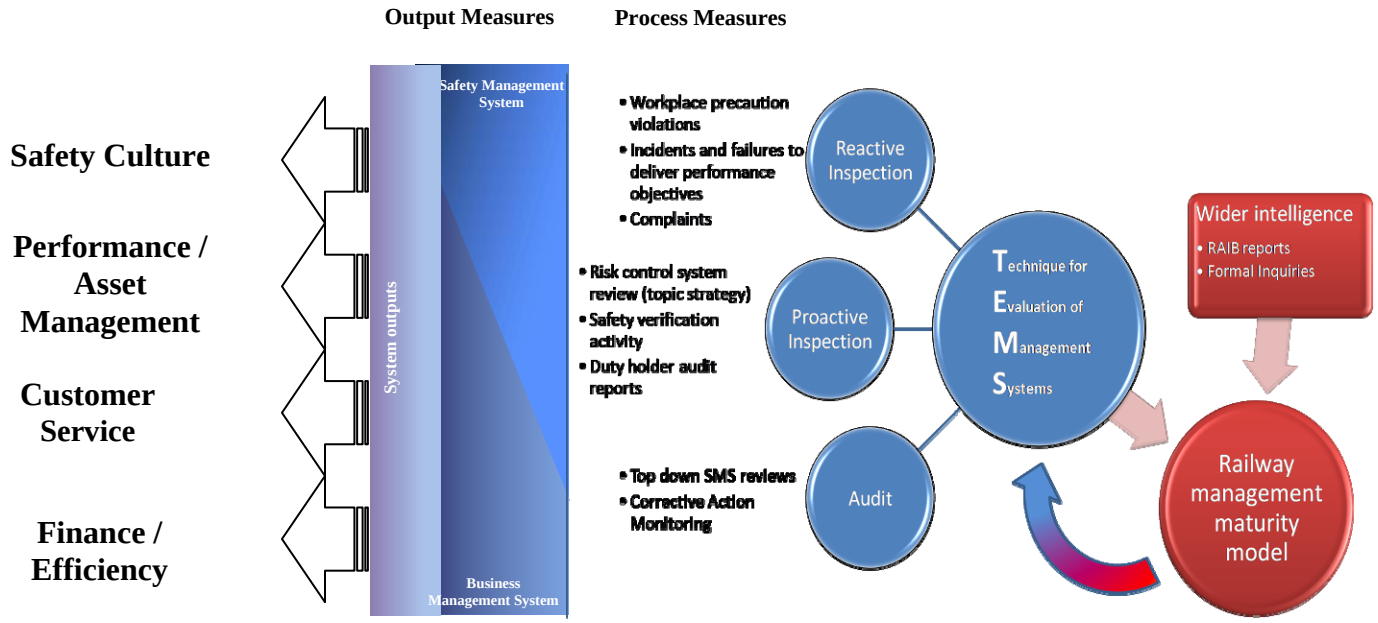
OFFICE OF RAIL REGULATION

Techniques for the evaluation of management systems

User manual



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Foreword

Effective management systems are essential for our five-year strategy to be successful. An organisation can only achieve excellence in risk control if their safety-management systems are excellent. Understanding whether or not an organisation's safety-management system can achieve excellence is an important part of our work.

We must ensure the railway industry delivers our corporate strategy, and use the information and intelligence we gain from our activities to inform how and where we take action. We have developed an approach that builds on what we already do well, with extra activities that allow us to review safety-management arrangements more effectively. We refer to our activities relating to management systems as 'TEMS' – techniques for the evaluation of management systems. This guidance aims to help account holders understand what we expect from them and how they can use TEMS to assess management systems in a systematic way.

A safety-management system is more than policy and procedures, it is the way in which an organisation delivers its business objectives safely through management of the physical, managerial and cultural aspects of the organisation, from the Board right through to frontline staff.

We must focus our efforts on identifying good practice, correcting systemic deficiencies and challenging ourselves and industry to continually improve. By doing so we can influence organisations to aim for (and achieve) excellence by 2014.

Ian Prosser

HM Chief Inspector of Railways

May 2010

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Part A Our policy and what we mean by excellence

Our corporate strategy states that our vision is for the railway industry to achieve excellence in relation to risk control and safety culture.

We will inspect organisations to see whether their management systems can achieve excellence, and to promote improvement in order to achieve excellence.

