Department for Transport

Local Sustainable Transport Fund Monitoring and Evaluation Framework

December 2012

The Department for Transport has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the Department's website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact the Department.

Department for Transport
Great Minster House
33 Horseferry Road
London SW1P 4DR
Telephone 0300 330 3000
Website www.gov.uk/dft
General email enquiries FAX9643@dft.gsi.gov.uk

Contents

Foreword

Monitoring and evaluation are an integral element in understanding how well National and Local Government are delivering services and investing public finances. In the context of the Local Sustainable Transport Fund, demonstrating delivery of schemes that drive economic growth whilst cutting carbon will be vital to securing future funding.

By understanding which schemes are the most effective in achieving the twin objectives of the fund and responding to local transport issues, it is possible to build the evidence base, share best practice and support future decision making.

While monitoring and evaluation are important, we recognise that they need to be cost effective and proportionate. This framework aims to balance the approaches that are most effective at improving the evidence base with the resource burden this places on local authorities.

In a world of devolved decision-making, monitoring and evaluation will play an enhanced role. They should enable future spending to be predicated on demonstration of delivery against key outcomes. We believe this framework sets in place sound principles for this.

John Dowie

Director, Local Transport Directorate

1. Introduction

1.1 This framework sets out the Department's expectations for the monitoring and evaluation of projects receiving funding through the Local Sustainable Transport Fund (LSTF).

1.2 The framework offers a light-touch, resource efficient approach that seeks to balance the needs for accountability and evidence base development with the financial and time burdens of monitoring and evaluation activity. It sets out a proportionate approach to the monitoring and evaluation of the LSTF in line with National Audit Office's framework for evaluation programmes[1].

1.3 In summary it:

- Sets out the Department's requirements for the monitoring and evaluation activities and the roles of the Department and project teams in delivering these;
- Articulates which LSTF projects are expected to fulfill which elements of monitoring and evaluation; and,
- Provides project teams with the flexibility to collect monitoring and evaluation evidence in a way which reflects the local variation of projects and data availability.

1.4 The Department expects to work collaboratively with local authorities and others to deliver this framework. It aims to build on the evidence base to inform future local and national decision making on sustainable travel choices.

1.5 This framework has been developed by the Department following conversations with LSTF Tranche 1 project teams, academics and specialists in sustainable travel and large project bidders. A draft was distributed to all project teams, academics and other key contacts to gauge feasibility of delivery, test the anticipated quality of results from this work, and to improve the evaluation framework overall. This document is the result of that process.

[1] National Audit Office (2011), Review of Local Authority Major Capital Transport Schemes; Appendix Two sets out the principles for, and main elements of, evaluation in an environment where sponsoring bodies have devolved responsibility for the design and delivery of projects with multiple stakeholders, and where a programme may encompass a mixed portfolio of project type and size.

2. Monitoring and evaluation principles

Policy objectives of the fund

2.1 LSTF projects are expected to deliver on the following primary objectives:

- support the local economy and facilitate economic development, for example by reducing congestion, improving the reliability and predictability of journey times or enhancing access to employment and other essential services; and
- reduce carbon emissions, for example by bringing about an increase in the volume and proportion of journeys made by low carbon, sustainable modes including walking and cycling.

Suggested indicators for these objectives will be addressed in section 5.

2.2 Projects may also deliver on some or all of the following secondary objectives:

- helping to deliver wider social and economic benefits (e.g. accessibility and social inclusion) for the community;
- improving safety;
- bringing about improvements to air quality and increased compliance with air quality standards, and wider environmental benefits such as noise reduction; and
- promoting increased levels of physical activity and the health benefits this can be expected to deliver.

LSTF secondary objectives will be addressed in Section 7.

Monitoring and evaluation

2.3 **Monitoring** is the collection of data to check progress against planned targets. It is the formal reporting of evidence that spend and outputs are successfully delivered and milestones met. By tracking changes in outcomes over time, monitoring data plays a key part in evaluation throughout the initiative's lifetime.

2.4 **Evaluation** is the assessment of the project's effectiveness and efficiency during and after implementation. This includes measuring the

causal effect of the project (or elements within the project) on planned outcomes and impacts, assessing whether the anticipated benefits and value for money have been realised and whether any unanticipated impacts occurred.

2.5 The monitoring and evaluation framework for LSTF projects defined here sets out to:

- investigate the contribution of the fund to delivering economic growth and carbon reduction (i.e. report against the policy objectives);
- understand how the fund has delivered against some or all of the secondary objectives (see paragraph 2.2)
- provide accountability to taxpayers and Parliament;
- fill evidence gaps to inform the case for future local, national or third party funding for sustainable travel and to improve development and appraisal of future proposals; and
- provide an effective method for benchmarking and comparison.

2.6 Transport authorities may also wish to use the monitoring and evaluation framework as the basis for generating evidence to support local priorities, such as:

- learning what works in enabling sustainable travel choices, in which context, for whom and why;
- improving understanding about how to design, target and deliver sustainable travel initiatives most effectively and efficiently;
- testing the impact and effectiveness of innovative approaches where the evidence base so far is under-developed;
- identifying which measures to continue after LSTF funding ceases in March 2015;
- demonstrating local impact, with locally relevant data;
- benchmarking outcomes from one project against others; and
- investigating how LSTF projects can help deliver secondary objectives of local relevance.

2.7 Three principles have led the development of this framework, and will continue to guide its implementation during the lifetime of the fund:

- **Proportionality** - Adopting a light-touch, resource efficient approach to monitoring for local authorities (where possible utilising existing data sources);
- **Partnership** - Collaborative working across local authorities, government departments, academics and other organisations; and
- **Prioritisation** - Developing the evidence base to inform future local and national decision-making by targeting key evidence gaps.

3. Components and responsibilities

What does the LSTF monitoring and evaluation framework consist of?

3.1 The framework consists of three components.

1 **Annual outputs reporting** - Annual outputs reports monitor what the investment has been spent on, and what deliverables have resulted from this investment on an annual basis, by recording and reporting on inputs[2] and delivery of outputs[3]. All project teams (large and small) are expected to complete these each year via a standard reporting template provided by the Department.

2 **Outcomes monitoring** - Only large project teams are expected to develop and deliver bespoke monitoring programmes. They will track changes in key outcome metrics[4] and benefits delivery and build on plans submitted in business cases. Large project teams are also requested to produce a post implementation report. Small project teams are not required to deliver this component of the framework although they may want to draw on it for their own purposes.

3 **Case studies** – These will consist of detailed research projects on a few key priority questions where the evidence is relatively weak and/or important (e.g. the impact of sustainable transport on the economy). These case studies will provide a detailed account of how specific sustainable travel measures work, and how the outcomes and impacts observed[5] vary in different contexts; and, where feasible assess the value for money of the investment. A selection of large and small

[2] Inputs are the resources which are invested in implementing the project. This includes the Department's and local contribution funding but also human resources such as the time invested, skills required and other inputs such as equipment, technology and research.

[3] Outputs are the tangible deliverables in a project – a new bus service, the secure cycle parking installed at a train station, or information packs distributed to staff as part of a workplace travel plan. Some outputs will also be based on activities such as travel planning or cycle training, and how many / what types of people have been reached through such activities. Every LSTF project has a series of outputs, usually delivered once key project milestones have been reached.

[4] Outcomes are the observable changes in the short to medium term, and are frequently measured to assess the quality of a programme. The anticipated outcomes for LSTF projects relate directly to the objectives (e.g. mode shift, increased bus reliability and patronage, increased number of cyclists and cycle trips). Evaluation of outcomes enables assumptions to be tested about the effectiveness of outputs to deliver anticipated benefits.

[5] Impacts are the longer-term effects on the primary (economic growth and carbon reduction) and secondary (e.g. social impacts, safety, health, air quality and noise) objectives of the scheme.

