

“Motivating Success”

A Toolkit for Performance Measurement - TechMAC -

Version 2.01 - January 2010

**MOTIVATING SUCCESS
A TOOLKIT FOR PERFORMANCE MEASUREMENT
-TECHMAC-
CONTENTS AMENDMENT SHEET**

Version Number	Amendments	Initials	Date
1.01	First Issue		May 2008
2.01	Second Issue	CH	January 2010

1 BACKGROUND

- 1.1 The Highways Agency's Corporate Plan "Customers First" sets out our vision for providing a continually improving service to all our customers. In areas where we are not delivering a service to customers directly this will require working in partnership with our Suppliers. "Customers First" reasserts the importance of forming close working relationships with our Suppliers and improving the way we measure and realise the benefits of all contracts.
- 1.2 "Delivering best value solutions and services to customers" – A Review of the Highways Agency's Procurement Strategy makes clear that measuring performance, learning the lessons and delivering continual improvement are vital to the achievement of best value. The Agency currently defines Best Value as, "delivering business objectives at the lowest affordable cost while achieving Continual Improvement".
- 1.3 Maximising performance against Performance Indicators that are closely aligned to business objectives for the lowest actual cost will help to ensure best value is achieved.
- 1.4 The Agency has made a strong commitment to long-term relationships with its Suppliers and we need to ensure that the benefits of these relationships are maximised for all. Performance Management should be used to underpin continual improvement within a collaborative working process.
- 1.5 In order to achieve continual improvement, we need to measure the performance of all of our contracts, as well as our own performance and that of the Supply Chain. This Toolkit gives guidance on the measurement of performance for technology contracts. The primary goal of using this Toolkit is to not only quantify performance, but to improve it. Following the methodology outlined in the ISO 9000 standard, any "Aspect" that requires an improvement in performance is termed a 'Non-conformity'.
- 1.6 The Toolkit is one of a number in use by those involved in delivering the Agency's contracts and provides a consistent method of performance measurement across differing Directorates. Performance can then be analysed in a variety of ways and action taken to drive continual improvement.
- 1.7 The Toolkit will be further developed into a web-based tool to improve the efficiency of the process.
- 1.8 The Toolkit needs to be subject to regular review to ensure that it reflects the current requirements of the Agency.

2 AREAS OF PERFORMANCE MEASURES

2.1 To allow Integrated Teams to consistently measure and manage the performance of their contracts, the following Areas of Measure have been identified:

- Product
- Service
- Right First Time
- Cost
- Time
- Safety
- Client Performance

2.2 These Areas of Measure are designed to capture a holistic approach to contract performance, The Areas have been broken down into Indicators, which are a balance of inputs, outputs and outcomes and involve all key members of the Integrated Team.

Product

This area will measure how satisfied the Client is with the product, i.e. maintenance of network assets.

Service

This area will measure how satisfied the Client is with the service whilst the product is being delivered, i.e. *how* it is produced.

Right First Time

This area will measure the impact of re-working and defects on the contract.

Cost

This area will measure aspects of cost control.

Time

This area will measure aspects of time control

Safety

This area will measure aspects of safety for all work undertaken during the whole contract.

Client Performance

The performance of the Agency in fulfilling its Client role under the contract will be measured using the 360 degree Supplier Feedback Report.

3 SCORING SATISFACTION

- 3.1 The structure of this Toolkit is closely aligned to the Performance Framework Schedule in Annex 15 of the Service Information, and is intended to measure performance in executing the Levers through the use of Indicators to represent each of the Levers. These Levers in turn are linked to the Highways Agency's Corporate Outcomes.
- 3.2 Each Indicator has been broken down into a number of "Aspects" (although not exhaustive) to represent the activities which contribute to the performance of the levers. Wherever possible these activities have been linked to the requirements of the Contract and associated documents. It is anticipated that where the *Providers* Quality Statement or Quality Plan introduce new "Aspects" that have an impact on the performance of the Lever then these will be identified and included in the satisfaction score criteria. The Integrated Teams may add further "Aspects" to reflect accurate performance if they wish to do so.
- 3.3 The score for each Indicator should be agreed by the Integrated Team on a Satisfaction Scale based on evidence provided to demonstrate achievement against the Indicator. The form of this evidence needs to be agreed by the Integrated Team and early agreement as to the form of the evidence and the mechanisms to provide it should be systemised in the *Providers* Quality Plan to reduce the possibility of disagreements regarding the score to be awarded arising later.
- 3.4 Performance Indicators (PIs) and other suggested measures are also to be used as evidence where appropriate and these have been listed. Details of the PIs are set out in Annex A.
- 3.5 Targets have been established for a number of "Aspects" and achievement against these should be considered as part of the scoring process. Any Targets set must not detract from the contractual requirements.
- 3.6 All "Aspects" are considered equally important unless determined otherwise by the *Service Manager* and communicated to the *Provider*. In deciding upon the satisfaction score, performance in delivery of the individual aspects should be considered, but only on the basis of the evidence presented by the *Provider* or *Service Manager*. The evidence will either be the result of a quantifiable measurement (e.g. a PI) or the production of documentation and records as evidence (as required by the *Service Manager*) that a particular aspect is being delivered.

4 SCORING MECHANISM

- 4.1 It is the responsibility of the Integrated Team to agree a score that reflects the overall performance against the indicator taking into account any extenuating circumstances.
- 4.2 The following Table sets out a scoring mechanism based on successful delivery of the “Aspects”:

Score	Satisfaction	Requirement
10	Totally satisfied	All aspects completed to entire satisfaction.
8	Highly satisfied	Most aspects to entire satisfaction, but some aspects were only nearly satisfactory.
6	Just satisfied	A few aspects to entire satisfaction, but some aspects were only nearly satisfactory, and some unsatisfactory.
5	Neither satisfied nor dissatisfied	Neutral performance.
4	Slightly dissatisfied	Most aspects just unsatisfactory.
2	Very dissatisfied	Most aspects unsatisfactory, but one or two were just satisfactory.
0	Totally dissatisfied	All aspects unsatisfactory.

5 FREQUENCY OF REPORTING

- 5.1 The measurement of performance commences at the start date. It is good Performance Management practice to record performance on a regular basis, however, it is recognised that the resources required to undertake this task are not insignificant. To reduce the burden of this reporting but retaining the need to monitor and record improvement, a number of Indicators have been selected for reporting on a monthly basis. Reporting against the full list of Indicators set out in Annex A & 360-degree Supplier Feedback reporting of the HA performance should be undertaken on a quarterly basis.
- 5.2 For reference purposes only, Indicators have been divided into three Groups:
1. Indicators to be reported on monthly (marked blue in this Toolkit)
 2. Indicators to be reported on quarterly (marked yellow in this Toolkit)
 3. *Providers’* Process Indicators (refer to Annex 14.5) to be reported on quarterly and separate to this Toolkit.
- 5.3 The Indicators to be reported monthly are set out in the following Table:

Reported Monthly		
Area of Measure	Reference	Indicator
Product	1.1.1	Develop and implement programme of congestion easing Schemes
	1.2.1	Maintain asset condition and deliver programme of renewal Schemes
	1.2.2	Maintain accurate data and inventory records
Service	2.3.1	Maximise availability of Traffic Technology Systems
	2.3.3	Operate as an integrated team
Right First Time	3.1.1	Prevent excessive rework and defects
Cost	4.1.1	Provide accurate financial management
Time	5.1.1	Provide accurate programme management
Safety	6.1.1	Develop and implement programme of safety improvement Schemes
	6.1.2	Ensure safe operations on the Network

6 MEASUREMENT AND MANAGEMENT

- 6.1 Throughout the delivery of long-term contracts, Integrated Teams should be looking to improve performance as their experience and capabilities develop. The use of this Toolkit will allow performance to be measured and help to ensure that the benefits of longer-term relationships are realised.
- 6.2 The purpose of the approach adopted in this Toolkit is to avoid simply measuring results without a true understanding of what is driving them, and to provide line of sight for all the members of the Integrated Team between the tasks that they carry out, and the Integrated Team Outcomes.
- 6.3 The methodology used to integrate performance measurement and management is by the use of a 'corrective action report' – any element of performance that requires improvement, including those identified by the use of this toolkit, is deemed to be a Non-conformity and these are recorded. For each Non-conformity there will be a corrective action report, prepared and managed by the *Provider* but with input from the *Service Manager*, showing how and when the Non-conformity is going to be removed and reoccurrence prevented. The *Provider's* Quality Plan will be adjusted as required to include such preventative action.
- 6.4 It is vital that the Integrated Team create a culture that is supportive of measurement including:
- Objectivity – about the performance data and the indicators

- Commitment to improvement and goal setting
- Honesty and openness about performance
- Collaborative problem solving
- Avoidance of an over-reliance on intuition and opinion about what drives performance.

