National Audit Office

Measuring Up

How good are the Government's data systems for monitoring performance against Public Service Agreements?

PSA 5: 'Deliver reliable and efficient transport networks that support economic growth'

A review of the data systems underpinning the Public Service Agreement led by the Department for Transport under the Comprehensive Spending Review 2007

REPORT BY THE NATIONAL AUDIT OFFICE

Validation of the data systems for Public Service Agreement Target 5, Spending Review Period 2008-11

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Executive Summary

Introduction

1.1. This report summarises the results of our examination of the data systems used by the Government in 2008 to monitor and report on progress against PSA 5. This is the only PSA managed by the Department for Transport (the Department) out of the 30 PSA targets set across all Government Departments. The most recent public statement provided by the Department on progress against this PSA was in the 2008 Autumn Performance Report (APR).

The PSA and the Department

1.2. PSAs are at the centre of Government's performance measurement system. They are usually three-year agreements, set during the spending review process and negotiated between Departments and the Treasury. They set the objectives for the priority areas of Government's work.

1.3. Each PSA has a Senior Responsible Officer (SRO) who is responsible for maintaining a sound system of control that supports the achievement of the PSA. The underlying data systems are an important element in this framework of control.

The purpose and scope of this review

1.4. The Government invited the Comptroller and Auditor General to validate the data systems used by Government to monitor and report its performance. During the period October to December 2008, the National Audit Office (NAO) carried out an examination of the data systems for all the four indicators used to report performance against this PSA. This involved a detailed review of the processes and controls governing:

- The match between the indicators selected to measure performance and the PSA. The indicators should address all key elements of performance referred to in the PSA;

- The match between indicators and their data systems. The data system should produce data that allows the Department to accurately measure the relevant element of performance;

- For each indicator, the selection, collection, processing and analysis of data. Control procedures should mitigate all known significant risks to data reliability. In addition, system processes and controls should be adequately documented to support consistent application over time; and

- The reporting of results should be presented fairly for all key aspects of performance referred to in the target. Any significant limitations should be disclosed and the implications for interpreting progress explained.

1.5. Our conclusions are summarised in the form of traffic lights (see figure 1). The ratings are based on the extent to which departments have:

- put in place and operated internal controls over the data systems that are effective and proportionate to the risks involved; and
- explained clearly any limitations in the quality of its data systems to Parliament and the public.

1.6. The remaining sections of this report provide an overview of the results of our assessment, followed by a brief description of the findings and conclusions for each individual data system. Our assessment does not provide a conclusion on the accuracy of the outturn figures included in the Department's public performance statements. This is because the existence of sound data systems reduces, but does not eliminate, the possibility of error in reported data.

Figure 1: Key to traffic light ratings

Rating	Meaning …
GREEN (fit for purpose)	The data system is fit for the purpose of measuring and reporting performance against the indicator
GREEN (disclosure)	The data system is appropriate for the indicator and the Department have explained fully the implications of limitations that cannot be cost-effectively controlled
AMBER (Systems)	Broadly appropriate, but needs strengthening to ensure that remaining risks are adequately controlled
AMBER (Disclosure)	Broadly appropriate, but includes limitations that cannot be cost-effectively controlled; the Department should explain the implications of these.
RED (Systems)	The data system does not permit the reliable measurement and reporting of performance against the indicator
RED (Not established)	The Department has not yet put in place a system to measure performance against the indicator

Overview

Scope of coverage of the Target

1.7. The seven Department for Transport PSAs from the 2004 Spending Review (SR) have been replaced by a single PSA for the 2008-11 period, namely **PSA 5 – to deliver reliable and efficient transport networks that support economic growth.** PSA 5 is supported by four indicators, two of which have been carried forward from PSAs from the 2004 Spending Review (SR).

1.8. The four indicators cover journey times on key urban roads, delays on journeys on the Strategic Road Network; introducing additional capacity on the passenger rail network to reduce crowding; and Value for Money on decisions made by Ministers for transport projects.

1.9. Previous indicators also covered air quality, rail punctuality, road safety, enhanced access to local services and climate change. The first three continue as indicators under the Departmental Strategic Objectives (DSOs), and the climate change PSA has been carried forward by the Department for the Environment, Food and Rural Affairs (and since October 2008, the Department of Energy and Climate Change) under PSA 28.

