STAG Technical Database　　　　Section 15

Monitoring

April 2015

Transport Scotland

Version History

Changes since STAG Refresh, May 2008

Change number	Section updated	Date
1	Refreshed text for monitoring for active and sustainable travel and smarter choices interventions	April 2015

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15. Monitoring

The term Monitoring describes an ongoing process which has an important role in determining the success of a project in achieving established Transport Planning Objectives and includes:

- The development of a proposed monitoring strategy as part of the STAG Report to outline how Monitoring will be undertaken post-implementation and the scope of the process;
- The development of challenging but achievable key performance indicators (KPIs) clearly linked to the Established policy directives;
- 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; and
- The development of a Monitoring Report to detail the extent to which a project is delivering value for money and achieving the objectives set.

15.1 Introduction

Monitoring is the process of gathering and interpreting information on the performance of a project post-implementation. This process should be ongoing and will usually take place in conjunction with other information gathering exercises being undertaken by a local authority or other organisation implementing a project.

The term 'project' is used in this section for any option which has been implemented, whether it is an individual project or programme comprising a series of projects. Similarly, at this stage the term 'project manager' is used to describe those who would undertake the Monitoring.

15.2 Proposed Monitoring Plan

As part of a STAG study a Monitoring Plan should be developed to outline how monitoring will be undertaken following implementation. This should be reported in the STAG Report. It is important to consider the scope of Monitoring activity during the STAG Process. Failure to do so will make it difficult to assess the impacts of projects after their implementation. A monitoring framework should therefore be established early in a STAG study to ensure the gathering of relevant and appropriate information.

The Monitoring Plan should form an integral part of the development and implementation of projects. Selecting measurable indicators of progress towards meeting the Transport Planning Objectives, performance against the STAG Criteria and evaluating the impacts of the project on established policy directives should be seen as a priority. Key performance indicators (KPIs) must, however, be set early in the development process.

Developing the Monitoring Plan at the same time as setting targets and indicators can help in defining more affordable Monitoring programmes.

15.2.1 Monitoring for active and sustainable travel and smarter choices interventions.

The emergence of sustainable and active travel and smarter choices interventions in recent years brings with it the requirement for effective monitoring and evaluation approaches for these interventions. The data collected will assist in quantifying demand shifts through the introduction of softer measures and the propensity for people to change modes having received better information to make more informed choices.

Table 15.1 sets out potential data collection for cycling and walking schemes.

	Data to be collected
Prior to scheme implementation	Number of cyclists/pedestrians per day
	Utility/leisure split
	Journey time
	Origins and destinations
Scheme Details	Length of scheme
	Environmental improvements (landscaping, vegetation etc)
	Safety/security improvements (lighting, CCTV etc)
	Links with other schemes (part of a network, parking, resting places, crossings etc)
	Information (signage)
Following scheme implementation	Number of cyclists/pedestrians per day
	Utility/leisure split
	Mode shift (previous journey mode)
	Previous journey route (if transferred)
	Journey time
	Origins and destinations

Methods of monitoring cycling include the following:

- Automatic Traffic Counters (ATCs) (including pneumatic tube counters, piezoelectric counters and inductive loops)
- Manual Classified Counts (MCC)
- Cordon and Screenline Counts
- Destination Surveys
- Interview Surveys

Monitoring techniques that could be used for walking include:

- Origin/destination surveys
- Household surveys and travel diaries
- Manual counts
- Automatic count methods (including video imaging, infrared sensors, piezoelectric pressure mats).

Further information on each of these monitoring techniques including how to select survey sites; and when to undertake surveys is provided in the 'Traffic Advisory Leaflets Monitoring Local Cycle Use' (DETR, 1999) and 'Monitoring Walking' (DETR, 2000).

15.3 Project Monitoring

Effective monitoring requires the regular analysis of the information being gathered in order to continuously review the performance of the project against the established Transport Planning Objectives and STAG Criteria and the impacts of the project on established policy directives. Used in this way, Monitoring should identify any areas of under-performance, and should also identify factors causing under-performance, thus allowing practitioners to implement appropriate changes at an early stage.

Monitoring performance is fundamentally important as it allows a measurement to be made of whether a project has been successfully implemented or not. The current focus in transport planning, and many other areas of government, is to measure success in terms of Best Value. This requires a measurement of outcomes for projects to be made rather than the outputs of an authority's activity.

A Monitoring Plan for inclusion within the implementation stage of a project must be clearly identified. It should be possible to establish this strategy early in the process to ensure the gathering of relevant and appropriate information.

The levels of effort and expenditure required to monitor a project will vary. There are a range of factors which should be considered when determining the appropriate level of effort and expenditure for a particular project, including the level of resources available (both in terms of time and finances); the scale of the project; the degree of innovation of the project; and the degree of risk exposure associated with adverse outcomes and the quality/robustness of the Monitoring outcome.

Resource requirements associated with Monitoring should also be determined by the amount of information already available. It is important for practitioners to scan for information that may already be in the public domain. This would include Best Value reviews, Audit Commission reviews and modernising local government sources. It should be noted that there are also on-going traffic surveys and national data sources to draw upon.

15.4 Participation and Consultation

Stakeholders should be consulted during the development and implementation of the Monitoring Plan. Support for the Monitoring Plan is essential as when agreed it will ensure performance can be effectively monitored against the Transport Planning Objectives and that the integrity of the process of STAG is maintained.

15.5 Reporting

The project manager should develop a Monitoring Report that reflects the proposed Monitoring Plan developed as part of a STAG Study. The details of this Monitoring Plan should be clearly described within the Monitoring Report.

The Monitoring Report will allow performance against objectives and indicators to 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.

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. As part of the Monitoring Report an indication of the scope and timing of the Evaluation should be provided.

As the results of a Monitoring Plan are assessed, the detailed performance indicators and targets themselves may need to be re-defined. The development of revised targets and performance indicators must be carefully considered and be compliant with SMART principles and linked to the Transport Planning Objectives, STAG Criteria and established policy directives. In particular, such targets and performance indicators must continue to be achievable, yet challenging.

Depending on the Monitoring results, it might be necessary to consider whether a detailed Evaluation (Section 14) is warranted before making any major changes to the project.

The Monitoring Plan itself may need to be reviewed over time and modified according to the extent to which it is achieving sound and cost effective results.

Additionally, the Monitoring Plan, detailed performance indicators and targets may need to be reviewed and updated to appropriately reflect any changes to established policy directives.

For the purposes of the STAG Report it will only be necessary to provide an indication of the proposed scope of the Monitoring to be undertaken and identification of appropriate indicators to measure performance against the Transport Planning Objectives and STAG Criteria and the impact of the project on established planning directives.