6.5 There is a need for clear communication and role modelling by senior operational leaders within the Integrated Team about desired behaviour with regard to measurement, together with a positive reinforcement and demonstration of commitment.

6.6 The culture that the Toolkit is seeking to develop is to measure what truly matters and not what is convenient or traditional to measure i.e. those things that have the greatest impact on achieving the desired Outcomes – it's about importance and controllability.

7 SELECTION

7.1 Performance data will also be used to inform the process of selecting Suppliers and to help to deliver improved performance of Suppliers. The selection process will use performance data to identify the better performing Suppliers. Those Suppliers who demonstrate the best performance along with strong and improving capabilities will be the most likely to be selected to supply goods and services to the Highways Agency.

8 POOR PERFORMANCE

8.1 If a situation arises whereby a Supplier's performance is falling below acceptable standards, there may be an immediate need to consider restricting their future tendering opportunities. If a Supplier's performance in relation to service provision, behaviours, or attitudes, cannot be resolved by the usual procedures, then it will be reported to the Supply Chain Management Team who will take action as laid down in the Poor Performance Penalty Procedure (this can be found on the HA website). This allows action to be taken quickly to address such issues and requires immediate attention in respect of poor health and safety performance.

9 ADDITIONAL INFORMATION

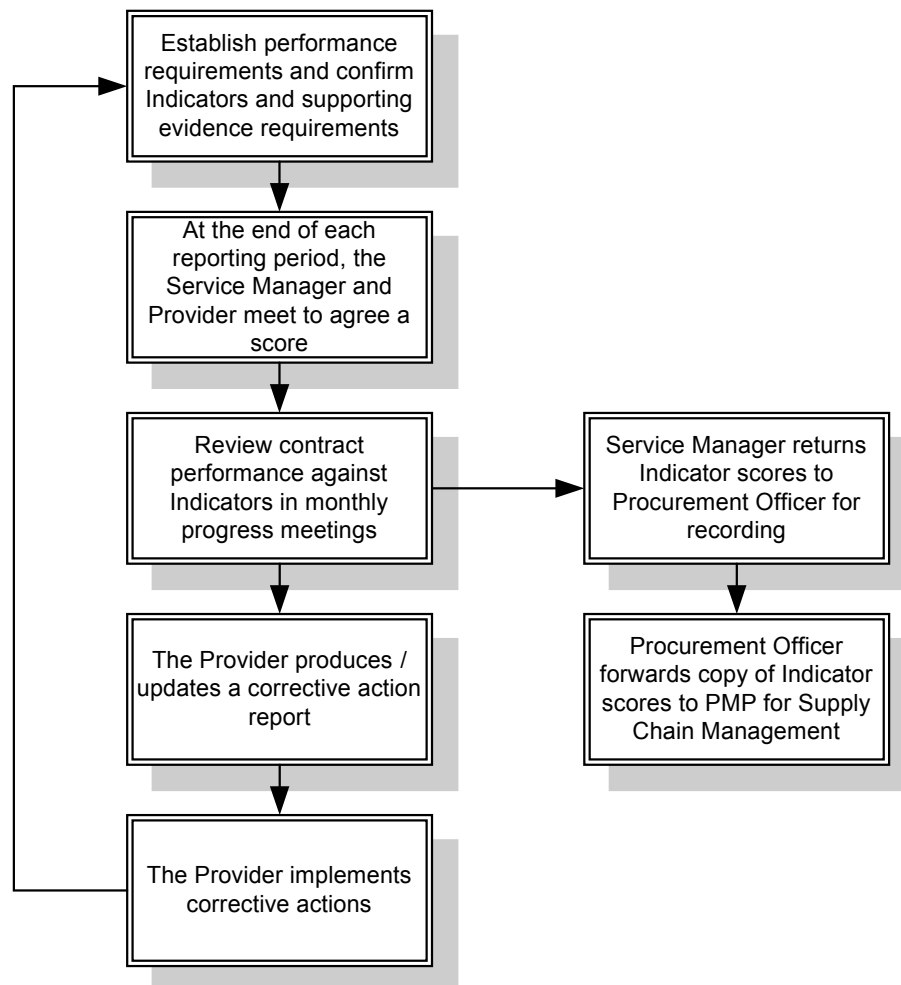
9.1 Reference is made within this document to Performance Indicators (PIs). Details regarding the recording, calculation, setting of Targets and reporting performance against these PIs are contained in Annex A to this Toolkit.

9.2 The aspects of each Lever have been cross referenced in the Toolkit as follows:

- Conditions of Contract (CoC)
- Service Information (SI)
- Network Information (NI)

9.3 Such references are not intended to be exhaustive or entirely comprehensive – there may be other relevant references and the Integrated Team should add these as appropriate as the Toolkit is developed over time. Any references are deemed to be to the latest version of documents, unless otherwise stated.

10 THE PERFORMANCE MEASUREMENT PROCESS MAINTENANCE CONTRACTS



11 RESPONSIBILITIES

11.1 Joint Responsibilities (The Integrated Team)

As an over-arching principle, the requirement to act as an Integrated Team is an important element of all Agency contracts. Although the responsibility to perform the requirements of the contract ultimately rests with the *Provider*, it is the responsibility of the Integrated Team to ensure that performance not only meets the minimum requirements of the Contract, but also to deliver Continual Improvement. This requires collaboration between all team members.

- Both the *Service Manager* and *Provider* should regularly keep and record evidence to support their proposed performance scores, and should keep appropriate records to show how the performance scores have been derived.
- Both the *Service Manager* and *Provider* may raise any concerns that the performance measurement process in general is not being conducted in a fair or open way.
- If there are significant differences where a performance score cannot be agreed between the *Service Manager* and *Provider*, the *Service Manager* shall determine that score for the relevant reporting period. Where agreement cannot be reached by the subsequent reporting period, the issue should be passed up the contract-partnering ladder. Where agreement still cannot be reached, the Network Board will moderate to agree the final score.

11.2 Responsibilities of the *Service Manager*

- The *Service Manager* must ensure that policies and procedures are implemented in an open and transparent way.
- The *Service Manager* should establish a regime that achieves this, e.g. scoring and reviewing the Indicators to inform the monthly progress meetings.
- The *Service Manager* should review and validate the Performance Assessment.
- The *Service Manager* should raise specific performance issues with the *Provider* as and when they arise, and if warranted should be included by the *Provider* in the corrective action report. The corrective action report should list the improvement areas, actions required, and target date for conversion of the actions. The *Service Manager* should monitor achievement of the corrective actions.
- Key lessons learnt, and improvement strategies will be captured and recorded, and communicated to *Providers* as appropriate.
- The 360 degree Supplier Feedback Report should be used to record improvement actions required of the Highways Agency and will be collated and shared within the Agency as appropriate.

11.3 Responsibilities of the *Provider*

- The *Provider* should ascertain from the *Service Manager* what evidence will be required to demonstrate successful achievement against the “Aspects”, and should ensure that the production of that evidence is integrated into the *Provider’s* Quality Plan.

- The *Provider* should undertake the performance assessment at specified timescales, reviewing the performance for the previous period, and issue the results to the *Service Manager* prior to the monthly progress meeting.
- The *Provider* should be open and honest about their performance.
- After the corrective action report has been agreed between *Service Manager* and *Provider*, it is the *Provider's* responsibility to put any required actions identified for them into place, in the specified timescale, and to adjust his Quality Plan to include the necessary preventative action to ensure that there will be no reoccurrence of the non-conformity.
- To complete the 360-degree Supplier Feedback Report on the Client's Performance.