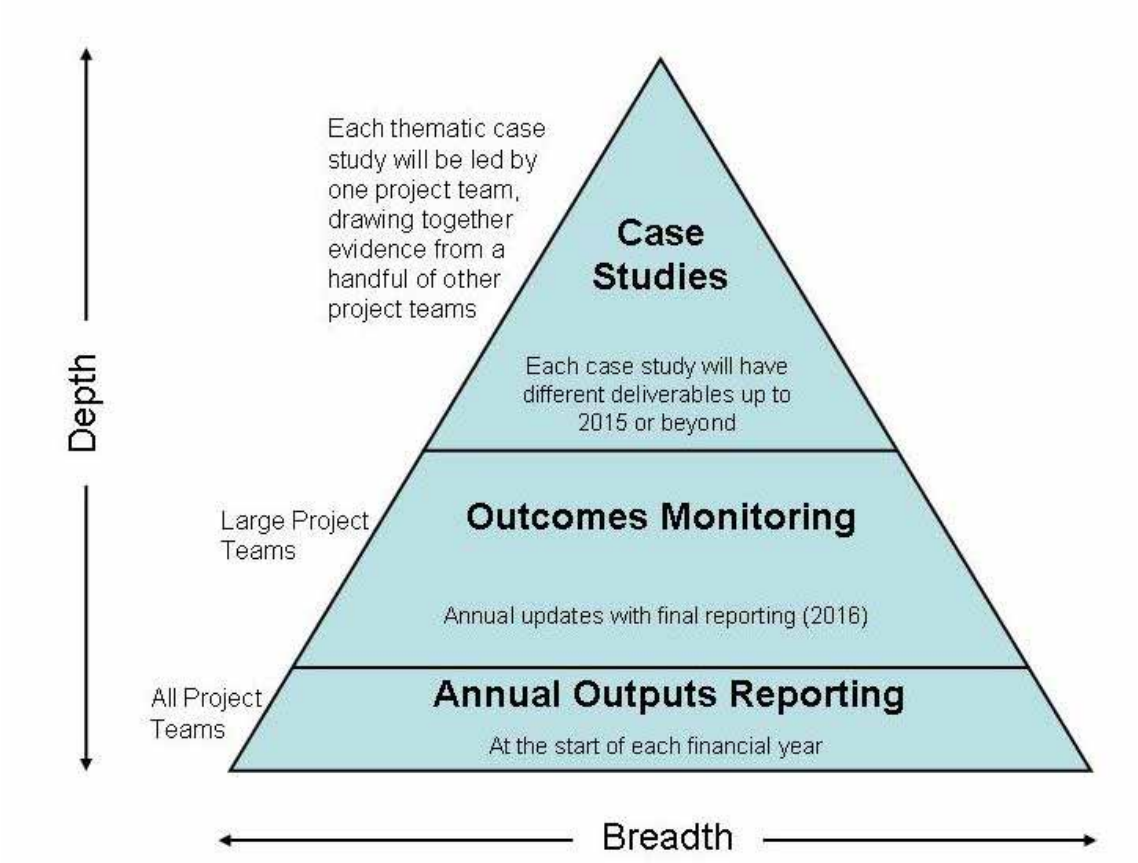
project teams will be involved in leading and participating in case studies. Detailed information on case studies, and those lead authorities that will progress each case study, will be published in Spring 2013.

3.2 Not all funded project teams are required to contribute to all three components of the framework. Figure 3.1 sets out the expected contributions of project teams to each of the three components. Of course, project teams can choose to go beyond these contributions if they so wish. Small project teams can choose to collect and report outcome metrics; these will allow for benchmarking and provide a wider pool of evidence for comparison.

3.3 No one component of the framework will provide a comprehensive assessment of the effectiveness of sustainable travel measures in isolation. For example, the framework recognises that the monitoring of a range of metrics alone will not generate evidence to demonstrate the causal effect of the investment on travel behaviours. This raises the need for more in-depth evaluation (through case studies) to generate robust transferable evidence about the effectiveness of sustainable travel initiatives that can inform future spending and delivery decisions at a national or local level.

3.4 It offers a proportionate approach to monitoring and evaluation across the fund. It recognises, particularly for small projects, that the effect of interventions may be difficult to detect and attribute without significant investment in data collection. Therefore such investment in data collection will not be requested for all projects.

Figure 3.1 - LSTF monitoring and evaluation framework



Responsibilities

3.5 The Department will support and co-ordinate the monitoring and evaluation framework overall. The responsibility for ensuring data collection, analysis and interpretation rests with project teams, working in collaboration with other partners where appropriate.

3.6 In line with the Government's approach to decentralisation, the framework does not prescribe how projects will carry out monitoring and evaluation, but sets out what is required for accountability of the projects. Project teams are responsible for developing and delivering a proportionate approach that meets monitoring and evaluation objectives without detracting from delivery.

3.7 The responsibilities of key partners to this framework are listed in Table 3.1.

Table 3.1 - Responsibilities of key partners	
Large project teams[6]	Record and report on inputs and delivery of outputs through annual reporting Deliver outcomes monitoring, as set out in bespoke monitoring plans[7] Some (but not all) large project teams will also lead the development and delivery of case studies
Small project teams[8]	Record and report on inputs and delivery of outputs through annual reporting If appropriate, some small project teams will also contribute to one of the case studies In exceptional circumstances, a small project team may lead the development and delivery of a case study
Department for Transport	Ensures the monitoring and evaluation framework is delivered and provides fit for purpose evidence to demonstrate accountability and learn lessons for future decision making Ongoing governance that the delivery of monitoring and evaluation activity is on track Supports project teams through sharing best practice and ensuring sufficient consistency of evaluation of projects Co-ordinates dissemination of evaluation findings
Local Government Association (LGA)	Provide website/information platform ('Knowledge Hub') to share best practice
Other Government Departments (Defra, DECC, DWP, CLG)	Selective participation in case study development and implementation as appropriate Information provision for monitoring data requirements as necessary
Academics and professional sustainable transport analysts	Collaborative participation in case studies as appropriate Data analysis and synthesis for different elements of the framework as necessary

[6] Large projects are defined as projects receiving more than £5m. For those projects that are linked to a Key Component (or Tranche 1) project approved in July 2011, the two projects should be regarded as a single large project, and any monitoring and evaluation activities will apply to both projects as one (large) project unless otherwise specified.

[7] Outcomes monitoring plans agreed between the large projects and the Department can include details of any additional monitoring and evaluation activity being planned by the project team independently of this framework.

[8] Small projects are defined as projects receiving £5m or less through Tranche 1 and Tranche 2, including any Key Component projects which were not followed by a successful large project bid.

Financing delivery of the framework

3.8 Large project teams were asked to budget for monitoring and evaluation when developing business cases in 2011, to enable adequate participation in delivering this framework. With the exception of case studies, they are expected to meet the costs of delivering this framework from their project budgets.

3.9 A limited amount of funding is available from the Department for case study development and implementation, which will be negotiated and allocated to the lead project team on a case-by-case basis. Decision making, regarding budget allocation for case studies, will be driven by the principles and objectives of the framework. The Department funding for case studies will be provided on the basis that funding from other sources (e.g. research councils, project partners) will also be sought and secured where possible, and appropriate methods will be applied.

4. Annual outputs reporting

4.1 Project teams are requested to complete an annual outputs report by July, to cover the previous financial year (where funding was approved part way through the previous funding year, this reporting requirement for the first year starts from the date funding was announced). The report covers:

1 A project description
2 The spend profile for each scheme element[9] (including an explanation for any significant variations from the profile originally proposed in the bid)
3 A short progress summary
4 Information on the outputs from each scheme element
5 Identification of project achievements and lessons learnt (optional)

4.2 These reports are intended to form the basis for information exchange between projects on good practice and lessons learnt during delivery. Project teams are encouraged to make these reports publicly available via the local authority's website, and also through the LSTF Knowledge Hub, to share directly with other project teams. These reports will provide an on-going record of outputs during delivery, which will then form the basis for any subsequent analysis of delivery as required. The report gives individual project teams the opportunity to showcase their achievements and lessons learnt. A template for these reports will be provided by the Department to project teams shortly after the end of each financial year.