According to the EFQM Excellence Model 2009, excellence relating to management systems can be achieved by:

"providing visionary and inspirational leadership, coupled with constancy and consistency of purpose, delivered through the operation of interdependent and interrelated organisational management systems which maximise the contribution of employees through their development and involvement to deliver results that exceed stakeholder expectation and create sustainable customer value."

These core values are consistent with a number of internationally recognised management standards and are features of high reliablility organisations.

We recognise that theories on management systems cannot cover all of the uncertainties and interactions presented by the operation of a business. However, we can gain a good understanding of an organisation by assessing certain commonly recognised aspects based on the Health and Safety Executive's publication 'Successful Health and Safety Management' (HSG 65). Those elements are as follows.

- Governance, **policy** and leadership
- **Organising** for delivery of control and communication
- Co-operation, competence and development of employees at all levels
- **Planning** and **implementing** risk controls through co-ordinated management arrangements
- **Monitoring**, **review** and **audit** to ensure effective governance, management and supervision.

We cannot efficiently identify, inspect and evaluate all of these aspects of a management system through a single inspection. So we will also use information gathered from a range of inspection activities to build up a picture of an organisation's management system. The inspection techniques used are generally the same as we use now, with the additional focus on inspecting the management system.

These Techniques for the Evaluation of Management Systems (TEMS) will include assignment work, general risk control inspection, investigations and specific SMS audit inspections. In some cases we will carry out dedicated safety-management-system audit inspections. Part C covers this in more detail.

We will analyse an organisation's ability to deliver excellence in safety culture and risk control using our Railway Management Maturity Model (RM3). That model uses an internationally recognised approach to assessing capability that is consistent with traditional SMS frameworks (HS(G) 65 and BS EN OHSAS18001).

RM3 promotes systematic analysis of a management system and will help us to identify areas of improvement as well as good practice. We aim to provide an environment where the railway industry can identify and solve its own problems and will signpost good practice identified. Part C of this manual covers RM3 in more detail.

Safety-management systems, and safety certificates and authorisations

Applications for safety certificates and authorisations allow us to understand what activities an organisation should be carrying out in connection with operational safety. Inspecting management systems will help us to make sure that the statements made in applications are correct and can lead to excellence in risk control.

Inspections should also identify whether a management system makes sure that the organisation meets its health and safety responsibilities set by law, particularly the Management of Health and Safety at Work Regulations 1999.

More information on the legal aspects of safety-management systems is given in appendix 1.

[2] derived from Petersen, D Techniques of Safety Management – a systems approach, 4th Edition, 2003, ASSE pp 31-40

Part B Principles of safety management

There are a number of sources of guidance and information on safety management. Details of the most useful guidance are given in the 'further reading' section of our Railway Management Maturity Model.

The following principles (from Petersen D, Techniques of Safety Management – a systems approach, 4th Edition, 2003) are critical to our approach to inspecting safety-management systems.

1 Safety is most effectively managed when it is integrated with other management activities and managed in the same way.

Management activities are focused on using resources effectively to achieve goals.

There are three levels of management activity linked to managing safety:

- Governance/Executive Management level;
- risk-control systems; and
- workplace precautions.

This is clearly outlined in HS(G) 65. Figure 1 shows how these levels fit together.