1.10. The Department's responsibilities and objectives, overall expenditure and the number of public bodies through which these are delivered are extensive. For the 2007 Comprehensive Spending Review (CSR) period, the Department has considered that its key contribution should be to economic growth through actions taken to improve the transport network. However, it is not clear what the link is between this PSA, as encapsulated within the four underlying indicators, and economic growth, and neither does the PSA seek to specifically measure this contribution.

1.11. The new rail element of the PSA indicator is for increasing capacity and reducing crowding on the rail network, which replaces the rail reliability and punctuality indicator which was previously a PSA target under the 2004 SR. The reliability and punctuality target does continue as a DSO indicator and, even if it were absent as a Departmental target, it would continue to be reported as part of Network Rail's responsibilities. Nonetheless it would appear that its importance as part of the Department's objectives may not be considered as key, which is a concern which was raised by the Select Committee on Transport in its Seventh Report.

1.12. The Department acknowledges within the PSA Delivery Agreement that there is no specific indicator to measure the success of improvements to international gateways, although many of its actions, as set out in the Delivery Agreement, also make an important contribution to improving surface access to ports and airports. With planned increases to the capacity of airports, perhaps it is an area the Department would have been expected to be measuring and reporting in the current CSR.

1.13. We are pleased to note that the Department has carried out an exercise to review all of its DSOs, including those supporting PSA 5, with the aim of ensuring that they form a complete picture of the Department's objectives, that they have 'SMART[1]' targets, that the data sets used are appropriate and that the targets are linked directly into the Department's objectives and business plan. A revised set of 5 DSOs has been agreed with Treasury.

Departmental responsibility for, and reporting of, performance against the Target

1.14. The Department has a Senior Reporting Officer (SRO) for the PSA, who is a member of the Board. The SRO's role and responsibilities are to report six-monthly assessments to the Prime Minister's Delivery Unit (PMDU) and Board and manage the cross-department interaction where the Department contributes to other PSAs.

1.15. The Department's delivery objectives, including PSA targets, are reported to the Departmental Board, giving feedback on progress and highlighting risks as necessary as part of integrated risk management processes. Information to track progress comes mainly from detailed reports by units responsible for performance measures. Responsibility for actual performance against the targets remains with the policy lead.

1.16. Although we welcome the reporting against PSA indicators being embedded into the Department's standard business planning and review processes, we understand there is no clearly defined mechanism in place which raises the profile of the PSA indicators above standard delivery objectives beyond the requirements to report 6-monthly to the PMDU and the Board.

1.17. The Department recognises that there is a need to improve the governance and reporting framework for PSA / DSO indicators and, as part of its review of DSO indicators, will be looking to implement a wider control environment which clearly defines roles, responsibilities and process for review and reporting for all indicators.

[1] SMART – Specific, Measurable, Achievable, Relevant, Timed

1.18. The Department's 2008 Annual Report and APR show good detail about the PSA 5 target, the four performance indicators, measurement methodologies, achievements and data quality. It cross-refers as necessary to the detailed Technical Notes on the website.

Summary conclusions from our review

1.19. Figure 2 summarises our assessment of the data systems.

Figure 2: Summary of assessments for indicator data systems

No	Indicator	Rating
1	Journey time on main roads into urban areas By 2010-11 minimise increases in journey time, accommodating an average increase in travel of 4.4 per cent within an average increase of 3.6 per cent in person journey times per mile. Working in partnership with DfT, LAs in the ten largest urban areas will minimise the impact of increased travel demand on journey times on main roads into town centres.	**GREEN (Disclosure)**
2	Journey time reliability on the strategic road network, as measured by the average delay experienced in the worst 10 per cent of journeys for each monitored route Minimise increases in delays between years ending March 2008 and March 2011 for the slowest 10 per cent of journeys in the context of traffic growing by 1-2 per cent a year	**GREEN (Disclosure)**
3	Level of capacity and crowding on the rail network By 2013-14 increase capacity to accommodate an expected increase of 14.5 per cent in rail passenger kilometres from 2008-09 while achieving the train load factors specified in the Government's High Level Output Specification (HLOS) for the railway.	**RED (Systems)**
4	Value for Money of Department for Transport spending over the CSR07 period Over the CSR07 period maintain the same proportion of spend in the High Value for Money category as achieved over the SR04 period.	**GREEN (Fit for purpose)**

1.20. Our main conclusions on the PSA are:

- PSA 5 focuses primarily on one aspect of the Department's objectives and is supported by a reasonable set of indicators. However, the Department should consider whether the indicators could be enhanced to specifically measure improvements in support to ports, airports and international rail hubs;

- It is not clear how the Department is linking any targeted improvements in transport to economic growth as required by the current wording of the PSA target; and

- other than for the capacity and crowding indicator, data systems are well established and generally maintained through an adequate framework of review and reporting to ensure risks to data quality are mitigated.

