project delivers value for money and achieves the objectives set.

The Scottish Executive requires monitoring and evaluation to be undertaken and documented for any proposal for which it provides support or approval.

15. MONITORING AND EVALUATION

15.1 Introduction

- 15.1.1 This chapter is concerned with monitoring and evaluation respectively. The term *project* will be used for any measure which has been implemented, whether it is an individual project or a programme comprising a series of projects. It should be noted, however, that for certain purposes it is useful to distinguish monitoring and evaluation at a strategic level from a project level, such differentiation normally being on the basis of scale and / or delivery timescale being considered.
- 15.1.2 Similarly, whereas at the proposal stage the term *planner* was used to describe those involved in planning and developing the proposal, at the monitoring and evaluation stage the term *project manager* is considered more appropriate at the project level. At the strategic level monitoring and evaluation of plans, programmes and strategies is unlikely to be carried out by a *project manager*.
- 15.1.3 A distinction between monitoring and evaluation is required. *Monitoring* in STAG is presented as an on-going process of watching over the performance of a project identifying problems as these arise and taking appropriate action. The term *evaluation* is used for specific, post-implementation events, designed to assess project performance against established objectives and to provide in depth diagnosis of successes as well as deficiencies.
- 15.1.4 For those proposals requiring SEA, it should be noted that the definition of monitoring within SEA is different to that presented above. Guidance on monitoring in SEA is available in ODPM: A Draft Practical Guide to the Strategic Environmental Assessment Directive.
- 15.1.5 Monitoring in this context should not be confused with the regular *revalidation* of the STAG objectives required during the development phase of projects. Revalidation should occur at specific points, particularly when key investment decisions need to be taken or when the business case is being reviewed. It is necessary to ensure that as a proposal develops and progresses towards becoming a project the project continues to meet the objectives established at the outset of the planning exercise.
- 15.1.6 Although the objectives themselves should not be revised, the revalidation process also allows the existing appraisal against the established objectives to be revisited and updated in light of further developments of the proposal (e.g. costs will have changed as the proposal is developed).

15.2 The need for Monitoring

- 15.2.1 Today's transport planning approach has moved on from earlier practices in several respects:
- it is now an objective-led activity;
 - it covers a wider range of activities;

- it requires a more active involvement of the public in the development and implementation processes.

15.2.2 In that the new approach is objective-led, and the process is intended to be inclusive, it is necessary to demonstrate at the implementation stage how effectively projects meet the established objectives. It should also be possible to identify any deficiencies thereby allowing early adjustments to be made which will bring a proposal back on track.

15.3 The Role of Monitoring

15.3.1 Monitoring is the process of gathering and interpreting information on the performance of a project. This process should be an on-going one and may take place in conjunction with other information gathering exercises being undertaken by a local authority or other organisation implementing a project. Managers of transport projects must clearly identify a monitoring regime for inclusion within the implementation stage of a project. It should be possible to establish this regime early in the process to ensure the gathering of relevant and appropriate information.

15.3.2 Effective monitoring also requires the regular analysis of the information being gathered in order to continuously review the performance of the project against the established objectives. Used in this way, monitoring should identify any areas of under-performance, and should also identify factors causing under-performance, thus allowing planners to implement appropriate changes at an early stage.

15.4 Monitoring Performance and Outcomes

15.4.1 The monitoring of performance is fundamentally important to measuring the success of a project. The current focus in transport planning, and many other areas of government, results from the introduction of the concept of Best Value. Through Best Value, monitoring is required to measure the outcomes of projects rather than the outputs of an authority's activity. For instance, rather than identifying the number of new bus shelters installed in one year, an authority should identify changes in levels of patronage on the bus services and understand the likely reasons for those changes.

15.4.2 The monitoring regime should therefore form an integral part of the development and implementation of projects. Selecting measurable indicators of progress towards meeting objectives should be seen as a priority. If this is not possible, identification of relevant and appropriate surrogate indicators will enable monitoring activity to proceed efficiently. Key performance indicators (KPIs) must however be set early in the development process.

Strategic and Project Levels

15.4.3 The differences between strategic and project level monitoring are matters of degree. In particular, monitoring at the strategic level needs to inform the planner of the aggregate outcomes of the strategy as a whole, for example changes in modal share for journeys to work in a town centre. In contrast, smaller measures

such as single projects, are generally much more local and specific, and this is reflected in the choice of indicators, for example involving the measurement of traffic levels along just one route.