11.4 Responsibilities of Highways Agency Procurement

- Performance data will be recorded and stored on an electronic database for future reference. This data will be used along with the Capability Assessment Toolkit in selecting Suppliers for future work. Details of trends, and/or exceptional performance, may also be used in selection.
- A Web based tool will be developed to collect data on a monthly basis to inform these trends and for benchmarking. The latest report received will be that which is used.
- The Procurement Team will use data for corporate level performance feedback and advice on Supplier development.
- Local Procurement Representatives will use data for regional level performance feedback and advice on Supplier development.
- Key lessons learnt, and improvement strategies, will be captured and recorded by the Highways Agency Local Procurement Representative or Procurement Team, and communicated to Suppliers as appropriate.
- The ongoing development of "Motivating Success", a Toolkit for Performance Measurement.

12 CONTACT THE PROCUREMENT TEAM

- 12.1 If you have any queries, comments or suggestions for improving "Motivating Success", A Toolkit for Performance Measurement, then please contact the Highways Agency Strategic Supplier Development Team (SSD). Email: HA_PM_Team@highways.gsi.gov.uk

1. Area of Measure: Product

Objective:	To determine the overall level of client satisfaction with the delivered product.
Indicators:	This Area of Measure has been broken down into 4 Indicators.
Measures:	How satisfied the <i>Service Manager</i> is with the Product that is being delivered using a 0 to 10 scale.
Scoring:	The Performance Indicators are scored separately and have equal weighting. The scores are totaled and averaged to give an overall score for Product.

Lever: Reduce Congestion

1.1.1 Develop and implement programme of congestion easing Schemes

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Programme of Schemes developed with congestion improvement outcomes clearly indicated	SI 5.1.1	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Programme of Schemes delivered	SI 5.1 SI Annex 20	To be agreed with <i>Service Manager</i>	100% of schemes delivered
Impact of Schemes monitored and actual achievements against planned outcomes recorded		To be agreed with <i>Service Manager</i>	Impact recorded for all schemes.
Aspects from the <i>Provider's</i> Quality Statement:			

Lever: Maintain Network in a Safe and Serviceable Condition

1.2.1 Maintain Asset Condition and deliver programme of renewal Schemes

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Effective Inspection Management programme in place	SI 3.2	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Effective long-term asset performance	SI 3.3 SI 1.2.1 (1), (3) & (4)	PI 11	To be set by Network Board if appropriate
Effective monitoring of Area Network (Watchman Role) to identify appropriate renewal Schemes	SI 2.6	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Schemes developed in accordance with the requirements of SI Annex 20 and Programme Objectives Guide	SI 3.3.11 SI Annex 20	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Programme of Schemes delivered		To be agreed with <i>Service Manager</i>	100% of agreed schemes delivered.
Aspects from the <i>Provider's</i> Quality Statement:			

1. Area of Measure: Product (Cont'd)

Lever: Maintain Network in a Safe and Serviceable Condition

1.2.2 Maintain accurate data and inventory records

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
All reasonable steps taken to obtain asset data from Outgoing Provider	SI 4.1.1 (3h)	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Existing inventories completed and records listed in Network Information & SI Annex 17	SI 3.1.1 SI Annex 17	To be agreed with <i>Service Manager</i>	As in SI 3.1.1
Asset databases updated and maintained in accordance with the requirements of the contract	SI 3.1.1 SI Annex 17 CoC 43	PI 6	To be set by Network Board if appropriate
Manage the Employer's Stocks in accordance with the Stores Operating Procedures. Protect the Employer's Stocks against the risk of loss or damage from any cause. Store the Employer's Stocks in a secure place when not in use	CoC 76 SI Annex 7	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Assets swapped out from network fixed as quickly as possible before being returned to stock	SI Annex 7 CoC 76.3	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Return failed components to the National Distribution Centre as necessary. Request <i>Service Manager</i> to replace components where appropriate	SI 3.3.2 SI Annex 7 CoC 76.2	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Aspects from the <i>Providers Quality Statement</i>:			

Lever: Respect the Environment

1.3.1 Develop sustainable operating methods and recycling initiatives

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Promotion of the recycling and re-use of materials used in or arising from all Area Network activities considered and implemented	SI 1.2.1 (5) CoC 103.1	To be agreed with <i>Service Manager</i>	At least 55% use of secondary or recycled materials
Work carried out in such a way as to minimise environmental impact	SI 1.2.1 (5)	To be agreed with <i>Service Manager</i>	To be set by Network Board
Aspects from the <i>Providers Quality Statement</i>:			

2. Area of Measure: Service

Objective:	To determine the overall level of client satisfaction with the Service provided by the Supplier.
Indicators:	This Area of Measure has been broken down into 7 Indicators.
Measures:	How satisfied the <i>Service Manager</i> is with the Service that is being delivered using a 0 to 10 scale.
Scoring:	The Performance Indicators are scored separately and have equal weighting. The scores are totaled and averaged to give an overall score for Service.

Lever: Increase Network Availability

2.1.1 Plan maintenance programme to minimise number and duration of interventions

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Programme prepared and coordinated to avoid and / or minimise the number and duration of interventions on the Area Network.	SI 2.5.2 CoC 31, 32, 34	a) Year on Year reduction in number and duration of interventions as recorded in SRW. b) Number of instances where interventions are shared. c) Number of interventions that started out as 1 and ended up as 2 or more.	a) To be set by Network Board b) To be set by Network Board c) Zero
Provide information to enable lane closure information to be promptly and accurately entered into Scheduled Roadworks (SRW) database for planned and unplanned events relating to technology assets that result in loss of lane availability	AMM 58 SI 4.3.2	To be agreed with <i>Service Manager</i>	100% compliance with AMM 58
Aspects from the <i>Provider's</i> Quality Statement:			

2. Area of Measure: Service (Cont'd)

Lever: Deliver Road User Satisfaction

2.2.1 Deliver Customer Satisfaction

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Issues with users of the Area Network resolved quickly and with due courtesy and consideration	SI 1.2.1 (2) SI 4.7.2 (1&4)	Road User Satisfaction Survey (RUSS)	To be set by Network Board if appropriate
Users of the Network given adequate information and forewarned of any events on, or matters affecting the Network	SI 1.2.1 (2-3) SI 1.2.1 (6) SI 4.7.1 (1-6) SI 4.7.2 (1-2, 4-5) SI Annex 3	To be agreed with <i>Service Manager</i>	% reduction year on year Set by Network Board
Compliance achieved with HA's Communications Strategy and the requirements of SI Annex 3	HA Communication Strategy SI 4.7.1 (1) SI Annex 3	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Aspects from the <i>Provider's</i> Quality Statement:			

Lever: Manage the Contract Effectively

2.3.1 Maximise availability of Traffic Technology Systems

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Reduce number of transient faults on the network.	SI 2.6	PI 12	
Maintain high availability of Traffic Technology Systems.	SI 2.6	PI 9	To be set by Network Board
Develop and implement an effective Winter Resilience Plan.	SI 3.1.3 SI 4.1.1 (3f) SI Annex 25	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
All hard faults are rectified as quickly as possible, and at least within the performance specification times set within the contract.	SI Annex 13	PI 1	To be set by Network Board
<i>Provider's</i> Technical Support Service manages maintenance and repair of RCC technology in accordance with the requirements of SI Annex 27.	SI 3.3.7 SI Annex 27	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Aspects from the <i>Providers</i> Quality Statement:			