1.21. We recommend that the Department:

- considers further how to establish the link between improvements in transport and economic growth;

- considers whether more clarity can be provided in targets as to the scale of expected change, to enable both the Department and the NAO to assess whether the data are sufficiently statistically robust in the context of the reported change (Indicators 2 and 3);

- fully considers and reports measures of uncertainty for each data system – or states and explains where it is not relevant (Indicators 1 and 2); and

- investigates and evaluates possible inter-dependencies between all Department indicators (whether PSA or DSO) to ensure risks to delivery against targets are identified and mitigated. (Indicator 3)

Assessment of indicator set

1.22. In undertaking the validation of data systems we read the documentation associated with the PSA, including the Delivery Agreement, and considered whether the indicators selected to measure progress were consistent with the scope of this PSA.

1.23. We conclude that the indicators selected afford a reasonable view of progress other than:

- a significant aspect of performance, train reliability and punctuality, is not part of the PSA. This indicator was previously a PSA under the 2004 SR, but has been excluded from the set of indicators used for PSA 5. Although reported rail performance has improved significantly and the Department considers that the industry continues to meet its targets, surveys such as that run annually by Passenger Focus show that rail passengers are still concerned by rail punctuality, and there is particular focus on how successfully (or not) Train Operating Companies (TOCs) deal with severe delays. However, punctuality continues to be measured and reported through a DSO, and there is also an obligation placed upon Network Rail to report;

- data may be available which could better reflect the influence which the Department has over delays on inter-urban roads. The current measure is significantly influenced by events outside the Department's control which, no matter how well managed, can adversely affect the measure in the indicator. The Department recognises the need to strive for a fair and meaningful measure that is as directly related as possible to observable outcomes. We understand the Department has commissioned a project with the Highways Agency to explore options for a better, more accountable measure for reliability performance;

- the Value for Money indicator only reports performance at the decision-making stage of the process. Our validation of the indicator has not highlighted any significant weaknesses in the process, and there appear to be adequate controls in place to ensure that the assessment process is applied consistently, a complete set of factors are considered and estimates of costs and benefits are reasonably accurate. However, PSAs are concerned with monitoring the deliveries of departments. Although the Department does report on outcomes of its major projects (e.g. Highways Agency para 5.14), this indicator only reports against what is planned to be achieved, with no comment on what has been achieved.

FINDINGS AND CONCLUSIONS FOR INDIVIDUAL DATA SYSTEMS

The following sections summarise the results of the NAO's examination of each data system.

PSA 5 Indicator 1 – Journey time on main roads into urban areas

Conclusion

2.1. This indicator has been carried forward from a 2004 SR PSA, and the associated data system was rated as AMBER (systems) in our 2007 validation review. Inspection visits to urban areas to review their procedures to assess risks to data quality and ensure reliability had not yet begun. Targeted visits are now carried out which allows the Department to investigate how the areas are analysing their data and planning to meet their targets, and to challenge them where necessary. In addition, six-monthly workshops are held to review assurances over both data quality and data use. Hence, our rating following this review is GREEN (disclosure) i.e. the data system is appropriate for the indicator and the Department has explained fully the implications of limitations that cannot be cost-effectively controlled.

2.2. Although the Technical Note emphasises that previous work suggests that changes of more than +/-2% are generally significant, uncertainty has not been specifically reported in the 2008 APR, although the Technical Note has been referred to. The Department should seek to report the levels and basis of uncertainty in its figures in the APR in future.

Characteristics of the data system

2.3. This Indicator sets a national target, which is a weighted average of local targets agreed with each of the 10 largest urban areas in England: London, Manchester, Merseyside, South Yorkshire, West Yorkshire, Tyne and Wear, West Midlands, Bristol, Leicester and Nottingham. Local authorities in these urban areas are responsible for the delivery of their local targets. Monitoring is carried out locally in respect of the 166 defined routes across the 10 urban areas.