Monitoring Innovative Projects

- 15.4.4 The type of monitoring appropriate for any project is also dependant on the level of innovation of the measure being implemented. Measures that represent new approaches or new policy interventions, such as Travel Plans or workplace charging initiatives, are likely to be subject to more detailed scrutiny and, therefore, will need more detailed analysis. Also, it is necessary to achieve a thorough understanding of the diverse factors that influence the impacts of innovative measures before they can be successfully used elsewhere. In these cases, in addition to monitoring, there is a need to undertake a more detailed evaluation, possibly involving extensive before and after studies. It is important to recognise the potential need to gather any necessary baseline information as early as possible in development.

15.5 Monitoring Processes and Methodologies

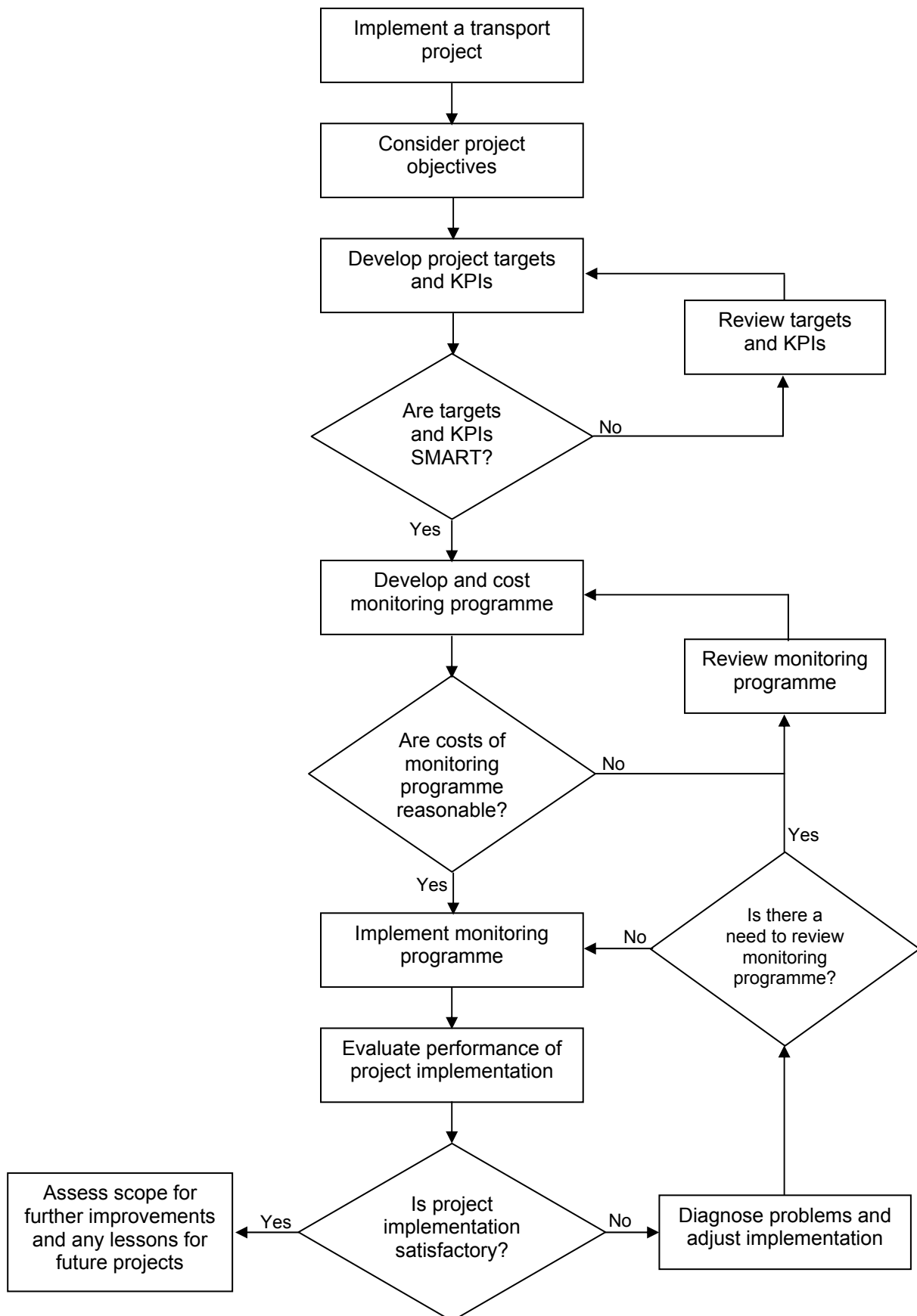
- 15.5.1 The monitoring regime must always take as its starting point the established objectives for the project. These should conform to the SMART principles outlined in Chapter 2. From these objectives, more specific quantitative targets or performance indicators should be developed, which also should conform to SMART principles.
- 15.5.2 Once these specific targets have been developed, methods for gathering, analysing and interpreting both quantitative and qualitative information need to be devised and incorporated into the monitoring regime. The purpose of the information is not only to inform the planner whether the project is achieving its targets or not but also to provide diagnostic information to indicate where and why things may be going wrong. Through a well designed monitoring regime, the management of the project will be able to take appropriate actions from an informed position to correct any under achievement. Additionally, the management of a project will be better able to inform the investment decision maker of the current anticipated performance of the project. The monitoring process is shown in Figure 15.1.