2. Area of Measure: Service (Cont'd)

Lever: Manage the Contract Effectively

2.3.2 Improve Efficiency and Achieve Continual Improvement

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
The mechanisms of the contract relating to service delivery and financial gainshare are effectively operated in order to generate service enhancements and cost savings (cashable) that assist in the Agency's contribution to the DfT's efficiency target		Cashable contribution	To be set by Network Board
Opportunities to achieve performance improvements by collaborating with other interested parties (e.g. local authorities) are actively pursued	SI Annex 14	No of collaboration opportunities identified and implemented	To be set by Network Board if appropriate
Effective handling of Third Party Claims	CoC 87 SI Annex 23		100% compliance
The causes of high performance are identified, captured and documented (e.g. an efficient process design, better use of intelligence on existing Levers, new Levers, some new technology etc.) – that performance is benchmarked with other members of the Maintenance Community to determine if the practice is 'best' and share best practice	SI Annex 14	To be agreed with <i>Service Manager</i>	To be set by Network Board
Create and implement incremental improvements	SI Annex 14 CoC 53	No of Improvements	To be set by Network Board
Create and implement Breakthrough Improvements	SI Annex 14 CoC 53	No of Improvements	To be set by Network Board
Create and implement Innovations.	SI Annex 14 CoC 53 & 54	No of Innovations	To be set by Network Board
Continual Improvement opportunities that involve gainshare sought and managed in accordance with the method outlined in the contract	SI 2.3 CoC 53	Amount of Gainshare earned by <i>Provider</i>	To be set by Network Board
Increase use of available intelligence to inform decisions	SI 2.3 SI Annex 13 SI Annex 19		
Aspects from the <i>Providers</i> Quality Statement:			

2. Area of Measure: Service (Cont'd)

Lever: Manage the Contract Effectively

2.3.3 Operate as an integrated team			
<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
A forum is established and used for effective communication between integrated team members (including the formation and operation of a Network Board)	SI 4.2 SI 4.3.1 CoC 13 & 15 SI Annex 10	PI 13	To be set by Network Board if appropriate
The organisational structure (people, systems and workplaces) is designed in a way that supports integration and that is reflected in the <i>Providers Quality Plan</i>		To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Procedure in place for dealing with issues between integrated team members i.e. an escalation method that is designed to resolve issues quickly	Annex SI 19	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
The activity of each team member is, consistent with, and coordinated with the activity of the others		PI 13	To be set by Network Board if appropriate
<i>Provider</i> responds to incidents when requested as quickly as possible, and at least within the performance specification times set within the contract.	SI Annex 13	SI Annex 13 "Emergency Response" & "Other Category Responses" measures.	To be set by Network Board
Take appropriate immediate action to assist Others in arranging for the Area Network affected by Incidents to be made safe as soon as possible.	SI 4.3.1 SI 4.3.6	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Aspects from the <i>Providers Quality Statement</i>:			

2. Area of Measure: Service (Cont'd)

Lever: Manage the Contract Effectively

2.3.4 Ensure effective business processes and resource management systems

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Effective mobilisation and demobilisation	SI 4.1.1		
Compliance with Employers standards (Effective business processes)	SI 2.4.1 SI Annex 18 SI 2.1.2 (3) SI 2.1.2 CoC 22.1	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Comprehensive submissions prepared for all approvals and departures from standards (effective business processes)		To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Process designs are high performing, extremely resource efficient, communicated to all of <i>Providers</i> team, tightly complied with in practice and relevant process and activity indicators are being used effectively	CoC 40.1 SI Annex 14 ISO 9001:2000	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Non conformities are continually identified with clear and achievable corrective action plans in place and successfully implemented	CoC 41 and 42 ISO 9001:2000 SI Annex 19	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
<i>Provider</i> proactively encourages inputs from all members of the team including supply chain partners – key issues are openly discussed with the team and actions are mutually agreed and implemented	CoC 26.3	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Excellent record of payments made on time to supply chain partners	CoC 26.3 SI Annex 9	Percentage of payments made to Sub-contractors within a specified period not exceeding 30 days from receipt by the <i>Provider</i> of a valid invoice	100%

2. Area of Measure: Service (Cont'd)

Lever: Manage the Contract Effectively (Cont'd)

2.3.4 Ensure effective business processes and resource management systems (Cont'd)

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Sub-contracts contain obligation to work with <i>Provider</i> to assist HA achieve it's aims and objectives, and also to seek continual improvement in the delivery of the Services	CoC 26.3	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Process Owners (with authority) appointed in accordance with ISO 9004:2000 and are measuring process performance and controlling the evolution of process designs	SI Annex 14	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
<i>Providers</i> quality management system audited in accordance with the requirements of the Contract and quality points system properly administered with corrective action taken	CoC 41 CoC 42 SI Annex 15	PI 8 QM 01 (no. of Quality Management points in effect at any time)	Maximum operating level of 25 QM points
Aspects from the <i>Providers</i> Quality Statement:			

Lever: Manage the Contract Effectively

2.3.5 Identify, manage and reduce risk

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
<i>Providers</i> Insurance policies maintained all in accordance with the requirements of the contract and checked and approved compliant by SM each year at renewal time in terms of scope and level of cover and excesses	CoC 80 - 87	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Operation of risk register and early warning system			
Aspects from the <i>Providers</i> Quality Statement:			

3. Area of Measure: Right First Time

Objective:	To measure the client's satisfaction with defects in the product & Service delivered.
Indicators:	This Area of Measure has 1 Indicator.
Measures:	How satisfied the <i>Service Manager</i> is with the Service that is being delivered using a 0 to 10 scale.
Scoring:	The score for the Performance Indicator is the score for Right First Time

Lever: Manage the Contract Effectively

3.1.1 Prevent excessive rework and defects

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
<i>Provider</i> has mechanism to ensure that all employees are aware of and are complying with the Processes and procedures in the Quality Plan (Resource Management)	CoC 40	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Aspects from the <i>Provider's</i> Quality Statement:			

4. Area of Measure: Cost	
Objective:	To measure the client's satisfaction relating to cost predictability and cost capture.
Indicators:	This Area of Measure has 1 Indicator.
Measures:	How satisfied the <i>Service Manager</i> is with the service relating to cost elements that is being delivered using a 0 to 10 scale.
Scoring:	The score for the Performance Indicator is the score for Cost

Lever: Manage the Contract Effectively

4.1.1 Provide accurate financial management			
<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Achieve close correlation between forecast and actual cost of work done (i.e. execution of the Services) on monthly and annual basis Actual cost is used to inform the future budgetary provisions	SI 2.5.3	PI 3	As identified in the PI Handbook
Close correlation between predicted and actual Scheme costs		PI 5	To be set by Network Board
Cost capture format agreed and cost being properly allocated to headings and accurately captured on a monthly basis with comparisons to forecast	SI 2.5.5 CoC 43.1-2 CoC 51.8	To be agreed with <i>Service Manager</i>	100% of Schemes
Explanations of variances between target and out-turn costs are provided – performance related issues are identified, and acted upon including changes to quality plan as necessary	SI 2.5.3 CoC 33	To be agreed with <i>Service Manager</i>	100% of Schemes
Annual Plan prepared and updated as prescribed in the Contract with adjustments made to prevent excess expenditure	SI 2.5.2 CoC 31	To be agreed with <i>Service Manager</i>	100% compliance
<i>Providers</i> invoices calculated and submitted in accordance with the requirements of the contract	CoC 50 SI 2.5.5	To be agreed with <i>Service Manager</i>	100% of all invoices
Effective operation of Compensation Events procedure as prescribed in the contract	CoC 60 – 65	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Aspects from the <i>Provider's</i> Quality Statement:			

5. Area of Measure: Time

Objective:	To measure the client's satisfaction with time predictability and management.
Indicators:	This Area of Measure has 1 Indicator.
Measures:	How satisfied the <i>Service Manager</i> is with the service relating to Time elements that is being delivered using a 0 to 10 scale.
Scoring:	The score for the Performance Indicator is the score for Time.

Lever: Manage the Contract Effectively

5.1.1 Provide accurate programme management			
<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Programmes prepared and updated as prescribed in the Contract	SI 4.3.7 CoC 32	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Programmes of work for planned maintenance are adhered to		PI 2	
Close correlation between predicted and actual duration of design and implementation periods		PI 5	To be set by Network Board
Aspects from the <i>Provider's</i> Quality Statement:			

6. Area of Measure: Safety

Objective:	To measure the client's satisfaction with elements relating to Safety.
Indicators:	This Area of Measure has been broken down into 2 Indicators.
Measures:	How satisfied the <i>Service Manager</i> is with the service relating to Safety elements that is being delivered using a 0 to 10 scale.
Scoring:	The Performance Indicators are scored separately and have equal weighting. The scores are totaled and averaged to give an overall score for Safety.