2.4. Measures are of people journeys rather than vehicles so that, for example, buses are weighted much more than cars. Targets relate to the morning peak period and are set by the local authority that is responsible for delivery against its targets. Targets and performance monitoring refer to academic years to avoid using journey time data for the summer when traffic is lighter.

2.5. Surveys are carried out by the urban areas to collect information on traffic flow and vehicle occupancy for each section of each route – corresponding to the same routes for which journey time is measured. Surveys must be carried out on at least four of the six years covered by the targets, although areas are encouraged to carry out surveys every year if at all possible.

2.6. Journey time data from GPS tracking systems installed in a proportion of fleet vehicles is supplied to the Department by a contractor, and is then passed on by the Department to local authorities. The Department started a new contract for the supply of journey time data in July 2007, replacing the old data source following an open competition. As part of the tender process, sample data supplied by all bidders was compared with independent sources on selected roads. The independent review found that the new data provided a more representative sample of traffic as a whole.

2.7. The change in journey time data supplier has necessitated adjusting the original baseline to give a consistent time series. This work is described in more detail in the revised Technical Note which is referred to, and the effects are summarised, in the APR.

2.8. The Department reviews the contractor's quality assurance arrangements and pursues any apparent anomalies in data series through regular progress meetings with the contractor. The Urban Congestion Programme Board, which includes representatives from Government Offices and the urban areas, also maintains an overview of the risks to delivery of the target, including those relating to data systems. A risk register is maintained and regularly updated.

2.9. Urban areas receive traffic data via the Department and use this to model future delays and the effect of planned interventions. These models were reviewed by the Department in 2006, with a number of recommendations which the Department has been helping urban areas to address.

Findings

2.10. The Department is dependent on urban areas for setting the constituent elements of the national target, for providing survey data on traffic flow and vehicle occupancy, for modelling and for managing initiatives to manage congestion.

2.11. The Department provides guidance and assistance to urban areas to help them develop and implement local delivery plans. The Department has reviewed and challenged plans and disseminates best practice. A Performance Fund has also been implemented which seeks to incentivise the urban areas to exceed their agreed targets.

2.12. The 2008 APR shows that journey times have decreased but that is in the context of lower traffic levels – in contradiction to an expected increase, as specified in the indicator target. The Department is not planning to renegotiate the 2010-11 target, but aims to reassess the criteria by which urban areas will qualify for funding through the Performance Fund if their targets are exceeded.

2.13. The Department scrutinises both data received from the external contractor on journey times and also survey data received from urban areas, applying informed validation and reasonableness checks and querying as necessary.

2.14. Targeted visits are now carried out to urban areas by the Department's Urban Congestion Statistics & Policy team's initiative to review their progress towards their targets, in part to assess risks to data quality and to ensure reliability. Six-monthly workshops are also held with urban areas to discuss procedures for collection and use of data.

2.15. The APR highlights limitations of the data sources which cannot be cost-effectively controlled. Urban area survey data is used for bus journey times as the Department's own GPS data source does not cover buses. In addition, measurement of traffic flow and vehicle occupancy for all vehicles is carried out by urban areas, although this may not be carried out every year.

PSA 5 Indicator 2 – Journey time reliability on the strategic road network, as measured by the average delay experienced in the worst 10 per cent of journeys for each monitored route

Conclusion

3.1. This indicator has been carried over from a 2004 SR PSA, and the associated data system was awarded a GREEN (fit for purpose) rating in our 2007 validation review. Our rating following this review is GREEN (disclosure) i.e. the data system is appropriate for the indicator and the Department has explained fully the implications of limitations that cannot be cost-effectively controlled

3.2. The Department's objective under this indicator is to minimise delays between the years ending March 2008 and March 2011 for the slowest 10 per cent of journeys in the context of traffic growing 1-2 per cent a year. A specific target has not been set as the relationship between traffic growth and congestion is not yet fully understood. The Department is reviewing options for a better measure for reporting reliability performance and is seeking to revise this indicator. The Highways Agency is carrying out a project to explore options for a better, more accountable measure.

3.3. The Department does not currently report the level of accuracy. Currently, the emphasis for this indicator is trend rather than an absolute figure and the Department has strived to ensure trend data is consistent in coverage and quality. The Department plans to carry out further work to assess uncertainty in the future.