Objectives, Targets and Developing Key Performance Indicators

- 15.5.3 In order to effectively monitor the anticipated impacts of a project, plan or programme to demonstrate progress towards achieving the objectives it is essential to identify some measurable indicators of change whilst also exploring any qualitative impacts.
- 15.5.4 As mentioned above, a clear set of KPIs must be established which take account of the ability to identify quantitative measures with relative ease of measurement at an appropriate level of investment. Such indicators and the frequency of measurement should be incorporated in the monitoring regime from an early stage in the project development. In general, emphasis should be placed on developing

a relatively small number of headline indicators and targets backed-up by careful consideration of the need for monitoring local differences within each area.

Figure 15.1: The Monitoring Process



15.5.5 As with setting objectives, in setting targets and devising indicators, it is important to adhere to the SMART principle of *specific, measurable, attainable, relevant and timed*. Most importantly, once the indicators and targets have been set, they should be subject to regular review to ensure that they continue to properly reflect the objectives of the project. Care should be taken to identify the inter-relationships between targets which could be conflicting.

15.6 Planning and Management of the Information Gathering Process

Data Collection

15.6.1 Project monitoring and evaluation will generally encompass the collection, analysis and interpretation of data relating to any number of established indicators.

15.6.2 The approach to the development of the data collection process for use in the monitoring regime should derive primarily from consideration of the objectives of the project. It is important to consider the availability and cost of collecting information for this purpose.

15.6.3 Issues of commercial confidentiality of data may arise. In some cases, this may mean that data are not available for public use or that some form of confidentiality contract is entered into. Planners should seek to overcome confidentiality issues through aggregation and indexing of source data.

Minimising Data Collection & Management Requirements

15.6.4 Before commencing data collection for a specific project, planners should attempt to define the nature of information required. This should be considered within the wider strategy / policy framework. In this way, baseline data can be targeted for specific indicators and targets for an individual project, while also considering where there is scope for gathering information which will be common to a number of projects. There is little point in spending valuable resources in deriving baseline information which is neither relevant to objectives nor readily measurable, or in treating projects in isolation where there are scale economies in gathering shared data.

15.6.5 Planners should review the scope for drawing on existing sources of information. Some examples of sources of data collected for road, public transport, air, ferries and freight are set out in Chapter 3. National data sources and sources of environmental data are given in Appendix A.

15.6.6 Where there is no existing data which exactly matches that required by the established indicators, information may be available which is similar to that required. In such cases, careful consideration should be given as to whether such available data could be used as a proxy for that required, or whether the performance indicator could justifiably be altered to reflect the data availability. Care should also be taken to ensure that the monitoring outcomes are not jeopardised by using proxy data.