4.3 All project teams are strongly recommended to keep a project diary and assign a team member to complete it regularly, to keep track of what the project is delivering and when, but also to capture information about external events that may impact on the outputs and outcomes (either positively or negatively). Project teams will find such project diaries invaluable when carrying out basic programme monitoring and any associated evaluation activities at a later stage.

4.4 The Department will review the initial year's output reports to establish whether the format of subsequent reports could be changed to improve analysis whilst not increasing the burden of monitoring or reporting on local authorities.

[9] The annual outputs report template enables teams to report on up to five scheme elements. Where project teams proposed delivery of more than five scheme elements in bid documents, these teams are encouraged to consolidate similar scheme elements to ensure reporting is scaled down to a manageable level.

5. Outcomes monitoring

5.1 Data collection, analysis and interpretation of findings regarding the influence of LSTF projects on economic growth and carbon reduction will be addressed through outcomes monitoring. All large project teams are expected to play a part in this. Small project teams are invited to contribute to case studies on relevant themes where appropriate, but there is no requirement that they will commit time and resources to outcomes monitoring.

5.2 The following sections set out the type of data that need to be collected to monitor impacts in a consistent way across the projects in the programme. More detailed guidance is included in the technical annex.

5.3 The themes listed represent commonly collected and reported metrics. At the local level, large project teams should make every effort to use these metrics to aid comparisons across the programme unless there are good reasons why these are not applicable, or better alternatives are available. As each large project is different the Department will work with each team separately to agree a monitoring plan that is proportionate and reflects local circumstances, whilst seeking to maximise the degree of comparability across the programme.

Travel Patterns

5.4 LSTF projects need to influence how people travel to have an impact on the economy and carbon. All large projects identified significant expected benefits from reducing demand for car travel in their business cases.

5.5 Where feasible and cost effective, large project teams should try to monitor and report changes in:

- Vehicle flow
- Bus and (where applicable) light rail patronage
- Number of cycle journeys
- Number of pedestrian journeys.

Economy

5.6 The LSTF Guidance was not prescriptive about how funded authorities should support their local economy and facilitate economic development. As a result there is wide variation in how the packages implemented as part of the programme support economic development. The metrics to be collected are based around four categories of intervention which cover most large projects:

- Congestion relief e.g. improving the frequency and reliability of public transport services; encouraging mode shift;
- Increasing the use of non-car modes e.g. increasing rates of cycling and walking from workplace travel plans;
- Helping get unemployed people into work e.g. cycle/scooter loans;
- Encouraging town centres and high streets e.g. giving greater priority to pedestrians.

5.7 Large project teams are not expected to collect data for all four categories of intervention listed above. They should focus on collecting data on those metrics that relate closely to the objectives of their project.

Carbon

5.8 Large project teams are expected to assess the carbon impacts of their projects. In doing so, the key factors for determining carbon emissions should be considered and converted into carbon impacts. This could be done, for example, using the Local Authority Carbon Tool produced by the Department[10]. The main factors would be:

- distance travelled/trip length (in vehicle kms)
- vehicle speed
- vehicle type.

5.9 Including these in outcomes monitoring will assist in demonstrating progress against travel patterns and economic outcomes as well.

LSTF outcomes monitoring and local evaluation plans

5.10 The design of monitoring and evaluation plans should follow a two stage process.

- In the first instance, large project teams will need to review their key objectives and identify the relevant outcomes that would show progress against these. The focus here should be on identifying the most significant outcomes that will need to be monitored – project teams are not expected to monitor all potential outcomes.
- In the second stage, suitable metrics and data need to be identified to monitor the outcomes identified in the first step. The selected sources should be sufficiently sensitive to detect changes of the magnitude expected at the outset (e.g. as indicated in the business case).

5.11 Where existing data sources are available, large project teams should consider including these even if the relevant outcome falls outside their main focus. Recording some monitoring data on these is likely to provide useful contextual information for interpreting outcomes or assessing unintended effects. Even if, for example, no reduction in vehicular traffic or road accidents is expected as an outcome of LSTF interventions,

[10]https://www.gov.uk/government/publications/local-authority-basic-carbon-tool

monitoring traffic flows and accident numbers (from existing sources) could still be important for identifying potential unintended consequences.

5.12 It is anticipated that large project teams will draw heavily on existing data sources to monitor the impact of their schemes. However, in some instances additional data collection will be required e.g. to provide statistically significant results, or to monitor sites not currently covered. The costs of additional data collection will need to be weighed against the improved robustness achievable and the importance of the relevant objective. The Department does not expect project teams to collect additional data where the costs are disproportionately large in comparison to the value of the information that will be generated. In some instances collection and reporting of existing data could be requested by the Department to allow outturn data to be compared to projected impacts used for the appraisal part of the business case.

5.13 The Department plans to maintain a collaborative approach with large project teams. Outline monitoring and evaluation plans as set out in business cases form the basis for these conversations. The aim is to agree sensible and cost effective approaches for each of the large projects, while allowing comparisons to be made and conclusions to be drawn across the programme. Section 8 sets out this process in more detail.

Timeframe for data collection

5.14 In order to track changes in the metrics over time, the monitoring data should provide a time-series with multiple data points collected in a consistent and comparable fashion. The frequency of data collection will depend on the data sources available. Having more data points available within the timeframe provides an increased opportunity to observe and understand changes over time. However, it is recognised that this will depend on the context for the individual projects and large project teams are encouraged to consider the best balance between the frequency of data collection and a proportionate monitoring approach.

5.15 The monitoring process should draw on data available pre, during and post the delivery of the project. Monitoring data should be published annually accompanied by general commenting or basic analysis, with final analysis conducted at least one year (but less than two years) after the end of the investment period in the post implementation report. Further analysis and reporting may also be undertaken beyond this point by the large project teams if they so wish; this should be outlined at the planning stage.

6. Case studies

Rationale

6.1 Thematic case studies will form a central part of the LSTF evaluation, providing evidence in relation to priority evidence gaps where there is an agreed set of research questions. They will provide an opportunity for in-depth investigation of the efficacy and cost effectiveness of sustainable travel measures; and a rigorous test of the extent to which the observed behaviour changes can be attributed to the LSTF investment. Case studies will explore the effectiveness of different delivery approaches and the extent to which the scale of impact varies across local contexts. This will aid validation of the results and understanding of their transferability whilst avoiding the need for every project to answer the same question. Project teams not participating in case studies will be able to utilise the evidence provided through case studies where their projects are similar and it will help inform future investment decisions by demonstrating what works, why and in which context.

6.2 It is not considered to be proportionate for every project team to carry out this level of evaluation, which is likely to require extra data collection activities. Resources will be focused on answering research questions about the effects of investment in sustainable transport where the evidence base is currently the weakest and/or the priority highest.

6.3 A small number of case study themes are being selected based on an assessment of priority evidence gaps and the extent to which these can best be filled by the evaluation of LSTF investment.

6.4 Proposed case study themes, based on evidence gaps, have been identified through an analysis of the sustainable travel evidence base conducted by the Department in January 2012, and developed as a result of prioritisation provided by project teams. These are:

- Three case studies to evaluate the outcomes of projects undertaken to support local economic growth:
  - Accessing employment opportunities;
  - Accessing strategic employment sites and business parks;
  - Encouraging town centres and high streets;
- carbon impacts and congestion relief; and
- Smarter Choices.

Process

6.5 Each case study will differ in approach, adapting to the most appropriate methodology for the projects that will form part of each case study. Each of the case study themes will be evaluated through involvement of a small number of LSTF projects[11].

6.6 A handful of LSTF project teams (mostly but not exclusively drawn from large projects) will lead a case study, working collaboratively with other project teams (large and small) to design and deliver a robust evaluation approach which can be applied consistently across each project area.