Characteristics of the data system

3.4. Delay is the difference between observed journey times and a reference journey time (the time that could theoretically be achieved when the traffic is free flowing). Speeds for free flowing traffic are measured each year through the Department's National Speed Surveys, and these are reviewed to consider whether any changes are required to the values used for calculating the reference journey times. No such changes have been required.

3.5. Data is received from four sources, including inductive loops in the road (MIDAS), two number plate recognition camera systems, and a GPS tracking system. Other than for a few trunk roads which have been excluded from this indicator, as they cannot be formed into a route, the whole Strategic Road Network is covered by the 103 routes measured.

3.6. Data of sufficient quality is available on 95 of the 103 routes, and included in the measure for this indicator. This is a net increase of four routes from the 2004 SR, which is mainly as a result of introducing additional measuring devices on these routes. This has required the baseline to be re-based, which has been clearly disclosed in the APR.

3.7. All data sources are recorded and stored in a database (HATRIS), which is maintained by the Highways Agency. Algorithms are consistently applied to data sources on each route within the database to determine the best source of data to be used in the overall measure. Data collected and sorted in HATRIS goes beyond that which is used to report against this measure, and is the Highways Agency's primary source of information for monitoring and modelling traffic behaviour.

Findings

3.8. A specific target has not been set for this target as research is continuing into improving the understanding of the effect of traffic growth on congestion.

3.9. In the absence of a specific target, performance under this indicator will be assessed from the successful delivery of a programme of measures - delays will be considered to have been minimised if, over the period April 2008 to March 2011, the programme of interventions and their impacts set out in the (Highways Agency) Reliability Delivery Plan have been delivered. This is disclosed in the recently revised Delivery Agreement Technical Note.

3.10. The Highways Agency has a target to save at least 1.7 million hours vehicle delay through its Reliability Delivery Plan over the 2007 CSR period, and the APR refers to this. The Highways Agency uses modelling to determine the difference that interventions have made to delays experienced. Although these are not directly observable outcomes, but modelled estimates from many assumptions and so subject to judgements, it does suggest a more direct assessment of the Department's performance in addressing delays to road journeys than perhaps a national measure for delay.

3.11. Uncertainty is not currently measured, and is not reported. The Department recognises that accuracy does impact on the significance attributed to changes in the measure, but does advise, within the APR, that the quality of data varies from route to route, and therefore care should be taken when looking at trends in the data for individual routes in isolation.

3.12. In March 2008, the National Statistician and Department for Transport Ministers agreed that the assessment provided sufficient evidence of compliance with the National Statistics Code of Practice and fitness for purpose to accept inter-urban delay data as National Statistics.

3.13. The Highways Agency, as owner of the majority of the data streams, undertook a comprehensive data quality improvement programme which addressed some problems identified in 2006. Following these and subsequent improvements, the Department has been able to increase the number of routes used for PSA monitoring purposes to 95. The change in the baseline as a result has been fully disclosed.

3.14. The exclusion and inclusion of routes within the measure are based on 6-monthly reviews, which are reported to, reviewed and signed off by the Data Quality Officer. Any changes to the algorithms used within the HATRIS database are independently reviewed, before being reviewed and signed off by the Data Quality Officer.

3.15. A baseline report has been produced for the 2008-11 period, which clearly describes the effects of the increase from 91 to 95 routes, and the introduction of the new data provider. This has been published on the Department's website in support of the APR.

3.16. The APR provides substantial details on changes to the measure, which routes have contributed to these changes, and the main reasons why. It also provides substantial detail on the limitation of the data, including the effects of extreme events, such as flooding, on delay.

3.17. A clear governance structure is in place, on programme, delivery plan and operations levels. Risk and issue logs are maintained for the HATRIS project, which capture any specific areas where there are concerns, which often relate to queries over data sources.

PSA 5 Indicator 3 – Level of Capacity and Crowding on the Rail Network

Conclusion

4.1. This is a new indicator for the 2007 CSR period which reports against targets set within the Department's Capacity Programme. We have assessed the associated data system as RED (systems) i.e. the data system does not permit the reliable measurement and reporting of performance against the indicator.