Levels of Effort & Expenditure

- 15.6.7 Developing the monitoring regime at the same time as setting targets and indicators can help define more affordable monitoring programmes.
- 15.6.8 The levels of effort and expenditure required to monitor a project will naturally vary from project to project. The following factors should be considered when determining the appropriate level of effort and expenditure for a particular project:
- the level of resources available (both in terms of time and finances);
 - the importance of the objective(s) the project supports;
 - the scale of progress towards the objective(s);
 - the scale of the project;
 - in a large project, the proportion of the elements of that project which have been implemented;
 - the degree of innovation of the project;
 - the degree of risk exposure associated with adverse outcomes;
 - the potential costs associated with failure to identify emerging problems at an early stage;
 - the importance of the data for other purposes or to other organisations; and
 - the quality/robustness of the monitoring outcome.
- 15.6.9 The resource requirements associated with monitoring are also determined by the amount of information already available. Planners should note, for example, the already considerable amounts of information in the public domain deriving from Best Value review work, Audit Commission reviews and modernising local government sources. There are also the on-going traffic surveys and national data sources of information to draw upon.

Reporting Findings

- 15.6.10 The monitoring report is a means by which performance against objectives and targets can be formally recorded. Monitoring periods by their very nature are required to be flexible and responsive to the type of information which becomes available between prescribed monitoring intervals.
- 15.6.11 A large, technical, document is not appropriate for a monitoring report. Rather, a summary report in which key findings and trends are identified and displayed in a readable format is preferable. The use of charts and diagrams rather than paragraphs of text to convey relevant information should be used wherever appropriate.
- 15.6.12 The monitoring regime forms an integral part of the STAG appraisal and proposed key performance indicators (KPIs) of progress towards meeting the planning objectives should be presented within the STAG Report (ref. Chapter 14) as well as an outline monitoring programme.

15.7 Adaptation and Development

- 15.7.1 The monitoring of a project's achievement against its objectives is clearly an on-going process. Depending on the monitoring results, it might be necessary to consider whether a detailed evaluation is warranted before making any major changes to the project. Over time, as the results of a monitoring regime are assessed, the detailed performance indicators and targets themselves may need to be re-cast. The development of revised targets and performance indicators must be carefully considered so as to comply with the SMART principles and linked to the established objectives. In particular, they must continue to be achievable, yet challenging.
- 15.7.2 The monitoring regime itself may need to be reviewed over time and modified according to the extent to which it is achieving sound and cost effective results.

15.8 The need for Evaluation

- 15.8.1 As with monitoring, it is necessary to demonstrate at the post-implementation stage of a project how effectively that project has met the established objectives.
- 15.8.2 Evaluations are specific post-implementation events designed to identify whether or not a project is performing as originally intended, whether established objectives are being achieved and whether the implemented project continues to represent value for money. An evaluation will use information gathered for monitoring purposes but will also involve data gathering, analysis and detailed interpretation that is particular to the evaluation itself.
- 15.8.3 Evaluation is always undertaken against indicators derived from the objectives of the particular project. It is therefore important that, at the outset, objectives are set within a framework that assists subsequent evaluation.

15.9 The Role of Evaluation

- 15.9.1 Evaluation is also known as ex post appraisal¹, as an evaluation looks back at performance and conducts an appraisal of performance against the original objectives of the project. Typically, evaluations will use a combination of day to day monitoring information and *ad hoc* information, gathered specifically in order to conduct the evaluation.
- 15.9.2 It is also useful to distinguish two types of evaluations, namely:
- *process evaluation*, which is conducted at an early stage in the existence of a project and which is primarily concerned with how well the project has been implemented; this is also known as formative evaluation;

¹ The term appraisal is used to refer to the process of examining a proposed intervention before it takes place – sometimes the term ex ante is used in this context: in contrast, evaluation takes place after the event, and is therefore referred to as ex post. Both are concerned with assessing the worth of a particular intervention, but appraisal looks forward while evaluation looks backwards.

- *outcome evaluation*, which is conducted once the project has been in existence long enough to have achieved all or most of its targets and examines performance against those targets; this is also known as summative evaluation.

15.10 Undertaking a Process Evaluation

- 15.10.1 Process evaluation is particularly useful in the early stages of implementation when there is scope for amending a project to make it more efficient or effective. The precise point in time for such an evaluation has to be judged carefully to ensure that initial teething problems have been overcome and resources are not being wasted where a project is performing poorly.
- 15.10.2 Depending on the scale of a project it may take several years to be able to identify and quantify the final results of the project and undertake an outcome evaluation. However, it may be appropriate to undertake a process evaluation much earlier in the life of a project in order to establish whether any corrections to a project or a strategic policy are required before substantial funds have been expended or committed.
- 15.10.3 A process evaluation is likely to be especially useful in highlighting issues such as project selection and planning, the application and funding process, the way in which funds are allocated and the management of the project at national and local levels.