6.7 It is anticipated that each case study will undertake a scoping exercise to establish the methodology and data requirements before an evaluation plan can be prepared. This element of the framework is likely to require a broad range of data to be collected and analysed (including bespoke data collection) and may need to draw on expertise from evaluation practitioners and academia.

6.8 In some instances, DfT will contribute to the cost of the case study. This will depend on the anticipated value for money from the resulting evidence. A decision will be made following the review of the evaluation plans in the spring (see Table 8.2 for a description of next steps).

6.9 Feedback from the project teams has also indicated that there are other important evidence gaps which could be addressed through case studies and highlighted instances where specific research studies are already being planned by the project teams (often working collaboratively with academic partners). This framework is not intended to inhibit these activities and project teams are encouraged to share their plans, and subsequent research findings, with the Department and other LSTF project teams via the LSTF Knowledge Hub.

[11] Project teams have indicated their interest in being involved in a case study.

7. Monitoring of secondary objectives

7.1 There are four secondary objectives for the LSTF, as follows:

- helping to deliver **wider social and economic benefits** (e.g. accessibility and social inclusion) for the community
- improving **safety**
- bringing about improvements to **air quality** and increased compliance with air quality standards, **and wider environmental benefits** such as noise reduction
- promoting increased levels of **physical activity** and the health benefits this can be expected to deliver.

7.2 **Wider social and economic benefits** (e.g. accessibility and social inclusion) - project teams with a focus on this objective may want to evaluate this as part of one of the case studies.

7.3 Monitoring road **safety** can be important even for projects not directly targeting this as a secondary objective. All large project teams are encouraged to include existing data on road safety in their outcomes monitoring.

7.4 Monitoring and evaluation of **air quality and other environmental benefits** can be derived from data collected on carbon reduction. Traffic volume, distance, speed and vehicle type determine pollution according to established speed-emission relationships. Projects covering Air Quality Management Areas (AQMAs), where road traffic is identified as the primary source of pollution and where the LSTF project is expected to deliver improvements, may wish to conduct such monitoring to assess the impacts on air quality directly.

7.5 **Physical activity** is most likely to be a resulting factor from LSTF projects that have a specific focus on active travel (i.e. walking and cycling). A growing evidence base is already available on the physical activity benefits from active travel[12], and there are limited evidence gaps in this respect. The National Institute of Health Research (NIHR) Public Health Research programme is currently inviting research proposals that will provide evidence to advance the existing knowledge base on the

[12] See, for example, Powell, J., Dalton, A., Brand, C., Ogilvie, D. 2010 The health economic case for infrastructure to promote active travel: A critical review, *Built Environment*, 36(4): 504-518.

effectiveness of active travel interventions[13]. The Department for Transport and the Department of Health are currently investing in extensive research and evaluation of the Cycling Cities and Towns programme[14], so any further funding to research additional projects through LSTF will only be warranted if new priority evidence gaps will be addressed. New interventions aimed at promoting physical activity may benefit from specific, tailored monitoring, and project teams may wish to investigate this further.

[13] http://www.phr.nihr.ac.uk/fundingopportunities/
[14] https://www.gov.uk/government/publications/evaluation-of-the-cycling-city-and-towns-programme-interim-report

8. Next steps and engagement process

Outcomes monitoring

8.1 In the business cases submitted with their application for funding, large project teams have submitted outline monitoring and evaluation plans. Some teams have significantly progressed their approaches since then. The Department is providing feedback and advice on best practice to large project teams aiming to agree data collection, analysis and reporting. Draft monitoring and evaluation plans should be provided to the Department no later than the end of February 2013 for discussion and agreement before publication during Spring 2013.

8.2 The expected content of the finalised monitoring and evaluation plans is outlined in Table 8.1.

8.3 Agreed monitoring and evaluation plans should set out the period of time over which outcomes are being monitored. Sufficient time should be allowed for the impacts of planned interventions to fully materialise, e.g. it might take some time for improved cycling infrastructure to reach its full potential in terms of encouraging mode shift. As a guide, data collection would be expected on at least an annual basis, with annual reporting of the data including a discussion of changes in monitoring outcomes. Project teams are expected to publish all the data to allow researchers and other third parties maximum opportunity to assess the impact of the programme.

8.4 A final post implementation report (or detailed interim update for projects that intend to continue monitoring beyond that date) should be prepared within 24 months of the end of funding. Large project teams are expected to budget for the costs of this reporting.

8.5 To enable efficient knowledge sharing, dissemination and learning from best practice, the finalised monitoring and evaluation plans should be made available through the LSTF Knowledge Hub (as well as authorities' own websites). The same platforms should be used to share the annual as well as the final reports. Reports should be aimed at a non-technical audience.

8.6 The use of the LSTF Knowledge Hub will ensure all material is available in one place and easily accessible to all those involved or generally interested. This also facilitates benchmarking and the sharing of best practice between project teams. It will similarly ease future meta-

analyses at programme level by the Department or interested third parties.

Table 8.1: Content of evaluation and monitoring plans

Section Heading	Description	Outcomes monitoring	Case studies
1.Scheme background and context	Short description or the scheme (including costs, the delivery timeframe and explanation of the wider delivery context).	√	√
2.Scheme objective and outcomes	Define the scheme objectives and the associated outcomes and impacts. Provide assumptions underpinning how the scheme will achieve these in the form of a logic map.	√	√
3. Evaluation Objectives and research questions	Set out the scope of the evaluation and the questions which the evaluation will answer.		√
4. Outline the evaluation approach	Clearly define which overarching approach and analytical techniques will be applied (for instance, to establish causality) and the justification for this approach.		√
5. Data requirements	Provide details of the data being collected for each measure including data to be used, rationale for inclusion, data collection methods and frequency of data collection.	√	√
6. Data collection methods	Provide an overview of the data collection approaches including assumptions being made about sample sizes and mode of data collection. Where appropriate, provide maps showing spatial coverage of data collection.	√	√
7. Resourcing and governance	Provide details of the monitoring and evaluation budget(s), the governance structure for the delivery of the Monitoring and Evaluation plan, including details of who will be responsible for delivering the plan and procedures for risk management and quality assurance.	√	√
8. Delivery plan	Project plan and timeframe for data collection, progress reporting back to the Department and reporting of monitoring and evaluation findings.	√	√
9. Dissemination plan	Details of how the findings from the evaluation will be communicated to key stakeholders and lessons disseminated.	√	√

Case studies

8.7 The Department proposes the following timeframe is applied for developing the case studies:

Table 8.2: Case studies time frame

Activity	Lead	Timeframe
1. Case study priorities allocated to project teams. The DfT will contact the relevant project teams to inform them of selection.	DfT	Mid January 2013
2. Selected projects form case study groups (CSG), to agree plan of action and establish the Terms of Reference to be presented to the DfT.	CSG lead	End February 2013
3. CSG's work up scoping studies which results in the development of an evaluation plan for the case study to be submitted to the DfT.	CSG	End April 2013
4. Review and agreement of case study plans and consider funding allocations	DfT	End May 2013
5. Publish final case study plans	CSG	June 2013
6. Deliver the case studies to the timeframes set out in the plan, and provide routine progress reporting to the DfT (milestones to be agreed when finalising the evaluation plan).	CSG	Ongoing
7. Key interim and final case study outputs to be submitted to DfT for quality assurance and review (timeframe to be agreed when finalising the evaluation plan).	CSG	Ongoing

Technical Annex

1. Introduction

A.1 The purpose of this annex is to provide some suggestions and recommendations to large project teams on how to implement the outcomes monitoring requirements as set out in the LSTF evaluation and monitoring framework, focussing on the main LSTF objectives. No specific guidance is given for the monitoring of secondary objectives. Data collection and methods for case studies are similarly not covered here. Whilst small scale project teams are not required to monitor outcomes, they may find this note useful for undertaking monitoring activities to meet their own needs.