4.2. The Department obtains passenger counts information from several sources and discloses some of this information each year in, amongst others, the National Rail Trends publication. However, the Department does not regard these systems to be currently robust enough to provide data of sufficient quality to report against this indicator, and have chosen not to report fully against this indicator in the 2008 Autumn Performance Report.

4.3. We understand the Department is predominantly measuring passenger counts for the targets set out in the HLOS – and the 2007 White Paper "Delivering a Sustainable Railway" – which are to be achieved and reported on in 2014. Improvements being sought to be made in passenger count data systems relate to the measurement of these industry outputs 5 years from now, and the Department considers it has until 2013/14 to devise and implement these improvements.

4.4. A Rail Passenger Counts Database project will seek to achieve these improvements in data systems. The project recognises that without these improvements it would be difficult to provide analysis on train capacity utilisation and passenger overcrowding, and determine whether HLOS targets can be fully realised. Such data system risks are being monitored through a project risk register, although these are not currently escalated to the Capacity Programme Board risk register.

4.5. It is not clear to the NAO when the Department will have data on passenger counts which will be of sufficient coverage and quality to report against this indicator in the 2007 CSR period and allow crowding to be measured and profiled to sufficient accuracy to inform the Department whether the crowding targets in the HLOS will be met.

4.6. A target has not been set for the 2007 CSR period, although milestones have been established within the Capacity Programme. The Department considers this information to be commercially sensitive and therefore it is not clear how progress against milestones will be publicly reported during this CSR period.

4.7. The Department also has a DSO target to improve rail punctuality and reliability. From our review of both indicators we understand that the Department has not investigated or evaluated possible interdependencies and shared risks to delivery of these targets.

Characteristics of the data system

4.8. Capacity is measured through the detailed delivery agreements, directed by the High Level Output Specification (HLOS) and the individual franchise specifications that result from this. Physical purchase and introduction of additional carriages are monitored by the Programme Board.

4.9. The new franchise agreements include a requirement for Train Operating Companies to fit an agreed percentage of their rolling stock with automated passenger count equipment, which can come in two formats: a load weighing facility to estimate passengers being carried; or infra-red detection equipment over doors.

4.10. Count data coverage using such automated systems is improving gradually, with about half of the 18 Train Operating Companies having 25 per cent or more of their rolling stock fitted. Other sources of passenger counts across the industry are from ticket sales, the National Rail Travel Survey, electronic ticket gates and manual passenger counts. It is not clear whether the Department has considered what would be sufficient coverage, or when this would be in place, to allow crowding to be accurately measured against the indicator,

4.11. The Rail Passenger Counts Database will seek to collect data from all information sources and develop the sources further by establishing quality standards, standardisation of protocols for data collection and transmission, and identification of gaps in data sources. Until this is put in place, the Department considers the data currently available as being of insufficient quality to report against this indicator.

Findings

4.12. The Rail Passenger Counts Database project is based on a detailed business case, which suggests that the data system will include the key elements expected to ensure its robustness. The database is planned to be established some time in 2009, although the National Networks have until 2013/14 to implement modified data systems, as only then will industry outputs be required to be measured against the White Paper. The role of a Data Quality Officer has been established, whose current task is to manage the project, maintain a risk register and provide regular reports to the Capacity Programme Board on progress and key issues.

4.13. The Capacity Programme has a clear governance framework in place, which includes three levels of review: Programme Board, Management Board and Project Groups. A risk register is maintained at all levels. Currently, risks to the establishment and subsequent management of the database are not escalated to the Capacity Programme Board risk register.

4.14. Part of the Capacity Programme will be to draw up agreements with the Train Operating Companies and Network Rail, via new franchise specifications, detailing their deliveries as part of the Programme. Changes to the profiled passenger numbers, which will be updated as further and better information becomes available, are expected to feed through to these agreements via changes to the HLOS.

4.15. As lead times will be long for additional carriages to be commissioned and built, and for the necessary changes to rail infrastructure to be made, we would expect that there will be significant emphasis on obtaining timely and accurate passenger count data to inform such plans. However, this is not a risk which currently features on the Capacity Programme Board risk register.

PSA 5 Indicator 4 – Value for Money of Department for Transport spending over the CSR07 period

Conclusion

5.1. This is a new indicator, and our validation review leads us to rate the associated data system as GREEN (fit for purpose) i.e. the data system is fit for the purpose of measuring and reporting performance against the indicator.