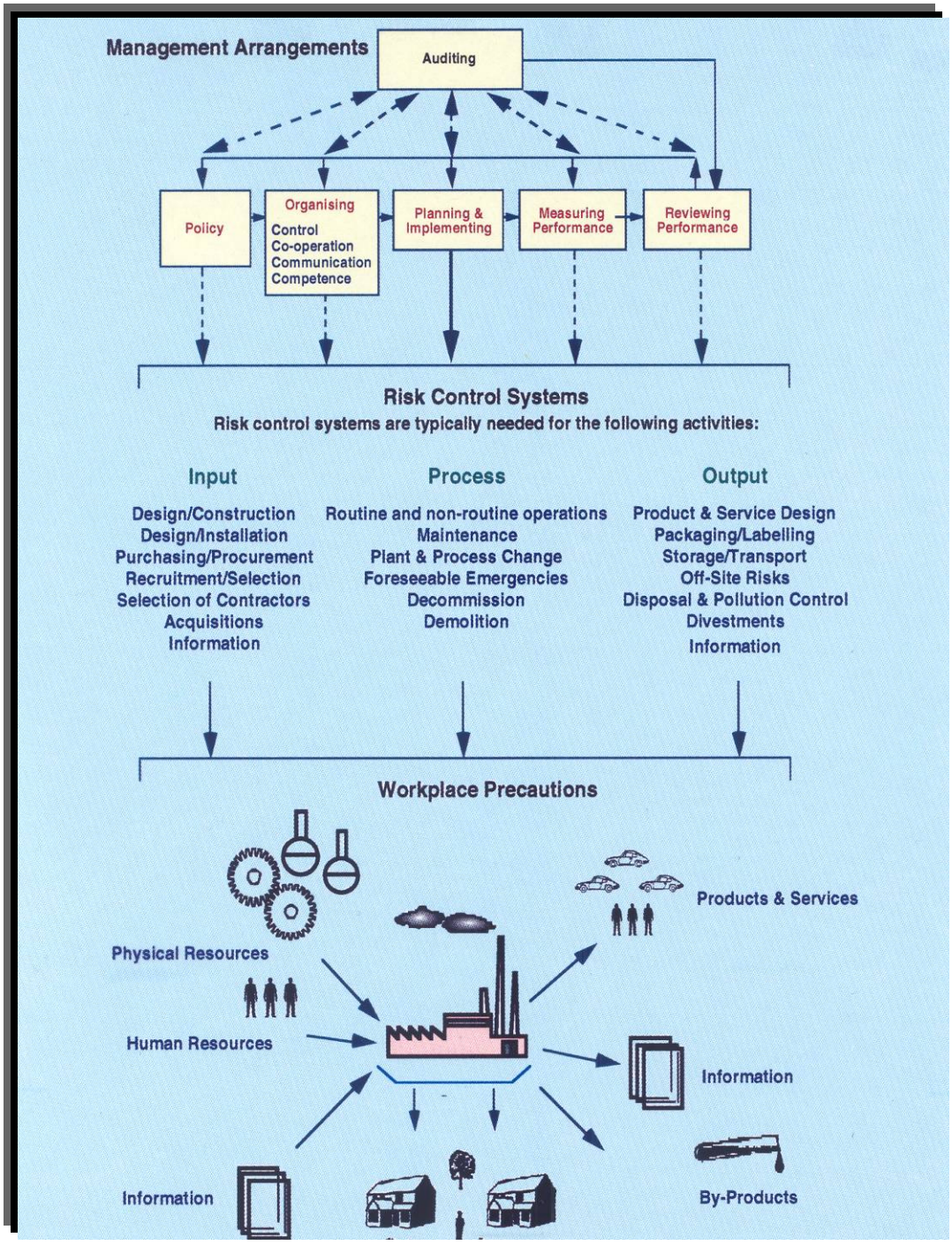

Figure 1 HS(G)65 approach to SMS

Management level

It is at this level that top management lay down the framework for how the organisation controls risks. This level is essential as it makes sure the full range of risks created by the organisation is managed and kept under review to drive continuous improvement. In an industry which is reacts to market forces, effective management is essential for controlling risk. Good management

arrangements at this level will reflect the “POMAR” framework of HS(G) 65 and BS EN OHSAS18001. SMS inspection is intended to sample at this level and then correlate this with the risk-control systems and workplace precautions inspected during assignments, investigations and general inspection activity. Duty holder commissioned audits may give a useful insight into the organisation’s management arrangements.

Risk-control systems

This is the level at which the higher level arrangements become focused on the risk presented by different activities in the organisation. A good risk control system will include the elements seen in the overall management system (Policy, Organising, Planning and Implementing, Monitoring, Review and Audit). The focus of this level is making sure that precautions in the workplace are adequate and in place. It focuses on the processes such as design/procurement, maintenance, control of contractors and competence. HS(G) 65 shows that organisational activities can be broken down into three areas – input, process and output.

Case study
A train-operating company is introducing new rolling stock. The company’s policy is to avoid manual handling whenever possible. The new trains include a ramp which gets rid of the need for a guard to position a ramp for people with disabilities. This policy requires a number of risk controls. These include the following. (with the relevant risk control listed in parenthesise):
• Making sure that the new ramp can be used safely in all foreseeable situations (local risk assessment, change management); .
• Making sure the ramp is maintained correctly (asset management, competence management)
• Making sure the ramp is used correctly (competence management)

Workplace precaution level

This is the level at which specific arrangements are put in place to make sure that risks are controlled. They relate to specific issues such as controlling train movements at a specific location or the activities of a Controller of Site Safety (COSS) on a worksite. This level is the output level of the management system. Good management systems will be focused on making sure that this level is working efficiently and effectively to manage the organisation’s risks.