A.2 A number of metrics and data sources are outlined that could help monitor progress against the growth and carbon objectives of the LSTF. As most sustainable transport policies aim to achieve these objectives through encouraging a change in travel patterns, measurements for travel patterns are covered first.

A.3 The Department recognises that the proposals set out here cannot be feasible or proportionate for all large LSTF projects due to the diversity of approaches adopted across the programme. In those cases, project teams may develop their own bespoke approaches that can show progress against their objectives. In doing so, project teams should demonstrate how their proposed metrics will enable them to detect the main impacts their project is expected to have on modal shift, the economy and carbon. The collected monitoring data should be sufficiently robust to show e.g. the traffic reduction indicated in the original business case to be statistically significant. Project teams are invited to clearly set out their individual circumstances if developing bespoke approaches.

A.4 The Department appreciates that project teams may have already begun collection of monitoring and evaluation data. This annex is not intended to replace work already ongoing, but to offer supplementary advice.

A.5 Where achievable at reasonable costs, large project teams are encouraged to include the measures proposed here in addition to their own chosen measures in order to enhance the comparability and consistency of monitoring across the programme. This would also enhance the transferability of findings between different projects (e.g. for benchmarking) and their usability in future scheme design.

A.6 The consultation responses requested additional guidance on a number of more technical issues. Some references to further helpful material are provided.

A.7 Given the variety of activities taking place under the fund and the different local circumstances, this guidance cannot provide a comprehensive handbook covering every practical aspect. Sharing of best practice between project teams (e.g. through the Knowledge Hub) has the potential for generating more hands on and user friendly advice than is possible to deliver through a single, all encompassing document here.

A.8 Together with the outline monitoring plans submitted as part of the business cases, this annex forms the basis for a collaborative process through which the Department is working with large project teams to further develop and finalise twelve individual outcomes monitoring plans by Spring 2013.

A.9 The next section covers travel patterns with discussions on the economy and carbon objectives to follow. Section 5 covers a number of technical statistical considerations before the final section provides more detail on available data sources.

2. Changes in travel patterns

A.10 A common way for LSTF projects to impact on the economy and carbon is to encourage people to change the way they travel. Indeed all large schemes indentify significant expected benefits from reducing demand for car travel in their business cases.

A.11 The framework sets out that every large project team monitors and reports changes in:

- Vehicle flow
- Bus and (where applicable) light rail patronage
- Number of cycle journeys
- Number of pedestrians journeys

A.12 This recommendation draws heavily on the secondary data sources analysed during the evaluation of the Sustainable Travel Towns (STTs)[15]. These have been selected because:

- It will make it easier to benchmark the results of the LSTF against the STTs;
- These metrics were originally selected for the STT evaluation as they were readily available and it would appear reasonable to assume that

[15]The Effects of the Smarter Choice Programmes in the Sustainable Travel Towns (Sloman et al, 2010). http://webarchive.nationalarchives.gov.uk/20110130182742/http://www.dft.gov.uk/pgr/sustainable/smarterchoices/smarterchoiceprogrammes/pdf/summaryreport.pdf

most other local authorities regularly collect this kind of data so the additional costs are minimised;

- As this data is collected by other authorities it also reduces the cost of collecting information from comparator areas;
- The direction and order of magnitude of impacts estimated in the STT evaluation using the monitoring data were broadly consistent (with some exceptions) with the results of the household surveys; and
- It is possible to draw on practical experiences of using these metrics for monitoring purposes.

A.13 The report on the evaluation of STTs identified a number of practical issues which potentially limited the use of those data in that evaluation. These included amongst other things count location, timing and continuity. To help reduce the risk of the same problems impacting on this monitoring programme, we have identified a number of recommendations about how the data should be collected. Please see section 6 of this annex for these.

A.14 Each of the metrics is described in more detail in section 6. We would expect these to be reported on an annual basis, with a monthly or quarterly breakdown where project teams feel that this adds value to the information needed for evaluation, or where it is useful to detect highly seasonal trends. In many cases, centrally collected local authority level official statistics exist for the metrics and these have been highlighted in that section. For a number of schemes, the sample size/geographic level of these statistics will be insufficient for LSTF intervention monitoring, especially interventions which are aimed at specific routes/areas/demographic groups. However, in some cases, the official data may be sufficient, or at least provide a useful supplement/means of validation for additional data collected by local authorities.

A.15 It is recognised that the proposed monitoring metrics will not provide a complete picture of changes in travel patterns which result from implementation of LSTF projects e.g. changes in average trip distance, destinations or vehicle occupancy. Local authorities are encouraged to draw on other available data, including any additional data to be collected for the LSTF, when compiling the monitoring report and use this to cross-check the results they obtain.

3. Economy

A.16 Programme level monitoring of economic impacts (e.g. number of people in employment, retail expenditure) would face significant difficulties to isolate the impact of LSTF investment from various other factors that influence high level economic indicators. The metrics here have instead been selected to monitor the direct impact of the LSTF programme on outcomes which are believed to influence economic development e.g. the cost of accessing a particular site, journey times, and footfall.

A.17 The LSTF bidding guidance was not prescriptive about how funded authorities should support their local economy and facilitate economic development. As a result there is a wide variation in the packages that will be implemented as part of the programme which support economic development in different ways. The metrics to be collected are based around four categories of intervention which cover a majority of funded projects:

- Congestion relief e.g. improving the frequency and reliability of public transport services; encouraging mode shift;
- Increasing the use of non-car modes e.g. increasing rates of cycling and walking from workplace travel plans;
- Helping unemployed people access work e.g. cycle/scooter loans;
- Encouraging town centres and high streets e.g. giving greater priority to pedestrians.

A.18 Large project teams are not expected to collect data for all four categories of intervention listed above. They should focus on collecting data on those metrics which relate to the objectives of their scheme. Each of those is discussed in more detail below.

Congestion relief

A.19 Many project teams are using the LSTF to apply sustainable transport measures to help reduce the impact of congestion on local economies. Left unchecked, congestion can increase costs to business due to longer journey times (e.g. leading to higher fuel costs, lost productivity whilst in transit) and reduced reliability (e.g. leading to the costs of holding higher stock levels to mitigate against later deliveries). Congestion may also reduce the size of the labour market local businesses may be able to draw from particularly if high and unpredictable journey times put potential employees off commuting to some locations.

A.20 All large project teams are encouraged to monitor the following indicators:

- Average AM peak journey time per mile
- Variation in journey times on key corridors

A.21 In assessing the impact of the programme on congestion these metrics should be considered alongside data on traffic flows and mode share covered in section 2 above.

Increasing the use of non-car modes

A.22 Encouraging the use of alternatives to the car can contribute to economic growth in a number of ways:

- Increasing the pool of labour that businesses have access to, allowing them to expand and find the best people (20% of adults live in a household without access to a car[16]).
- Improving the resilience of the transport network by providing feasible alternatives for when things go wrong e.g. road closures.
- If the promotion of non-car modes leads to an increase in physical activity, this may reduce the level of absenteeism.
- Allow firms to expand at existing sites without having to provide additional car parking.

A.23 Reducing the use of car by promoting alternatives can also lead to reduced congestion– these impacts are captured in the congestion metrics.

A.24 The previous section set out the data to be considered by all large project teams to monitor the impact of LSTF on mode choice in general.

A.25 The following additional data should be considered where economic growth is supported by promoting the use of alternative modes for access to specific sites e.g. business parks, schools, and city/town centres:

- Households able to access site within 20/40 minutes using public transport/walking, car and cycle and/or households with access to site within a reasonable time period by public transport/walk, car and cycle
- Modal split at specific site – either cordon counts or population survey

Helping unemployed people access work

A.26 A number of LSTF project teams are seeking to support particular groups of individuals or communities (e.g. long term unemployed people) in accessing employment opportunities. Examples of interventions include free public transport travel for a limited period, making people aware of travel options, subsidised cycle hire etc.