Lever: Improve Road User and Work Force Safety

6.1.1 Develop and implement programme of safety improvement Schemes

<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
Effective identification of potential Schemes as part of watchman role.	SI 2.6	Watchman register.	To be set by Network Board if appropriate
Programme of Schemes developed, including VM.	SI 5.5.1	Forward Technology programme.	To be set by Network Board if appropriate
Programme of Schemes delivered	SI 5.1 SI Annex 20	To be agreed with <i>Service Manager</i>	100% of schemes delivered
Impact of Schemes monitored and actual achievements against planned outcomes recorded.		Road Safety Audits (Part 4)	Impact recorded for all schemes.
Aspects from the <i>Provider's</i> Quality Statement:			

2. Area of Measure: Safety (Cont'd)

Lever: Improve Road User and Work Force Safety

6.1.2 Ensure safe operations on the Network			
<i>Aspect</i>	<i>Reference</i>	<i>Evidence</i>	<i>Target</i>
<ul style="list-style-type: none"> • Number /quality of Safety, Health and Environmental briefings / toolbox talks. • Results of SHE audits (internal and external), and rectification of non-conformance and noted improvements. • Capture and reporting of near misses and the development of appropriate mitigation measures. 	SI 1.2.1 (4) SI 2.7 CoC 27 SI Annex 9	To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Reduce accidents within the <i>Providers</i> organisation	RIDDOR	PI 4A	Current HA Target
Reduce road traffic accidents at roadworks			Current HA Target
Design for safety embraced.		To be agreed with <i>Service Manager</i>	To be set by Network Board if appropriate
Aspects from the <i>Provider's</i> Quality Statement:			

Annex A

Performance Indicators - TechMAC -

IIINTRODUCTION

This Annex replaces The Handbook of TechMAC Performance Indicators Issue 01 – 26 May 2006. It details the latest Performance Indicators developed by the Technology Managing Agent Contractor (TechMAC) Contracts Working Group (CWG) to be used as evidence in the measurement of performance in accordance with the TechMAC Motivating Success Toolkit.

TECHMAC PERFORMANCE INDICATORS				
<i>Ref</i>	<i>Description</i>	<i>Meas. Ref</i>	<i>Issue</i>	<i>Date</i>
PI 1	Rectification of hard faults	2.3.1	02	
PI 2	Maintenance programme implementation	5.1.1	02	
PI 3	Budget management	4.1.1	02	
PI 4	Employee safety	6.1.2	02	
PI 5	Time and cost predictability	4.1.1/5.1.1	02	
PI 6	Data management	1.2.2	02	
PI 7	Not Used			
PI 8	Quality Management	2.3.4	02	
PI 9	Availability of Traffic Technology Systems	2.3.1	02	
PI 10	Not Used			
PI 11	Asset condition	1.2.1	02	
PI 12	Fault analysis	2.3.1	02	
PI 13	Internal customer satisfaction	2.3.3	02	

PI 1: Rectification of hard faults

Measure: Maximise availability of Traffic Technology Systems					
<u>Purpose/Description</u>	To measure the efficiency and effectiveness of the Provider's fault rectification service. The <i>Provider</i> should rectify faults on the Area Network as quickly and effectively as possible in order to minimise any danger, disruption or delay to the public, or damage to the Area Network and / or local environment.				
<u>Indicators</u>	<p>PI 1A Number of category A, B and P faults where service is restored within the Restore Service times stated in Annex SI 13, as a percentage of the total number of such faults.</p> <p>PI 1B Number of category C, D and E faults where service is restored within the Restore Service times stated in Annex SI 13, as a percentage of the total number of such faults.</p>				
<u>Definitions</u>	<p><i>Fault</i> A disruption or potential hazard to the operation, safety and/or integrity of the Area Network (or adjacent land) that requires an immediate response by the <i>Provider</i>. The fault has to have existed in HALOGEN for a duration longer than 20 minutes.</p> <p><i>Category</i> See Annex SI 13 Performance Requirements.</p>				
<u>Data Source</u>	Provider's FLOG (fault logging) database, HALOGEN				
<u>Data Input</u>	Frequency/Reporting Period: Calendar month				
<u>Fields</u>	<p>Total Number of category A faults. (A)</p> <p>Total Number of category B faults. (B)</p> <p>Total Number of category P faults. (P)</p> <p>Total Number of category C faults. (C)</p> <p>Total Number of category D faults. (D)</p> <p>Total Number of category E faults. (E)</p> <p>Number of category A, B and P faults where Service is restored within the Restore Service times. (F)</p> <p>Number of category C, D and E faults where Service is restored within the Restore Service times. (G)</p>				
<u>Calculations</u>	<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
	<u>Individual Monthly Performance.</u>				
	PI 1A (M)	$(F/(A+B+P))*100$	Percentage	1	G+T
	PI 1B (M)	$(G/(C+D+E))*100$	Percentage	1	G+T
	<u>Rolling 12 Month Performance.</u> (current plus preceding 11)				
	PI 1A (A)	$(\Sigma F/(\Sigma A+\Sigma B+\Sigma P))*100$	Percentage	1	T
	PI 1B (A)	$(\Sigma G/(\Sigma C+\Sigma D+\Sigma E))*100$	Percentage	1	T
	<p><u>Note:</u> (M) monthly indicator (A) annual indicator</p> <p>Σ = the aggregation of input data for the current month and the preceding 11 months.</p>				

PI 2: Maintenance programme implementation

Measure: Provide accurate programme management					
<u>Purpose/Description</u>	To measure the <i>Provider's</i> ability to schedule its works so as to be consistent with programmed schedules. The Provider should manage its resources to ensure all planned works are completed as programmed at the start of the year.				
<u>Indicators</u>	<p>PI 2A Number of Planned Maintenance activities, excluding electrical activities, completed in the year to date, as a percentage of the total Planned Maintenance activities, excluding electrical activities, in the Planned Maintenance Programme.</p> <p>PI 2B Number of Planned Maintenance electrical activities completed in the year to date, as a percentage of the total Planned Maintenance electrical activities in the Planned Maintenance Programme.</p>				
<u>Definitions</u>	<p><i>Planned Maintenance</i> Routine activities that are frequently repeated and continuously ongoing throughout the year. These include inspections, cleaning and electrical testing.</p> <p><i>Completed</i> Work can only be considered to be completed when the entire scheme or activity has been carried out and the assets involved have been put into service.</p> <p><i>Planned Maintenance Programme</i> Defines what routine maintenance activities are to be carried out in the year, and when these should be performed.</p>				
<u>Data Source</u>	Programme, work records				
<u>Data Input</u>	Frequency/Reporting Period: Calendar month				
<u>Fields</u>	<p>Number of planned maintenance activities, excluding electrical activities, completed in the current year to date. (A)</p> <p>Number of maintenance activities, excluding electrical activities, planned to have been completed in the current year to date (B)</p> <p>Number of planned maintenance electrical activities completed in the current year to date. (C)</p> <p>Number of maintenance electrical activities planned to have been completed in the current year to date (D)</p>				
<u>Calculations</u>	<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
	<u>Year to Date Monthly Performance.</u>				
	PI 2A (M)	(A/B)*100	Percentage	1	G+T
	PI 2B (M)	(C/D)*100	Percentage	1	G+T
	<u>Note:</u> (M) monthly indicator (A) annual indicator				

PI 3: Budget management.
Measure: Provide accurate financial management

Purpose/Description To measure the predictability of the *Provider's* financial forecasting with respect to the monthly accruals and annual budget allocation for the overall area portfolio. Relates to the requirements of the Resource Accounting Manual to demonstrate the 'proper handling and reporting of public money'.

Indicators

PI 3A Percentage variance between the actual and forecast value of work completed in the month (overall portfolio). (Value of all work excluding lump sum).

PI 3B Percentage variance between the actual and forecast value of work completed in the financial year (overall portfolio). (Value of all work excluding lump sum).