Performance Indicators

- 15.10.4 A process evaluation is concerned with implementation, and it is therefore necessary to establish a usable number of performance indicators and measures relevant to what is expected during implementation. These may be thought of as tests of good implementation practice. To take an example, in the case of funding for public transport in rural areas, the relevant indicators / measures included:
- proportion of budget allocated to authorities which was actually spent within timescale;
 - number of authorities seeking carry over of funds to subsequent years;
 - the extent to which plans for new services went to public consultation;
 - numbers of new services and additions to existing routes which were established within 12 and 24 months of project start up;
 - number of services withdrawn or substantially modified within 24 months of project start up;
 - response of commercial operators, and number of services deregistered following implementation of the project;
 - extent to which authorities implemented innovative solutions, for example where routes were known to be “thin”.
- 15.10.5 A process evaluation should be concerned with all aspects of implementation. In this example, it should examine not only with how local authorities had made use of monies allocated to them, but also their views on how well the project had been

designed and put in place by the Scottish Executive. In other words, the roles of all the parties involved in implementation need to be examined.

Information Gathering

- 15.10.6 The gathering of information for a process evaluation should primarily involve use of data being gathered for the monitoring regime but additional information may be needed where it is intended to investigate how well the process of implementation was managed. This can involve gathering opinion as well as data by using a series of structured interviews to obtain the views and impressions of key stakeholders.

Reporting on Process Evaluations

- 15.10.7 The principal outputs, which will form the basis of the process evaluation report, will generally be:

- a quantitative analysis of performance against the selected indicators and measures;
- a qualitative review of factors underlying performance such as the quality of management, the provision of information, geographic factors and political factors;
- an interpretation of the above which offers comment on performance of the implementation of the project and draws lessons for on-going implementation and for the design, management and implementation of future projects.

- 15.10.8 The process evaluation should also highlight issues for the future outcome evaluation, including the extent to which the information being produced by the monitoring process is likely to be adequate for subsequent outcome evaluation.

15.11 The Role of Outcome Evaluation

- 15.11.1 Outcome evaluation should look for clear and measurable outcomes from the project. The timing of an outcome evaluation needs to be carefully judged. If undertaken too soon, final impacts may not have had time to “work through”, but if undertaken too late, resources will be wasted if the project is not efficient or effective.

- 15.11.2 Outcome evaluations are intended to answer questions such as “what is the extent of the identified outcomes, and what were the costs of achieving this?” And, where comparisons can be made with similar projects, “do these resources and outcomes together represent value for money?”

Evaluation and Appraisal

- 15.11.3 Whereas *appraisal* takes place prior to implementation, where a comparison is made between projected outcomes with the intervention and projected outcomes with a do-minimum scenario, *evaluation* involves comparisons of the do-minimum with actual outcomes.

Outcomes, Outputs and Inputs

15.11.4 The approach suggested here for an outcome evaluation involves a chain of cause and effect. The term outcomes means the ultimate effects or changes which were intended to be achieved through the project, such as a reduction in congestion or an increase in use of public transport. Using the chain metaphor, outcomes come at the final end of the chain. It is useful to distinguish the outcomes at intermediate parts of the chain, and for these it is preferable to use the term “outputs” to indicate intermediate consequences of a project.

15.11.5 Outcomes may be specific and concerned with a single indicator but for most projects, outcomes are more strategic and related to policy goals. Thus, there may be policy objectives such as overcoming social exclusion in a particular area, or retaining population in remote rural areas and these policy goals may be translated into measurable outcomes, such as:

- numbers of unemployed people finding long term employment;
- numbers of rural residents experiencing significant improvement in accessibility.

15.11.6 Whilst outcomes can be thought of as end results, outputs are the means to the ends and can be thought of as steps in the chain between inputs (resources, in the form of the project) and outcomes. Outputs are therefore intermediate, and can be represented by intermediate indicators such as:

- numbers of people finding work through training projects;
- numbers of people using new rural public transport services.