2 Any unsafe act, unsafe condition, near miss or accident is a symptom of a possible failure of the management system.

The management system is there to make sure that the risk controls prevent these symptoms from arising. If there are a lot of these symptoms, or they are present in several parts of the organisation, it is vital that the organisation

reviews its management system to understand where and why the failures are happening.

3 Safety-management systems should focus on making sure that the physical, managerial, procedural and cultural elements of the organisation are managed.

Achieving excellence in risk control, and the consequential reduction in risk, is only possible if all the aspects of the workplace are managed. Good management systems will consider how best to improve both the efficiency and effectiveness of risk controls. This means that if an organisation is renewing its facilities there is the opportunity to eliminate or reduce some of the physical factors that lead to onerous procedures which impact on productivity and create an environment which may increase the potential for errors or violations.

Wider business decisions can have both a positive and a negative effect on the culture of the organisation. Organisations should consider the implications of these business decisions and put appropriate arrangements in place to manage any related risk. Examples of this include making a decision to remove overtime, restructuring, and changing the facilities provided for employees.

4 The safety-management system should take account of, and shape, the culture of the organisation

The management system and culture depend on each other. The organisation, as a collection of individuals will present a range of attitudes, beliefs and perceptions. The challenge of the management system is to make attitudes, beliefs and opinions consistent with what is needed to meet the business' objectives. However, the management system needs to take account of the organisation's culture to effectively control risk.

5 There is no one right way to achieve safety in an organisation. However, there are some common characteristics that are seen in organisations that manage safety well.

This is the fundamental premise of management models which aim to reflect important features of a complex, interdependent dynamic system. HS(G) 65 provided a solid overview of those features, as they apply to effective safety management. As management theory develops and management systems become increasingly integrated, discrete safetymanagement systems will be less common. This will put pressure on inspectors to draw out the features of the system that deliver safety as well as opposed to other risk-management functions. While the process of managing safety may be less visible, the outputs should continue to be clear (namely, compliance with legislation and continual improvement in the control of risk.

Part C Roles and responsibilities

This section summarises the roles and responsibilities associated with the TEMS process. The account holder is responsible for assessing an organisation's management system during the period covered by its safety certificate or authorisation or by 2014 if the dutyholder is not covered by these requirements.

Account holder

- Is responsible for making a decision on the quality of an organisation's safety-management arrangements. They will do this within the framework set out in the Railway Management Maturity Model (RM3).

- Sets out, in consultation with their manager, the five-year inspection strategy for the organisation.

- Decides on the most appropriate method of inspection for the parts of the management system being inspected.

- 4. Decides on composition of inspection team. in relation to areas that will be covered (see also point 9)

- Communicates the plan of action with the organisation and employee representatives.

- Assesses the management systems that the organisation has in place. & carries out verification of these via the most appropriate method

- Gathers relevant information. (This may include information from Network Rail routes.)

- Raises relevant issues as they come to light during the inspection.

- Gets help and support from experts when necessary.

- Has been on the three-day SMS course.

- Produces a plan which includes aims and objectives, methods, expected outcomes and timescales.

- Is familiar with the content of HSG 65 and the POPMAR model.

- Should decide what strengths and weaknesses the organisation has after carrying out the inspections.

- Produces a report within three weeks of completing an SMS inspection.

- Makes sensible and practical recommendations for improvements where appropriate.

- Meets organisations to discuss the inspection report and findings (if the organisation asks for this feedback).

- Liaises with the team administrator or searches COIN to gather information on the types of complaints and incidents investigated.

- Raises any important issues with the group account holder (First, Go-Via, Stagecoach or NEX) if input from a higher level is needed.

- Knows when enforcement action should be considered or taken because something needs urgent attention.

Account holder's manager

- Reviews the five-year inspection strategy to make sure they are satisfied with the methods and timescales suggested.

- Make sure the topics being looked at are consistent across all organisations being inspected during the same inspection cycle.