Definitions

Forecast value The value of work planned to be incurred during the month, forecast at the beginning of the month (or end of the preceding month), based on the proposed programme for design, supervision and works.

Actual value The value of work actually incurred during the month as shown on invoices / applications submitted to the Highways Agency for payment.

Data Source

HAMIS / SfM and / or Provider's records

Data Input

Frequency/Reporting Period: Calendar month

Fields

Forecast value of work planned to be completed in month (overall portfolio) (A)

Actual value of work completed in month (overall portfolio) (B)

Forecast value of work planned to be completed in the financial year (overall portfolio) (C)

Actual value of work completed in financial year (overall portfolio) (D)

Calculations

<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
<u>Individual Monthly Performance.</u>				
PI 3A (M)	$(B-A)/A*100$	Percentage	1	G+T
<u>Financial Year to Date</u>				
PI 3B (A)	$(D-C)/C*100$	Percentage	1	G+T

Note: (M) monthly indicator (A) annual indicator

Σ = the aggregation of input data for the current month and the preceding months to and including April.

PI 4: Employee safety.

Measure: Ensure safe operations on the Network					
<u>Purpose/Description</u>	To measure the effectiveness of the <i>Provider's</i> safety processes by monitoring all accidents reportable under RIDDOR and all other recorded injuries within the <i>Provider's</i> organisation.				
<u>Indicators</u>	<p>PI 4A Area RIDDOR Frequency Rate, based on all accidents reportable under RIDDOR.</p> <p>PI 4B Area Accident Frequency Rate, based on the total number of 4A and all other recorded injuries.</p>				
<u>Definitions</u>	<p><i>RIDDOR</i> Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.</p> <p><i>Recorded injuries</i> All injuries recorded in Accident Books (or databases) covering the Agency's Area Maintenance contract (TechMAC).</p>				
<u>Data Source</u>	<i>Provider's</i> Accident Books / databases including RIDDOR forms.				
<u>Data Input</u>	Frequency/Reporting Period: Calendar month				
<u>Fields</u>	<p>Total number of hours worked in the month (A)</p> <p>Total number of all accidents reportable under RIDDOR in the month (B)</p> <p>Total number of recorded injuries in the month (Non-RIDDOR) (C)</p> <p>Total of all accidents reportable under RIDDOR and all recorded injuries in the month (D)= (B+C)</p>				
<u>Calculations</u>	<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
	<u>Rolling 12 month Performance.</u> (current plus preceding 11)				
	PI 4A (A)	$\Sigma B/\Sigma A*100,000$	Integer	2	G+T
	PI 4B (A)	$\Sigma D/\Sigma A*100,000$	Integer	2	G+T
	<u>Note:</u> (M) monthly indicator (A) annual indicator				
	Σ = the aggregation of input data for the current month and the preceding 11 months.				

PI 5: Time and cost predictability
Measure: Provide accurate financial and programme management

<u>Purpose/Description</u>	This PI measures the accuracy of time and cost predictions, initially only on eligible schemes exceeding £100K in value. The indicators are designed to reflect the impact on customers and the HA of changes in predictions during the different phases of design and construction of these schemes. The PI is a measure on the whole of the delivery team including HA, TechMAC and the Supply Chain.
<u>Milestones</u>	<p>A series of milestones throughout the Scheme are identified as defined in “Time and Cost Phases for PI 5”, see Appendix 1.</p> <ol style="list-style-type: none"> 1. Commitment to detailed design 2. Completion of detailed design 3. Agreement of Cost 4. Agreement of predicted start & finish dates 5. Actual start of Construction 6. Actual completion of Construction 7. Agreement of final account at first valuation after completion
<u>Indicators</u>	<p>PI 5A Variance between actual date at 2, compared to date at 2 as predicted at 1.</p> <p>PI 5B Variance between duration 5 to 6 as predicted at 4, compared to duration predicted at 1.</p> <p>PI 5C Variance between duration 5 to 6 as predicted at 4, compared to actual duration 5 – 6.</p> <p>PI 5D Variance between duration 5 to 6 as predicted at 1, compared to actual duration 5 – 6.</p> <p>PI 5E Variance between the sum of costs at milestone 3 compared to those costs predicted at milestone 1, as a percentage of costs predicted at milestone 1.</p> <p>PI 5F Variance between the sum of costs at milestone 7 compared to those costs predicted at milestone 3, as a percentage of costs predicted at milestone 3.</p> <p>PI 5G Variance between the sum of costs at milestone 7 compared to those costs predicted at milestone 1, as a percentage of costs predicted at milestone 1.</p> <p>NB: All measures only for Live Schemes where data is less than 365 days old.</p>
<u>Definitions</u>	<p><i>“Live” Scheme</i> A Live scheme is determined by the age of the second of the two milestones that constitute the PI. This should be 365 days old or less to qualify as Live data.</p> <p><i>Scheme Cost</i> The sum of all money managed by the <i>Provider</i> on behalf of the HA – including design, construction, statutory undertakers etc. This will not include land costs.</p> <p><i>Eligible Scheme</i> Scheme currently approved by HA, with an estimated scheme cost over £100K at milestone 1.</p> <p><i>Measure Period</i> Rolling 12 months [current month + preceding 11 months] (or year to date if less than 12 months data exists).</p> <p><i>All Parties</i> HA, Designer/Project Manager, Constructor(s), TechMAC and Supply Chain.</p> <p><i>Milestones</i> All milestones are defined in Appendix 1, “Time and Cost Phases for PI 5”.</p>
<u>Methodology</u>	<p><u>Scheme Data Flow</u></p> <p>As part of preparing the annual programme, covering works funded for each financial year, a record for each Scheme is produced and relevant details recorded, including the predicted date for completion of detailed design, predicted construction start and finish dates, and prediction of final cost (milestone 1).</p> <p>When detailed design is completed relevant details are recorded and the variation</p>

PI 5: Time and cost predictability
Measure: Provide accurate financial and programme management

from the prediction is calculated and recorded (milestone 2).

Methodology
(Cont'd)

When all parties agree the construction costs (milestone 3), the *Provider* records the revised predicted final scheme cost and the date of this entry, against the project record.

Similarly, when all parties agree the construction dates – (during milestone 4) – the revised predictions for the start date for construction and completion date for construction, and therefore the construction duration are recorded.

The actual dates for Start and End of Construction are promptly recorded as they occur and at the End of Construction the construction duration is calculated and entered into the records (milestone 5 & 6)

Finally, the *Provider* records the projected final scheme cost, at the first valuation after the End of Construction (milestone 7) and the date of this entry, against the project record.

TechPI Calculation

Individual scheme data is then summarised to calculate the PI's. Only Live data is considered for each of the PI's. Each month, each PI is considered independently, so that data for a scheme may be eligible for inclusion in the calculation of some or all PI's.

[NB As soon as completion of detailed design data is recorded for a scheme, that data is included in the subsequent calculation of 5A, at the end of the month. once this data is more than 365 days old (i.e. 12 months old) it is removed from the calculation of 5A, even though data from the same scheme may still be eligible for the calculation of 5B, 5C and 5D that month.]

[NB As soon as cost data at milestone 3 is recorded for a scheme that data is included in the subsequent calculation of 5E, at the end of the month. Once this data is more than 365 days old (i.e. 12 months old) it is removed from the calculation of 5E, even though data from the same scheme may still be eligible for the calculation of 5F + 5G that month]

For all Time Predictability PIs only positive variations (late completions) are added to the cumulative total, which is divided by the number of eligible schemes in the measure period to calculate the indicators.

As all deviations from predictions are undesirable for budgetary control, the Cost Predictability PIs consider the absolute value of cost variances as a percentage of the sum of the initial predictions. This avoids the potential for negative and positive differences, in separate schemes, to have a compensatory effect on the indicators.

Compensation events will affect the actual recorded dates / scheme cost but the predicted dates / cost will not be amended to reflect compensation events. i.e. compensation events which affect the duration and overall cost of a scheme will have a negative effect on the result.

Until data is available for 12 months, the indicators are reported as Year to Date (YTD).