15.11.7 Inputs are the first steps in the process and represent the basic means from which outputs and outcomes are to be achieved. It is often useful to insert additional steps into the process from inputs to outputs and outcomes. For example, a “high level” input measure might be:

- numbers of training projects provided;
- numbers of new bus services provided.

15.11.8 However, as the basic input is generally money, it is possible to look at ratios such as cost per training project or cost per bus service.

15.11.9 Similarly, inputs can be linked to outputs, for example in the training project example:

- persons per training project finding work / finding long term employment;
- cost per person in training;
- cost per person finding work.

15.11.10 For a public transport project, the corresponding ratios could include:

- percentage of people using new bus services who report significant improvement in accessibility;

- numbers of users per new bus service (analysed by area, type of service etc);
- cost per new bus service user;
- cost per person reporting significant improvement in accessibility.

15.11.11 Using such ratios to examine how inputs translate into outputs and then outcomes, the outcome evaluation is able to address the issues often referred to as the 4 Es, namely:

- Economy – the costs of resources used, procurement and tendering issues;
- Efficiency – how well were inputs translated into outputs, and could more output have been achieved with less or different inputs or processes / management;
- Effectiveness – did achieving the defined outputs then enable the wider policy objectives to be achieved: could these have been achieved through some alternative intervention or process;
- Equity – were the gainers from the project, such as particular social groups or areas, as intended; is this in line with other policy intentions.

15.11.12 Outcome evaluation accordingly requires a number of indicators and measures appropriate at each stage in this process and for each of these issues. These indicators and measures should be determined from the consideration of objectives.

15.12 The Outcome Evaluation Process

Overview

15.12.1 The process used in an outcome evaluation may be set out as a series of sequential steps, as follows:

- definition of scope and purpose;
- project rationale;
- aims and objectives;
- measures and indicators;
- base case for comparison;
- analysis and interpretation;
- reporting and recommendations.

Scope and Purpose

15.12.2 It is important to have clearly defined scope and purpose for undertaking the evaluation as this influences the information required and the approach to be adopted.

15.12.3 It is also important to recognise that only when a project has been running for some time is it possible to determine the overall success of the project. Therefore, the timing of the evaluation needs to be given careful consideration.

Project Rationale

15.12.4 The rationale for the project is the justification for the particular course of action which is being implemented. This should have been clearly identified at the appraisal stage. The project rationale should include:

- A do-minimum case which explains what will happen without the project;
- A statement of how the project will bring about change, and why it represents the best option available.

15.12.5 The mechanisms from implementation and expenditure of resources through to final outcomes should be clearly stated. This can be thought of as the chain of cause and effect, and is especially important with regard to consequential or indirect impacts of projects, particularly:

- where EALIs are used (alone or with other impacts) to justify the project;
- where distributional benefits or costs are expected.

Aims and Targets

15.12.6 The key point to be repeated here is that it is desirable to establish a hierarchy of targets, established from the proposal objectives, as it is from these that measures and indicators are developed. This hierarchy should correspond to links in the chain of cause and effect, as far as possible.

15.12.7 Measures are quantitative, while indicators involve qualitative elements. There are generally four types of indicators or measures:

- Input indicators/measures deal with the resources used in carrying out the project; they should normally be measurable in money and/or physical inputs;
- Activity indicators/measures deal with how resources are applied;
- Output indicators/measures deal with the immediate changes produced by the project being evaluated, and as such should be related to the targets;
- Outcome or impact indicators/measures are concerned with the ultimate results of the project and are defined by the final aims and targets of the project.

15.12.8 Input, activity and output measures/indicators relate to intermediate targets, while outcome measures/indicators correspond to final targets. Input, activity and output indicators/measures should be arranged in a hierarchy to reflect the chain between the application of inputs and the achievement of a series of intermediate targets.

15.12.9 To give some examples:

- An example of an input measure would be the amount of money allocated to a particular programme, such as community transport: this could be segmented by type and/or location: as discussed above, the use of such measures depends upon the intermediate objectives set;
- An example of an activity measure would be the number of voluntary sector groups receiving assistance under a community transport programme: again this could be segmented by type or location;
- An example of an output measure would be the number of people using a community transport service assisted through the project under evaluation – this could also be segmented by type and/or location of users, such as wheelchair users, or people in remote areas.