- Regularly reviews progress with the account holder.

- Promotes joint working within the inspection team.

- Gives the account holder advice on enforcement issues that may arise.

- Tells Deputy Director about any concerns an organisation may have about the inspection and can provide evidence to support the account holder's views.

Team administrator

- Reviews COIN for any previous complaints and investigations that may be relevant to topics being looked at during the current inspection.
- Makes sure COIN records are kept up to date.
- Monitors progress of the investigation on behalf of the account holder's manager.
- Updates the progress tracker on behalf of the account holder (if asked to do so).
- Keeps account holder informed of any complaints that may affect the work they are carrying out.

Part D Inspecting management systems

Overview of TEMS and RM3

Our regular inspection activities allow us to check compliance with specific regulations, such as those relating to working at height, construction and design management. Our focus is on making sure that health and safety risks are controlled, so far as is reasonably practicable (or beyond if required by specific legislation).

TEMS draws existing inspection activities together and blends them with SMS audit inspections in order to sample the management arrangements and build up a picture of an organisation's ability to deliver excellence in risk control. RM3 helps account holders evaluate this picture consistently with other account holders.

Figure 2 shows how general inspection and management systems inspections are related. As the diagram shows, the inspection activities vary in the mix of interviews, observations and checking documents involved. An inspection of a management system requires a more formal approach than other inspections. This is to make sure the logistics are correct to produce the best possible inspection activity and reduce the effect on the organisation.