Data Source

Provider's records, HA records and Contractor's records if applicable.

Data Input

Frequency/Reporting Period: Calendar month

PI 5: Time and cost predictability
Measure: Provide accurate financial and programme management

Measure: Provide accurate financial and programme management		
Fields (All 0 decimals)	Predicted date for completion of detailed design as made at milestone 1.	(A)
	Predicted date for start of construction as made at milestone 1.	(B)
	Predicted date for completion of construction as made at milestone 1.	(C)
	Predicted scheme cost as made at milestone 1.	(D)
	Actual date for completion of detailed design (milestone 2)	(E)
	Predicted scheme cost as made at milestone 3	(F)
	Date Milestone 3 was reached	(G)
	Predicted date for start of construction as made at milestone 4.	(H)
	Predicted date for completion of construction as made at milestone 4.	(I)
	Date Milestone 4 was reached	(J)
	Actual date for start of construction (milestone 5).	(K)
	Actual date for completion of construction (milestone 6).	(L)
	Predicted scheme cost as made at milestone 7.	(M)
	Date Milestone 7 was reached	(N)
	Variance calculation for 5E	(O) F-D
	Variance calculation for 5F	(P) M-F
	Variance calculation for G	(Q) M-D
	Live data for 5E	(R) =IF[(TODAY –(G))>365,0,1]
	Live data for 5F and 5G	(S) =IF[(TODAY –(N))>365,0,1]
	Live data for 5A	(T) =IF[(TODAY –(E))>365,0,1]
	Live data for 5B	(U) =IF[(TODAY –(J))>365,0,1]
	Live data for 5C and 5D	(V) =IF[(TODAY –(L))>365,0,1]
	Predicted length of construction at Milestone 1	(W) C-B
	Predicted length of construction at Milestone 4	(X) I-H
	Actual length of construction	(Y) L-K
	Number of days variance for 5A	(Z) E-A
	Number of days variance for 5B	(AA) X-W
	Number of days variance for 5C	(AB) Y-X
	Number of days variance for 5C	(AC) Y-W

PI 5: Time and cost predictability
Measure: Provide accurate financial and programme management

<u>Calculations</u>	<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
		<u>Rolling 12 Month Performance.</u> (current plus preceding 11)			
PI 5A (A)		$IF(T=1), THEN(\Sigma(Z>0))/\Sigma(T)$	Integer	0	G+T
PI 5B (A)		$IF(U=1), THEN(\Sigma(AA>0))/\Sigma(U)$	Integer	0	G+T
PI 5C (A)		$IF(V=1), THEN(\Sigma(AB>0))/\Sigma(V)$	Integer	0	G+T
PI 5D (A)		$IF(V=1), THEN(\Sigma(AC>0))/\Sigma(V)$	Integer	0	G+T
PI 5E (A)		for all Schemes where R=1 $[(\Sigma O)/\Sigma D]*100$	Percentage	0	G+T
PI 5F (A)		for all Schemes where S=1 $[(\Sigma P)/\Sigma F]*100$	Percentage	0	G+T
PI 5G(A)		for all Schemes where S=1 $[(\Sigma Q)/\Sigma D]*100$	Percentage	0	G+T

Note: (M) monthly indicator (A) annual indicator

Σ = the aggregation of input data for the current month and the preceding 11 months. This data is deleted after 12 months inclusion in the results, see definition of live data.

APPENDIX 1- Time and Cost Phases for PI 5											
time →											
Design Phase			Possible delay between completion of works info and start of pricing	Pricing Phase		Agreement of predicted start and finish dates	Possible delay between agreement of target price and start of construction	Construction Phase			Agreement of final account at first valuation after completion
Commitment to detailed design	Design	Completion of detailed design		Pricing	Agreement of Cost			Actual start of Construction	Construction	Actual completion of Construction	
1		2			3	4		5		6	7
Milestone											
<u>Milestone Definitions</u>											
<u>Design Phase</u>											
<ol style="list-style-type: none"> 1. Commitment, after final VM, to completion dates and initial <i>scheme cost</i>. These dates are drawn from a programme covering works funded for a financial year, to be compiled and agreed by 31st March, for all <i>eligible schemes</i>. For schemes issued after 31st March the earliest possible dates and <i>scheme cost</i> are to be agreed within the team. 2. Completion of detailed design as evidenced by the availability of a COMPLETE design package (this may not coincide with the issue of the design package, subject to programme and unforeseen delays in starting pricing). Any issue of additional information would put back the end of the design stage. If the HA request a hold on pricing then the end of the design stage is the stage at which the complete package is ready for issue. 											
<u>Pricing Phase</u>											
<ol style="list-style-type: none"> 3. Agreement of Cost (e.g. Target Cost, Derived Price, Task Order Agreement and Tender price agreement) 											
<u>Construction Phase</u>											
<ol style="list-style-type: none"> 4. Point at which an agreed construction programme is published. This will normally coincide with <i>milestone 3</i>. 5. Actual start of works on site including any traffic management. 6. Completion as defined under the Contract and including removal of all traffic management. 7. Agreement of final account at first valuation after completion. 											

PI 6: Data Management.

Measure: Maintain accurate data and inventory records					
<u>Purpose/Description</u>	To ensure that all assets maintained by the <i>Provider</i> , as well as all fault data, are recorded in the TPMS asset database. This allows the <i>Provider</i> to calculate and monitor asset availability, condition, faults and residual life, and so be better equipped to manage the assets under its control.				
<u>Indicator</u>	PI 6A Percentage of TPMS populated.				
<u>Definitions</u>	<p><i>TPMS</i> Technology Performance Management System.</p>				
<u>Data Source</u>	Scheme data, TPMS, HALOGEN				
<u>Data Input</u>	Frequency/Reporting Period: Calendar month				
<u>Fields</u>	To be Agreed (A) (B) (C)				
<u>Calculations</u>	<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
	<u>Individual Monthly Performance.</u>				
	PI 6A (M)	TBA	Percentage	1	G+T
	<u>Rolling 12 Month Performance.</u> (current plus preceding 11)				
	PI 6A (A)	TBA	Percentage	1	G+T
	<u>Note:</u> (M) monthly indicator (A) annual indicator				
	Σ = the aggregation of input data for the current month and the preceding 11 months.				

PI 8: Quality management
Measure: Ensure effective business processes and resource management systems

Purpose/Description To assess how closely the *Provider* is complying with his contractual requirements, and how effectively it deals with instances of non-conformance.

Indicators

- PI 8A Number of Quality Management Points at start of the month.
 PI 8B Number of Quality Management Points cleared in the month.
 PI 8C Number of Quality Management Points accrued in the month.
 PI 8D Number of Non-conformities overdue (cumulative) at end of the month.

Definitions

Quality Management Points These are awarded to the *Provider* in accordance with the Quality Table in the Contract Data.

Non-conformity These can occur without management points being awarded, so long as the necessary reports are raised to correct these, hence why these are measured as well as the number of management points awarded.