15.12.10 These indicators are used to assess the project's performance against four criteria which are used in evaluation to judge the overall value for money of the intervention and to identify which elements in the process of design and implementation have worked well or badly. The 4E criteria, introduced previously, are:

- economy,
- efficiency,
- effectiveness,
- equity.

Base Case for Comparison

15.12.11 The ability of an evaluation to demonstrate that outcomes are *attributable* to the project depends largely on the ability to define what would have happened in the absence of the project, and to compare this with what did actually happen. It is important to try to define this 'without project' or do-minimum scenario as accurately as possible in order to be able to identify the real results of the project being evaluated.

15.12.12 In transport project evaluations it is normally not possible to identify an identical scenario of a do minimum situation for comparison with the implemented project. Therefore evaluators will need to adopt one of the following alternatives:

- comparison of an extrapolated or modelled 'without-project' trend with the actual 'with-project' trend
- comparison of the pre and post project situations of the groups affected by its implementation;
- comparison, based on qualitative and quantitative information and judgement, of what would have happened had the project not taken place with what actually happened.

15.12.13 Simple trend extrapolation is worthwhile only where there are no external shocks which would affect the outcomes. Modelling can provide a much better basis for on and off comparisons, provided the model can allow for a range of external factors in predicting the 'without-project' outcome.

- 15.12.14 Pre and post comparisons assume that the pre situation would continue, and the validity of this needs to be considered.
- 15.12.15 In many instances, the evaluator will have to make an informed judgement as to what would have happened had that project not taken place. This judgement has to be based on sound quantitative and qualitative information, which should be gathered before and after the project takes place.
- 15.12.16 Whatever approach is adopted for particular cases, the evaluation should make explicit the assumptions made in considering what would have happened in the absence of the project being evaluated.

Analysis and Interpretation – Process Evaluation

- 15.12.17 In a process evaluation, the focus is heavily on inputs and activity, although there may be some initial output measures as well. The evaluation needs to establish that inputs are being deployed as required in the implementation plan and that inputs are being sourced economically and used efficiently.

Analysis and Interpretation – Outcome Evaluation

- 15.12.18 In an outcome evaluation, a range of indicators and measures should be developed and used, including both output and outcome measures and indicators. These need to be based on effects judged or assessed to be additional, that is the outputs and outcomes attributable to the project, over and above what would have happened had the project not taken place.
- 15.12.19 This approach lends itself well to analysis using spreadsheets, which can be organised to record inputs, outputs and outcomes and to calculate the selected economy, efficiency, effectiveness and equity ratios (the 4E's). These should be based on the objectives of the project and the output and outcome measures/indicators selected.
- 15.12.20 The interpretation of the results from such an analysis generally involves a mix of:
- internal comparisons, for example between individual projects or groups of projects in different areas or regions; or between projects implemented in different years;
 - external comparisons between the particular project in Scotland and similar projects either in Scotland or the rest of the UK, or both.
- 15.12.21 This will typically identify or highlight particular aspects of the project, for example if it seems generally very expensive as a way of achieving output objectives, or if achieving outputs at low cost does not then go on to achieving the desired outcomes.

Reporting and Recommendations

15.12.22 The evaluation report should set out, and substantiate its findings on:

- whether the project achieved its objectives, fully or partially;
- the reasons for any failures in meeting objectives and the consequences of failures;
- a statement of the costs of the project;
- a statement of those outputs and outcomes from the project which are assessed to be additional;
- analysis of performance measures indicators; and
- interpretation using the criteria of economy, efficiency, effectiveness and equity.

15.12.23 Ultimately, the evaluation report has to reach a view as to whether the project represents a good use of resources, whether value for money could be improved, and how best to achieve this.

15.12.24 In some cases, more radical changes or even termination of a project may be required. In such cases, the evaluation forms the basis of the justification for such a decision. More positively, a well executed outcome evaluation will diagnose where change is required, and examples of measures which might be identified include:

- changing the criteria which determine eligibility for funding;
- management or other changes in the agencies responsible for implementing a project;
- altering subsidy regimes to provide stronger efficiency incentives to operators;
- introducing a competitive element into funding of projects.

15.12.25 The value of an outcome evaluation will, therefore, typically exceed its costs by a substantial margin, by improving on-going projects and providing lessons for the design and implementation of future transport projects and policies.

15.12.26 For the STAG report it will only be necessary to provide an indication of the scope and timing of the project evaluation.