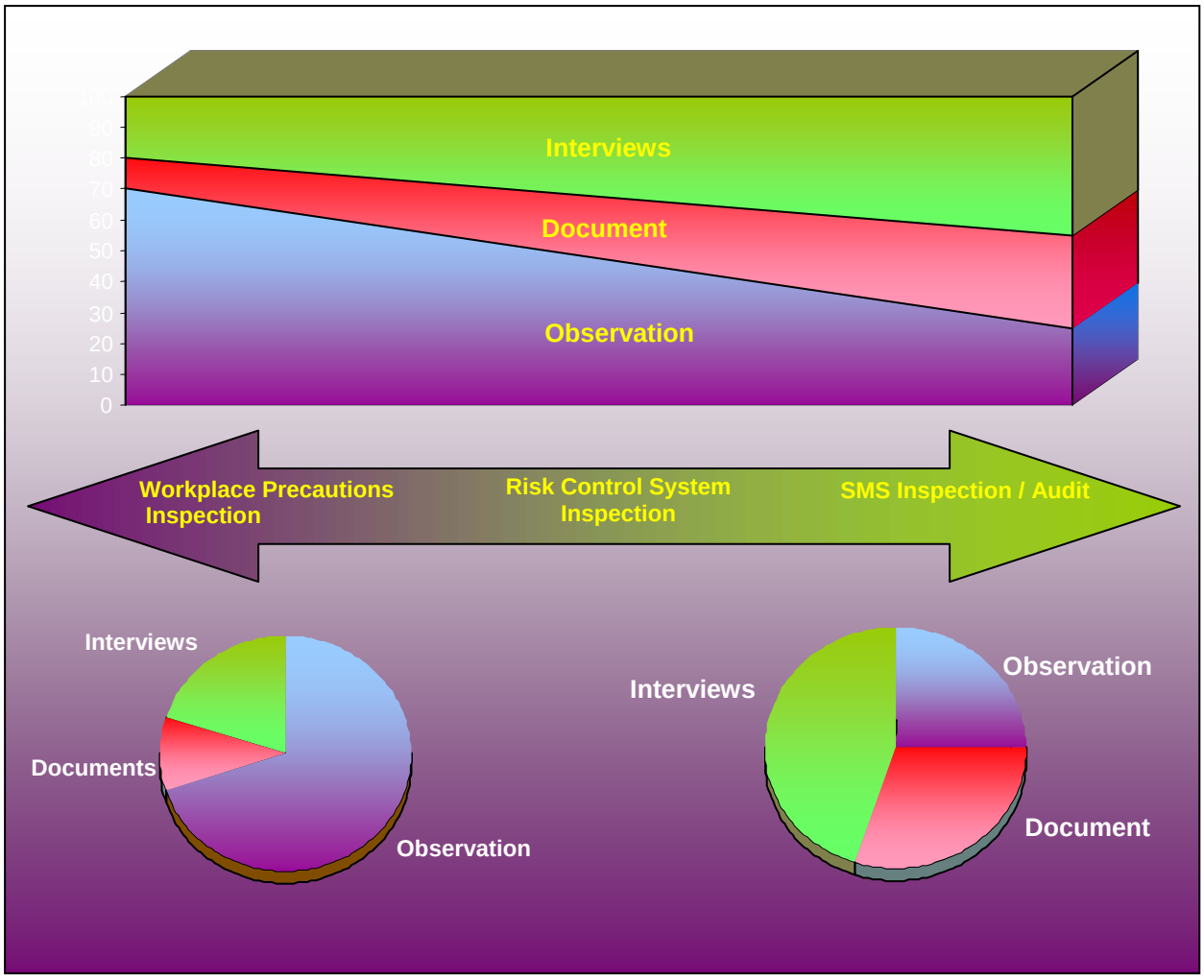

Figure 2 **The inspection spectrum**

Inspecting safety-management systems

SMS audit inspections are similar to traditional audits, which many inspectors will have carried out before. As with traditional audits, SMS audit inspections are more formally structured and will require the development of protocols to guide the inspection. SMS audit inspections are focused on understanding what the organisation is trying to achieve in connection with safety management, and how its safety-management systems deliver this.

Account holders have access to electronic documents to help inspectors prepare, carry out and analyse SMS inspections. These electronic documents include the following.

- A draft duty holder notification letter (form TEMS1)

• Inspection planning forms (form TEMS2)

• Blank inspection protocol form (form TEMS3a) and question sets. These should be tailored for the organisation, areas covered, and the parts of the organisation being inspected.

• SMS inspection data collection form (form TEMS3b)

• A combined protocol and data collection form (TEMS3c) which can be used instead of forms TEMS3a and TEMS3b

• Blank inspection reports (form TEMS4)

• Account holder RM3 evidence collation form (form TEMS5)

SMS inspections are covered by the SMS audit inspection training course, which all inspectors must go on. Part 3, Inspection process, explains how to plan, perform and report an SMS inspection.

Combining inspections

SMS inspections can be combined with risk-control and workplace-precaution inspections to provide a full ‘vertical slice’ of the organisation, i.e. a full snapshot’ of how well the whole system is working. The advantage of this approach is that it provides an overview of the whole management system (from the boardroom to frontline staff) in one go.

The TEMS planning process

The overall purpose of TEMS is to identify whether the management arrangements provide and maintain risk-control systems that protect the safety of people affected by the organisation’s activities. The account holder chooses the technique to use. Their decision is led by our business plan, the status of the organisation’s safety certificate or authorisation (if appropriate), and what resources are available.

There are four main stages in the TEMS approach:

- setting the five-year inspection strategy;
- defining the annual inspection activities;
- carrying out the annual inspection activities; and
- evaluating the management arrangements.

Setting the five-year inspection strategy

The account holder must form an opinion on an organisation's management system. TEMS provides guidance on what an excellent management system would contain. This guidance is the Railway Management Maturity Model (RM3). To form a reliable opinion the account holder would need to make sure that the inspector assesses all of the elements set out in RM3.

The account holder, in consultation with their manager, will decide the depth and number of inspections needed to assess an organisation during a five-year period. This should take account of the size, structure and nature of the organisation. The inspector should use our cross-functional programmes, issues relating to safety certificates and authorisation (if appropriate) and RM3 to set the five-year strategy.

Assessment may be made using the results of routine inspections, investigations or through specific SMS inspections.

At the end of this stage there should be a five-year plan that sets out which elements of RM3 need to be explored, when to do this, and which inspection technique should be used. The inspector should review the strategy each year. These reviews allow the inspector to take account of new issues.

If an organisation is likely to change ownership or corporate structure in the five years covered by the strategy, this should be taken into account. In these situations, certain aspects of the organisation's management system will be of a higher priority (for example, change management).

Form TEMS 5yr Strategy is a template of a plan that inspectors should complete within six weeks for organisations that have a safety certificate or authorisation, and by December 2010 for all other organisations. The strategy should be stored on the COIN parent case.

Defining the annual inspection activities

Inspectors need to define the inspection activities they will carry out each year during the five-year strategy. The definitions should include details of the dates when the inspections will take place and, for SMS inspections, the resources the organisation will need to provide. Form TEMS Annual Plan provides a template that inspectors can use at this stage. Again, inspectors should record their defined activities on the parent case in COIN.