A.27 Whilst these schemes could potentially promote additional economic activity (by expanding the effective supply of potential employees), these impacts are likely to be difficult to observe across the LSTF area. Therefore, the scope of monitoring activity will be to measure changes to the economic status of the target group at regular intervals.

A.28 There is no published set of indicators which allow the success of programmes in helping people access work to be easily monitored. While it is in principle possible for individual schemes to access DWP data on individuals' employment or benefit status, this would not be a proportionate approach to monitoring outcomes across all projects due to significant data protection hurdles.

[16] National Travel Survey, 2010 (DfT).

A.29 Project teams might want to consider individual approaches and working with their local jobcentres on the employment/benefit status of the target population or the proportion of unemployed people reporting transport as a barrier to getting employed.

Encouraging town centres and high streets

A.30 A number of LSTF project teams are seeking to promote town centres and high streets as a destination. The methods being pursued to achieve this objective include improving transport links (e.g. additional bus services) and enhancing the "place" function of certain areas (e.g. by removing or redirecting traffic to create a nicer environment).

A.31 As a minimum large project teams will want to monitor the impact on the town centres and high streets that have been targeted for improvement as part of the programme. It will also be worth to consider monitoring other sites to check whether any displacement of economic activity has occurred although this might only be determined through a more detailed evaluation.

A.32 Potential measures include:

- Number of households with access to town centre within a reasonable time.
- Footfall: the measurement of footfall should gauge the number and frequency of visitors to the area defined locally as the high street or town centre, not just visitors to shops or particular attractions.
- Vacancy rates: percentage of retail unit vacant.
- Consumer and business satisfaction (do users enjoy their experience/return after initial visit?)

4 Carbon

A.33 The LSTF guidance was not prescriptive about how funded authorities should reduce carbon emissions. As a result there is a wide variation in the packages that will be implemented. The proposed framework keeps to the main factors that effect carbon emissions from local travel.

A.34 Large project teams are expected to assess the carbon impacts of their scheme. In doing so the key factors for determining carbon emissions (outlined below) should be considered and converted into carbon impacts. This could be done, for example, using the Local Authority Carbon Tool produced by the Department[17]. Suitable controls should be used to provide a comparison of the impact of the scheme against what would otherwise have happened.

[17] https://www.gov.uk/government/publications/local-authority-basic-carbon-tool

A.35 The user guide to the Local Authority Carbon Tool sets out the data required to complete the assessment. When considering their monitoring plans, project teams are encouraged to consider these. In summary they are:

- Distance travelled – a greater distance travelled by a carbon emitting mode of transport would increase carbon emissions, other things being equal. For assessing carbon impacts, knowing the mode of transport and vehicle type is important since a kilometre (km) travelled by a bus, a car or a van will generate different emission impacts. Both the number of vehicles in each type and the average distance travelled are important in assessing changes in distance travelled. The vehicle count data outlined in the section above should be used. For schemes that are expected to change the average distance travelled, data on this should be considered in addition.
- Vehicle speed – carbon emissions per km vary with the speed a vehicle is travelling at. For each type of vehicle, more CO2 is emitted per km at low speed and high speed than at moderate speed. The congestion metrics outlined in the 'Economy' section could be used here as well.
- Vehicle mix[18] – the carbon emissions per km vary according to the vehicle used as defined in the vehicle's Certificate of Conformity. Not only do different modes have different emissions per km, but two cars can have different emissions per km. For example, an electric car produces fewer emissions as compared to a petrol or diesel car.

A.36 In many cases national average data on vehicle mix (e.g. fuel type and Euro standard) may be adequate for use in assessing the carbon implications of interventions. Default values for this and other variables are available in the Local Authority Carbon Tool.

A.37 A few projects include proposals to alter the vehicle mix either directly e.g. by funding electric vehicles, or indirectly by providing infrastructure such as charging points for electric vehicles. Understanding the types of vehicle used may be important in these circumstances.

A.38 The vehicles relevant for assessing the carbon impact of the LSTF in a specific area are expected to be the vehicles used for local journeys in that area e.g. cars, buses, taxis, vans and motorcycles. Data on new vehicle registrations in the area and an assumption of the lifetime of existing vehicles can be used as a proxy for information on the whole fleet of such vehicles used in the area in a given year.

5. Technical statistical issues

A.39 This section contains further information about measuring the metrics discussed above, including:

[18] The Carbon Tool guidance contains the list of vehicle types to consider.

- Statistical significance
- Advice on the use of count data
- Baseline data
- Controls

Statistical significance

A.40 Before making the decision to invest in a new data collection as part of the LSTF monitoring and evaluation, project teams should consider whether the collection will actually enable changes on the scale expected from the LSTF intervention to be detected as statistically significant.

A.41 For example, count data, particularly when based on a limited number of count points or a limited number of manual counts, will be subject to year-on-year fluctuation. Where the level of typical fluctuation exceeds the scale of change expected from the LSTF intervention, it is unlikely that the impact of the LSTF intervention could be detected.

A.42 As another example, the results of surveys based on a limited sample of the population will be subject to uncertainty due to sampling variability.

A.43 The Scottish Government have brought together a number of useful and easy-to-read resources concerning issues of statistical significance in data collections and how to use confidence intervals and hypothesis tests:

http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey/ConfidenceIntervals

Advice on the use of count data

A.44 Data from counts can provide a rich data source with which to monitor the impact of LSTF on travel patterns. However, the results obtained from these sources can be sensitive to decisions about how the data is collected and analysed. In developing monitoring plans project teams should consider the following:

- Sites of counters should be reviewed to ensure that they are a representative sample of the intervention sites/areas. Where counts are required to be undertaken at new locations it is recommended that these are in addition to, rather than a substitute for, existing sites.
- Count data should be provided for locations/routes that are in areas likely to be affected by the scheme and should be considered for control areas. To avoid any potential bias these should be identified prior to the scheme being implemented.
- Count data should be analysed by the recipient and significant spatial differences identified – the evaluation of the sustainable travel towns found a significant difference in traffic reductions between “inner” and “outer” areas.

- Automatic Traffic Counters and Automatic Cycling Counters should be routinely checked to make sure they are working (it is recommend that this is done every 3 months) to limit any gaps in the data series e.g. to malfunctioning equipment. Missing values in the data series of individual counters should be investigated and interpolation considered.
- Reporting should include:

- a map showing the location of counts;
- a description of how data was collected at these sites e.g. manual counts, ATCs (and if manual the dates of counts should be recorded);
- a description of how each site has been allocated to different geographical areas for analysis (if applicable); and
- monthly/annual (as applicable) counts (in absolute terms) should be provided for each site or route.

- Anomalous values or sudden shifts in counts should be investigated and explanations reported (e.g. road works, opening of new supermarket, occupation of new housing development, and change in bus services). If interpolation or other adjustments are applied to the raw data these should be noted and recorded.
- To help identify whether the introduction of LSTF-funded measures has had an impact on trends it is recommended that historical data on sites is reported where available.

A.45 It will not be possible to measure all movements within the areas covered by LSTF projects and so the impact should be monitored at a sample of locations. This sample will need to be carefully selected to ensure that it is representative, sufficiently large and targeted to provide meaningful and unbiased data. The value of the monitoring data will be strengthened if it can be compared to data collected on similar routes which have not benefitted from LSTF investment. Local authorities are encouraged to explore the options for collecting comparator data in their areas[19].

A.46 Given that many of the LSTF projects intend to influence travel behaviour across an area we would anticipate that monitoring should occur across the affected area. Cordon counts and screenlines (e.g. on approaches to town centres) may provide useful secondary data but should only be considered as the primary data collection method if costs are prohibitive and/or there are practical issues which cordon counts can help overcome (e.g. obtaining ticket data from bus operators).

A.47 LSTF large project teams should not feel constrained by the minimum reporting requirements identified above and are encouraged to analyse this rich dataset further than suggested above. Chapter 17 of Sloman et

[19] See annex for more detail on controls

al (2010)[20] provides useful examples of how data can be presented and analysed.