5.2. Under this indicator the Department aims to maintain (rather than improve) the same proportion of spend in the High Value for Money category as in the 2004 SR period. The VFM profile is determined by the estimated monetary cost of each project at the point that final spending decisions are made, and not on outturn assessments of costs and benefits.

5.3. As this indicator does not seek to measure or report the outcomes of the projects approved during the spending review period, and whether they achieved the planned VFM category, this seems at odds with the purpose of PSAs to measure the achievements of Departments.

5.4. This indicator only seeks to measure those projects which go through the Department's appraisal process and require Ministerial approval. Which project types are included and excluded is clearly disclosed in both the Technical Notes and the APR.

5.5. A few very large value projects during the CSR period may skew the profile and aid / prevent the Department meeting its target. Such projects may be crucial, whether or not they represent high VFM, and the Department should consider highlighting these when reporting against the PSA.

Characteristics of the data system

5.6. The Department has a long-standing process in place for appraising proposed projects called the New Approach to Appraisal (NATA). NATA requires those raising a business case to assess their proposals for value for money using 23 classes. Proposals are judged to offer poor, low, medium or high value for money based on the benefits to cost ratio, ranging in scale from less than 1 for 'poor' to more than 2 for 'high'.

5.7. This indicator will report the amount of Department spending approved over the 2007 CSR period that is subject to the Department's NATA process and the proportion in each VFM category. The indicator will include each VFM assessment presented to Ministers at the point that final spending decisions are sought (i.e. at the last approval before work commences or contracts are let).

5.8. The baseline for this indicator is the VFM profile of Department spending approved over the 2004 SR period. Only some of the classes against which projects are appraised can be monetised (a monetary value assigned). The majority require qualitative judgements, which can be far more important than the monetised ones. The NATA process takes the monetised benefit cost ratio and, using best available evidence on non-monetised impacts, places the project into one of the VFM categories.

5.9. To ensure the right approach was taken, and the Baseline would be consistent with future measures reported against the indicator, a discussion paper was used to compare the various possible reporting methods, with the decided methodology signed off by the Data Quality Officer, the Chief Economist.

Findings

5.10. The key risks to the data system supporting this indicator arise from the potential for inconsistent and weak application of the Department's VFM assessment process. However, there are effective processes in place which are designed to mitigate these risks.

5.11. A robust and consistent appraisal system over both the Baseline and current CSR period is ensured through a number of processes:

- Clear appraisal processes and associated guidance notes are available on a dedicated area of the Department's website, which is accessible by all parties who may bid for Department funding;

- A three-tier governance arrangement is in place, which is described in the Investment Assessment Framework as the individual Project Teams, Investment Boards and the Departmental Board, through which these appraisals are reviewed. As projects go through the project development process, they become better defined and assumptions of costs and benefits are refined throughout the appraisal process;

- VFM assessments are included in submissions to Ministers, supported by other information to enable the Minister to challenge the decisions and assumptions made, and the final VFM category attributed; and

- NATA guidance is updated periodically to reflect the latest assumptions such as GDP growth, population growth, fuel prices and fuel efficiency. The same applies for valuations of impacts such as the cost of carbon or noise.

5.12. Part of the requirements of the Department's New Approach to Appraisal (NATA) process is that cost estimates should be adjusted to account for risk and 'optimism bias' in order to obtain more accurate cost estimates. The potential of "worst outcome" on the VFM category is reported as part of the business case, which is then reviewed at each level of appraisal.

5.13. The Department also has a current programme of work called "NATA Refresh", which is the Department's response to the recommendations made by the Eddington and Stern Reviews for significant improvements to be made to the appraisal tools used by the Department. The focus of those recommendations was to ensure that NATA properly appraises factors impacting on the environment, efficient use of transport networks and society.

5.14. Following the opening of a road scheme, the Highways Agency also undertakes an evaluation to establish whether it has brought the benefits anticipated and whether the other impacts of the scheme were as predicted. This ongoing programme of evaluation is called Post Opening Project Evaluation. Results from these reviews are reported in the Highways Agency website.

5.15. Finally, the Department recommends that all local authority major projects are evaluated on delivery, to assess the appraisal process, and provides guidance for this. Where the Department has more control over schemes, such as the Department's Congestion Transport Innovation Fund, the Department is looking to build in conditions that require evaluations to take place.