Data Source

Provider's register of Quality Management Points, Quality Management System, Non-Conformity Reports

Data Input

Frequency/Reporting Period: Calendar month

Fields

- Number of Quality Management Points at start of the month. (A)
 Number of Quality Management Points cleared in the month. (B)
 Number of Quality Management Points accrued in the month. (C)
 Number of Non-conformities overdue (cumulative) at end of the month. (D)

Calculations

<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
<u>Individual Monthly Performance.</u>				
PI 6A (M)	(A)	Integer	0	G+T
PI 6B (M)	(B)	Integer	0	G+T
PI 6B (M)	(C)	Integer	0	G+T
PI 6B (M)	(D)	Integer	0	G+T

Note: (M) monthly indicator (A) annual indicator

PI 9: Availability of Traffic Technology Systems

Measure: Maximise availability of Traffic Technology Systems					
<u>Purpose/Description</u>	To provide a measure of the proportion of Technology Assets maintained by the <i>Provider</i> that are available for providing a service to the road user.				
<u>Indicators</u>	PI 9A Actual Operational Availability of technology system. PI 9B Contract Operational Availability of technology system.				
<u>Definitions</u>	<p><i>Technology system</i> The above measures are calculated for each of the following technology systems maintained by the <i>Provider</i>:-</p> <ul style="list-style-type: none"> • Emergency Roadside Telephones • Signs • Signals • CCTV • Midas <p><i>Actual Availability</i> All faults irrespective of responsible party are included in calculating this measure of availability.</p> <p><i>Contract Availability</i> Only faults attributed to <i>Provider</i> responsibility are included in calculating this measure of availability.</p> <p><i>Operational Availability</i> Lost hours of service are deducted from potential total hours of asset availability in order to calculate available hours. Degraded hours of service are not deducted. For definitions of “lost” and “degraded”, see MCH1867B, Table A4.</p>				
<u>Data Source</u>	To be agreed				
<u>Data Input</u>	Frequency/Reporting Period: Calendar month				
<u>Fields</u>	Technology system Actual Operational Availability. (A) Technology system Contract Operational Availability. (B)				
<u>Calculations</u>	<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>
	<u>Individual Monthly Performance.</u>				
	PI 9A (M)	A	Percentage	2	G+T
	PI 9B (M)	B	Percentage	2	G+T
	<u>Note:</u> (M) monthly indicator (A) annual indicator				

PI 11: Asset condition

Measure: Maintain asset condition and deliver programme of renewal Schemes					
<u>Purpose/Description</u>	A measure allowing the technology area team to monitor and manage long-term asset performance so as to maintain a satisfactory level of service provided to the road user.				
<u>Indicators</u>	<p>PI 11A Percentage of technology assets registered within TPMS with an RDL below 2 years.</p> <p>PI 11B Percentage of technology assets registered within TPMS with an APIC score below 3.</p>				
<u>Definitions</u>	<p><i>Technology system</i> The above measures are calculated for each of the following technology systems maintained by the <i>Provider</i>:-</p> <ul style="list-style-type: none"> • Emergency Roadside Telephones • Signs • Signals • MIDAS • CCTV. <p><i>TPMS</i> Technology Performance Management System.</p> <p><i>RDL</i> Residual Design Life. Number of years left before an asset should be replaced (according to the manufacturer) without taking into consideration that asset's past performance or current condition.</p> <p><i>APIC</i> Asset Performance Indicator Classification. One of the technology Key Performance Indicators calculated within TPMS. A score for each asset of 0-10 is calculated, made up of the following weighted components:-</p> <ul style="list-style-type: none"> • Asset Condition Rating • Residual Design Life • Reliability (How frequently an asset develops faults) • Maintainability (Time required to repair an asset's faults) • Obsolescence 				
<u>Methodology</u>	A high score for 11B would indicate that the condition of technology systems is in need of review, and suggest that renewal investment and planning is required. A high score for 11A should prompt the <i>Provider</i> to closely monitor APIC scores, but would not necessarily mean a high score for 11B.				
<u>Data Source</u>	TPMS				
<u>Data Input</u>	Frequency/Reporting Period: Calendar month				
<u>Fields</u>	<p>Total number of technology system assets registered within TPMS (A)</p> <p>Number of technology system assets, of (A), with an input RDL. (B)</p> <p>Number of technology system assets, of (B), with an RDL < 2 years (C)</p> <p>Number of technology system assets, of (A), with a calculated APIC (D)</p> <p>Number of technology system assets, of (D), with an APIC < 3 (E)</p>				
<u>Calculations</u>	<i>Measure</i>	<i>Calculation</i>	<i>Type</i>	<i>Decimals</i>	<i>Report</i>
	<u>Individual Monthly Performance.</u>				
	PI 11A (M)	(C/A)*100	Percentage	1	G+T
	PI 11B (M)	(E/A)*100	Percentage	1	G+T
	<u>Note:</u> (M) monthly indicator (A) annual indicator				

PI 12: Fault analysis.

Measure: Maximise availability of Traffic Technology Systems																
<u>Purpose / Description</u>	To assess the quality and reliability of technology infrastructure, and the <i>Provider's</i> efforts to improve this performance. To assess the effectiveness and efficiency of the <i>Provider's</i> fault rectification.															
<u>Indicator</u>	PI 12A Proportion of responses to hard faults that were a 2nd response to a fault initially occurring no more than 1 calendar month beforehand.															
<u>Definitions</u>	<p><i>Technology Infrastructure</i> Encompasses NMCS2, COBS, and sub-systems such as MIDAS and CCTV.</p> <p><i>NMCS2</i> 2nd generation National Motorway Communications System. Provides facilities for Regional Control Centres to operate motorway devices.</p> <p><i>COBS</i> Control Office Based System. A computer system sitting within Regional Control Centres allowing the operation of all roadside equipment.</p> <p><i>Hard Fault</i> A disruption or potential hazard to the operation, safety and/or integrity of the Area Network (or adjacent land) that requires an immediate response by the <i>Provider</i>. The fault has to have existed in HALOGEN for a duration longer than 20 minutes.</p> <p><i>2nd Response</i> Effort to fix a re-occurring fault that has the same symptoms as the original fault initially thought to have been rectified.</p>															
<u>Data Source</u>	HALOGEN fault logs, TPMS															
<u>Data Input</u>	Frequency/Reporting Period: Calendar month															
<u>Fields</u>	<p>Number of responses to hard faults (A)</p> <p>Number of 2nd responses to hard faults initially occurring no more than 1 calendar month beforehand (B)</p>															
<u>Calculations</u>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><u>Measure</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Calculation</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Type</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Decimals</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Report</u></th> </tr> </thead> <tbody> <tr> <td colspan="5" style="padding-left: 20px;"><u>Individual Monthly Performance.</u></td> </tr> <tr> <td>PI 12A (M)</td> <td>(B/A)*100</td> <td>Percentage</td> <td>0</td> <td>G+T</td> </tr> </tbody> </table> <p><u>Note:</u> (M) monthly indicator (A) annual indicator</p>	<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>	<u>Individual Monthly Performance.</u>					PI 12A (M)	(B/A)*100	Percentage	0	G+T
<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>												
<u>Individual Monthly Performance.</u>																
PI 12A (M)	(B/A)*100	Percentage	0	G+T												

PI 13: Internal customer satisfaction.

Measure: Operate as an integrated team																
<u>Purpose / Description</u>	To ascertain how well the <i>Provider</i> is meeting the needs of its internal customers, and therefore the needs of road users.															
<u>Indicator</u>	PI 13A Average of satisfaction scores awarded to the <i>Provider</i> by its internal customers.															
<u>Definitions</u>	<p><i>Internal Customers</i> Organisations that the <i>Provider</i> works with and behalf of. These include:</p> <ul style="list-style-type: none"> • Managing Agent Contractors (MAC) • Regional Control Centres (RCC) • National Traffic Control Centre (NTCC) • National Roads Telecommunications Services (NRTS) <p>An internal customer is likely to express dissatisfaction when it receives negative feedback from road users. In this way, internal customer satisfaction can be seen to be an indirect measure of road user satisfaction.</p> <p><i>Satisfaction Score</i> Awarded by respondents to a short questionnaire undertaken quarterly that is used by the <i>Provider</i> to find out how it is perceived by its internal customers.</p>															
<u>Methodology</u>	13A will be calculated quarterly, as opinions are unlikely to change significantly from month-to-month, and form filling on a monthly basis could be overly burdensome on respondents. The questionnaire will try to establish how well the <i>Provider</i> has listened to, communicated with and understood the customer, the quality and promptness of the <i>Provider's</i> work, and any specific problems that the customer has with the <i>Provider</i> .															
<u>Data Source</u>	Customer satisfaction forms															
<u>Data Input</u>	Frequency/Reporting Period: Quarterly															
<u>Fields</u>	<p>Total of questionnaire scores awarded to <i>Provider</i> in last quarter (A)</p> <p>Number of questionnaires completed and returned to <i>Provider</i> in last quarter (B)</p>															
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<u>Measure</u>	<u>Calculation</u>	<u>Type</u>	<u>Decimals</u>	<u>Report</u>												
Quarterly.																
PI 13A (Q)	A/B	Integer	2	G+T												