Baseline data

A.48 LSTF-funded authorities are encouraged to consider what data is available to set baselines. Where existing data sources are being used as part of the monitoring and evaluation, historic time series should be reported as part of this.

A.49 The 2011 Census may provide a useful baseline, particularly for small geographic areas, if the project team intends to collect similar information in the years following the Census, as part of the monitoring and evaluation.

A.50 A detailed prospectus for the release of Census data is available from the Office for National Statistics (ONS) website[21]. Useful data items include main mode of travel to work, car ownership and, for tourism, numbers of overnight visitors.

Controls and Comparator Areas

A.51 Project teams are asked to compare and / or adjust their monitoring data against suitable controls, stating what controls have been used. It is for project teams to determine the balance between the cost of doing additional data collections for control, and having controls which are appropriate for the metrics being monitored.

A.52 Suggested methods for controls:

- Identifying similar corridors / areas within the local authority and running parallel data collections which are unaffected by the LSTF intervention. Given the likely costs, care should be taken to ensure data are truly unaffected by LSTF interventions.
- Joining up with other LSTF-funded authorities to identify joint controls. While costs per authority are likely to be lower, control should still be carefully checked for independence of LSTF effects.
- Comparing against national and local level data from the Department's official statistics series:

  - Walking and Cycling
  - Traffic estimates
  - Congestions
  - Bus and light rail patronage
  - Vehicle registrations
  - National Travel Survey
  - Mode of travel to work

- National-level trends from DfT's National Travel Survey.

[20] http://webarchive.nationalarchives.gov.uk/20110130182742/http://www.dft.gov.uk/pgr/sustainable/smarterchoices/programmes/pdf/chap17.pdf
[21] http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/2011-census-prospectus/index.html

A.53 Where the suggested control statistics are available at local-authority level, there is scope to identify areas with similar characteristics to the authority in question, which would offer a more like-for-like control than an overall national-level figure. The Office for National Statistics produce area classifications and "corresponding authorities" (LAs which have the most in common with each other), based on socio-economic and demographic characteristics:

http://www.ons.gov.uk/ons/guide-method/geography/products/area-classifications/ns-area-classifications/index/index.html

A.54 Project teams might find these classifications useful in identifying suitable controls (note that they are due to be updated in light of the 2011 Census, although an exact timetable for this has not been given).

A.55 Project teams are also welcome to suggest alternative groups of LAs to control against, particularly if they have evidence that they provide a better match than the ONS classifications in terms of transport-related factors.

A.56 Inevitably, as almost every LA is receiving some LSTF funding, finding a set of "intervention-free" LAs against which to match is impossible. However, the varied nature and localized impact of the LSTF schemes means that LA or national level data can still provide a suitable control, with careful thought – e.g. project teams with a focus on cycling should avoid controlling against LAs with a similar set of interventions.

A.57 When selecting their approaches, project teams need to be mindful of the implications and limitations when comparing data originating from different sources.

6 Suggested data sources

A.58 In many cases, centrally collected local authority level official statistics exist for the metrics and these have been highlighted in the tables below. In many cases, the sample size/geographic level of these statistics will be insufficient for LSTF intervention monitoring, especially interventions which are aimed at specific routes/areas/demographic groups. However, in some cases, the official data may be sufficient, or at least provide a useful supplement/means of validation for data collected by local authorities. As every intervention is different in nature and scope, it is for individual project teams to judge how applicable these official statistics would be and highlight them in their monitoring returns as appropriate. Relevant statistics have been highlighted in the table below, referenced by the series name. Further details can be found on https://www.gov.uk/government/organisations/department-for-transport/about/statistics.

A.59 Project teams are also best placed to decide on the appropriate level of geographical cover, detail and frequency for the various data they decide on monitoring. The Department will provide feedback on proposals made in the draft monitoring and evaluation plans.

Table A.1: Suggested data sources - changes in travel patters	
Measure	**Vehicle flows**
Definition	Average 24 hour figures for seven day, two way flows
Potential data collection methods/ existing data sources.	National Road Traffic Estimates data – DfT road traffic data series and underlying count point data (Note: these are unlikely to be located in sufficient numbers or in the right place to provide an accurate representation of traffic trends and we would expect this to be supplemented by additional observations. Furthermore, most of the count points are not surveyed every year.) Automatic Traffic Counters (ATC) Manual Classified Counts (this may need to be combined with ATC data to scale up results to 24 hour figures) CCTV/Automatic Number Plate Recognition – although care will need to be taken to make sure these are not moved around over time The merits of different approaches and recommended sample sizes are discussed in http://www.clip.local.gov.uk/lgv/aio/36791
Further disaggregation	This will depend on the methods used to undertake the vehicle counts but in some instances it may be possible to breakdown changes in flow by vehicle type. This might be useful as certain vehicle types (e.g. cars and taxis) are likely to be more susceptible to change given the nature of interventions funded by the LSTF.
Measure	**Bus and light rail patronage**
Definition	Average number of bus/light rail passenger journeys
Potential data collection methods/ existing data sources.	DfT Bus and Light Rail statistics series – annually reported patronage figures by local authority and PTE, can provide a broad trend over several years, although project teams are encouraged to explore the local-level collections below: Passenger boardings from bus/light rail company reported patronage data Bus/light rail occupancy at cordon/screenline
Further disaggregation	May want to consider by route or length of journey, particularly if the LSTF interventions are very route/area specific. LSTF project teams are encouraged to explore with operators the possibilities for disaggregating bus patronage by specific routes or areas where relevant, whilst recognizing that the scope to disaggregate data may be limited by commercial confidentiality.
Measure	**Cycling prevalence**

Definition	Cycle journeys and / or cycling prevalence in the population
Potential data collection methods/ existing data sources.	Active People Survey - annual household survey, administered by Sport England, including questions about how often respondents cycle and the purpose; Sample size typically ~ 500 per lower tier local authority. Manual counts Automatic Cycle Counts Local household surveys Workplace surveys Whatever method is used, care should be taken to minimise the influence of external factors when reporting and interpreting the results (e.g. weather, temporary road works).
Further disaggregation	If data is collected continuously or more than once a year it might be useful to consider whether there is any difference in trends at different points in the year.
Measure	**Walking journeys**
Definition	Walking journeys and / or walking prevalence in the population
Potential data collection methods/ existing data sources.	Active People Survey - household survey including questions about how often respondents walk and the purpose; Sample size typically ~ 500 per lower tier local authority. Manual counts Local household surveys Whatever method is used, care should be taken to minimise the influence of external factors when reporting and interpreting the results (e.g. weather, temporary road works).
Further disaggregation	If data is collected continuously or more than once a year it might be useful to consider whether there is any difference in trends at different points in the year.

Table A.2: Suggested data sources - economy - congestion	
Measure	**Average AM peak journey time per mile**
Definition	Average 24 hour figures for seven day, two way flows
Suggested metric	Reported across whole intervention area (e.g. local authority level) and on key corridors targeted for investment. Data collected on at least an annual basis.
Potential data collection methods/ existing data sources.	Trafficmaster data Automatic Number Plate Recognition DfT congestion and reliability statistics series – vehicle speeds on locally managed A-roads during the morning peak, quarterly by local authority.
Further disaggregation	Recipients may want to consider changes in peak journey times by link (e.g. on key corridors) although they should be aware that it will be more difficult to establish statistically significant changes.
Measure	**Variation in journey times on key corridors**
Definition	Average number of bus/light rail passenger journeys
Suggested metric	Variation in journey times (7AM to 7PM) on key corridors targeted for investment – [ideally would want to analyse as day to day variability within time bands but may need to settle with variation in average journey times across the day]
Potential data collection methods/ existing data sources.	There should be a sufficient number of observations to ensure that any differences reported are statistically significant.
Further disaggregation	Trafficmaster data Automatic Number Plate Recognition

Encouraging town centres and high streets

A.60 For more information about the methodologies, strengths and weaknesses of the Accessibility Statistics, the following documents are helpful:

http://assets.dft.gov.uk/statistics/series/accessibility/accessibility-statistics-guidance.pdf
http://assets.dft.gov.uk/statistics/series/accessibility/accessibility-statistics-methodology.pdf
http://assets.dft.gov.uk/statistics/series/accessibility/accessibility-statistics-key-definitions-and-terms.pdf

http://assets.dft.gov.uk/statistics/series/accessibility/accessibility-statistics-strengths-and-weaknesses.pdf

A.61 DfT's Accessibility Statistics are based on public transport timetable data and information about the road network and location of key services and sites. Inevitably, these statistics may not always be able to take account of all local factors affecting accessibility, particularly highly localized interventions, and project teams are encouraged to supplement the DfT statistics with their own local knowledge and evidence where relevant.

Table A.3: Suggested data sources - economy - Encouraging town centres and high streets

Measure	**Total number of households able to access site within 20/40 minutes using public transport/walking, car and cycle**
Definition	Total number of households that are able to access site within 20 minutes/40 minutes using public transport/walking, car and cycle. Note: we would only anticipate this data being collected and reported if the recipient is improving access. This indicator is unlikely to provide a good indication of the success of schemes based on soft measures (e.g. travel plans).
Suggested metric	Separately reported for public transport/walking, car and cycling. Separately reported for each lower super output area (LSOA) in which there is a significant site(s) targeted as part of the programme. Figures should be reported for each year of the LSTF programme. Historical information should be reported (where available) to provide indication of trends. Accessibility indicator dataset is available back to 2007. Should report both absolute number of people with access and percentage of households within local authority.
Potential data collection methods/ existing data sources.	Project teams may want to make use of existing data collected for the accessibility statistics published by DfT. Teams may also want to investigate options for producing their own bespoke accessibility measures and travel time calculations using off-the-shelf software
Further disaggregation	Recipients may want to analyse changes in accessibility to site from different LSOAs particularly if targeting improvements on particular corridors/routes e.g. new bus services.
Measure	**Households with access to a site within a reasonable time period by public transport/walking, car and cycle**
Definition	This measure will use the continuous indicators applied in developing DfT's accessibility statistics. This is a measure based on the sensitivity of users to the travel time for each service, i.e. – the longer it takes to get to a particular service, the fewer people will undertake the journey. However, instead of measuring the number of households within a geographical area that can access a service (regardless of where that service is located) within a reasonable time we would seek to estimate the number of

	households that can access a specific site (defined as the LSOA in which the site is located) in a reasonable time using the same underlying indicator. Note: we would only anticipate this data being collected and reported if the recipient is improving access. This indicator is unlikely to provide a good indication of the success of schemes based on soft measures (e.g. travel plans).
Suggested metric	Separately reported for public transport/walking, car and cycling. Separately reported for each LSOA in which there is a significant site(s) targeted as part of the programme. Figures should be reported for each year of the LSTF programme. Historical information should be reported (where available) to provide indication of trends. Accessibility indicator dataset is available back to 2007. Should report both absolute number of people with access and percentage of households within local authority.
Potential data collection methods/ existing data sources.	Project teams may want to make use of existing data collected for the accessibility statistics published by DfT. Teams may also want to investigate options for producing their own bespoke accessibility measures and travel time calculations using off-the-shelf software.
Further disaggregation	Recipients may want to analyse changes in accessibility to site from different LSOAs particularly if targeting improvements on particular corridors/routes e.g. new bus services.
Measure	**Modal split at specific sites**
Definition	Number of trips to/from site or area split by following modes: car (multiple occupancy); car (single occupancy); public transport; walking, cycling, motor cycle, goods vehicle, other.
Suggested metric	Reported for as many sites/areas in the intervention area as possible, but prioritising the busiest sites/largest employment centres. Data to be collected before scheme/travel plans are delivered and 1 year after scheme completed or travel plans fully rolled out (for areas and existing sites), 1 year after occupation for new sites. Survey/count should be undertaken for a single day on the same day of the week and same month of the year (during a “neutral” month). Some useful pointers and a template are available at : http://www.trics.org/sam.pdf and http://www.surreycc.gov.uk/__data/assets/word_doc/0004/169438/Monitoring-Report-template.doc Absolute number and percentage of total trips should be recorded.
Potential data collection methods/ existing data	Staff questionnaire

sources.	Cordon count Travel to work Areas from the 2011 Census. This would provide a good baseline measure and this could be monitored through repeat surveys with a sample of the population
Further disaggregation	Results could be further analysed by time of day (e.g. with cordon counts) and journey purpose (e.g. with staff questionnaires).
Measure	**Number of households with access to the town centre within a reasonable time**
Definition	This measure will use the continuous indicators applied in developing DfT's accessibility statistics. This is a measure based on the sensitivity of users to the travel time for each service, i.e. – the longer it takes to get to a particular service, the fewer people will undertake the journey. However, instead of measuring the number of households within a geographical area that can access a town centre within a reasonable time we would seek to estimate the number of households that can access a town centre or high street (defined as the LSOA in which it is located) in a reasonable time using the same underlying indicator. Note: this data should only be collected and reported if the large project team is seeking to support town/city centres by improving access. This indicator is unlikely to provide a good indication of the success of schemes based on soft measures (e.g. travel plans) or that seek to improve the environment within town centres and high streets (e.g. widening of pavements).
Suggested metric	Figures should be reported for each year of the LSTF programme. Historical information should be reported (where available) to provide indication of trends. Accessibility indicator dataset is available back to 2007 Should report both absolute number of people with access and percentage of households within local authority.
Potential data collection methods/ existing data sources.	Project teams may want to make use of existing data collected for the accessibility statistics published by DfT.
Further disaggregation	Can be broken down by mode: Public Transport/Walk, Car and Cycle.

Suggested data sources – carbon

A.62 As discussed in chapter 5 above, many of the metrics related to carbon are aligned to those for monitoring travel patterns and the economy. Suggested data sources for these are given above.

A.63 However, where LSTF projects propose to reduce carbon emissions by directly altering the local vehicle mix – e.g. by encouraging electric vehicles - it may be appropriate to explore the impact of these changes.

A.64 DVLA data on vehicle registrations is analyzed and regularly published by DfT, including data on fuel types – for example, the categories in the following tables:

- VEH0170 – The number of ultra-low emission vehicles registered for the first time
- VEH0203 – Licensed cars by propulsion/fuel type
- VEH0256 – Cars registered for the first time by CO2 emission band

A.65 These and other categories of vehicle data are available under

https://www.gov.uk/government/organisations/department-for-transport/series/vehicle-licensing-statistics

A.66 Breakdowns of those series down to local authority district level can be produced on an ad hoc basis by the Vehicles Statistics Team in DfT. [22] Where projects involve changing the local vehicle mix project teams are encouraged to consider using this data as part of their evaluation of carbon. Table A.4 suggests the metric below as a guide, but adaptations to make it more applicable to specific projects are welcome.

Table A.4: Suggested data sources - carbon - vehicle mix

Measure	**Number of new alternative fuel and conventional vehicles in the affected area.**
Definition	Number of new alternative fuel vehicles (e.g. electric, hybrid plug-in hybrid electric vehicles – PHEV/conventional hybrid electric vehicles –HEV and internal combustion engine (ICE) vehicles in the LSTF funded area or local authority.
Suggested metric	Figures should be reported for each year of the LSTF programme. Historical information should be reported. Alternative fuel vehicles data should be split into specific types where possible e.g. electric, hybrid, plug-in hybrid etc. and ICE vehicles should be split into petrol and diesel types where possible. The share by fuel type should be reported for cars, buses, taxis, vans and motorcycles separately where possible.
Potential data collection methods/ existing data sources.	DVLA licensing data via DfT
Further disaggregation	Disaggregation by quarter rather than year.

[22] The Vehicle Statistics team can be contacted via email: vehicles.stats@dft.gsi.gov.uk