Using an annual review permits an account holder to take stock of emerging issues, both from within their account and also intelligence from wider industry.

Account Holder executes the annual inspection activities

This stage is divided into two inspection activities – SMS inspections and risk-control (general) inspections. Separate guidance on

SMS-inspections is given in part 3 on the following page. General inspections are covered in a separate manual, <name>.

The criteria and sub-criteria set out in RM3 guide the inspections, but the inspector can tailor the inspection to make sure it is relevant to the organisation and the specific areas they are inspecting.

Evaluating management arrangements

After every inspection, the account holder must analyse the findings to assess the quality of the management system. The account holder should update the dutyholder SMS evaluation/evidence matrix. Form TEMS4 is a template matrix. It guides inspectors through an evaluation, makes sure there are links to supporting evidence (COIN references and so on), and allows inspectors to monitor the development of the organisation's safety-management system. Inspectors should keep the updated version of the form on the COIN parent case.

When an account holder reviews their five-year inspection strategy each year they should use their evaluation to shape the annual inspection activities for the following year.

Quality Assurance checks will be made of a 10% sample of evaluation forms. These will be completed by a competent safety management systems specialist.

Inspection process

This section explains how an account holder should plan, carry out and report on SMS audit inspections.

Step 1 Initiating the inspection

An SMS audit inspection needs to be planned by both the inspector and the organisation to make sure that it is completed efficiently and that it sufficiently covers the necessary aspects of the organisation's elements. The following steps are designed to help inspectors plan and carry out SMS audit inspections.

a Appoint a lead inspector

Those responsible for managing the inspection should appoint a lead inspector. The lead inspector will normally be the account holder. Also, the lead inspector should have at least been on the SMS inspection course. Lead inspectors can get advice and support from the safety management systems specialist.

Occasionally, a joint SMS inspection may need to be carried out. This may be with HSE or with other parts of our organisation. If a joint inspection is carried out, before the inspection takes place, we and the other party must agree our and their specific responsibilities, particularly relating to the lead inspector's authority.

b Producing written objectives

Within the five-year strategy, an individual SMS audit inspection should be based on written objectives. These are defined in the Railway management maturity model (RM3).

The RM3 criteria define what the inspection should accomplish. They will help inspectors assess the following.

- How successful the organisation's management system, or parts of it, is at meeting the criteria.
- Whether the management system is capable of meeting legal, regulatory and contractual requirements.
- How effective the management system is in meeting its objectives.
- Where the management system could be improved.

The objectives should describe the extent of the inspection, such as locations, activities and processes to be inspected.

If a combined inspection is being carried out, the lead inspector must make sure that the written objectives are appropriate to the nature of the combined inspection.

c Decide whether it is feasible to carry out the SMS inspection

To decide whether it is possible to carry out an effective inspection, the lead inspector should consider whether:

- there is enough relevant information to plan the inspection;
- the organisation will co-operate; and
- the time and resources needed are available.

d Appoint the SMS inspection team

When the SMS inspection has been declared feasible, an audit inspection team. should be selected, taking into account the competence needed to achieve the objectives of the SMS inspection. The annual planning process should have identified what resource is required and when. This will make formalising the team more straightforward.

e Formalise the SMS inspection arrangements

Before the SMS inspection the account holder should write to the dutyholder to:

- agree the timing and location of inspections;
- give an indication of the scope of the inspection;
- provide information on the inspection team;
- ask for access to relevant documents, including records;
- find out about any site safety rules the inspectors will need to follow;
- make arrangements for an initial meeting (if necessary) before the inspection; and
- agree the organisation's main contact and any arrangements for staff from the organisation to observe the inspector's activities.

Form TEMS1 provides a template letter that the account holder can use. This should be adapted for the account holder's and the organisation's specific needs and be the focus of the SMS inspection.

Step 2 Review documents

The lead inspector should make a list of documents the inspection team needs and provide this to the dutyholderbefore the SMS audit inspection.

Each member of the inspection team should review the provided information relevant to their area of inspection and complete the relevant work documents. Those work documents will include:

- checklists and question sets (forms TEMS3a and TEMS3c); and
- forms for recording information such as supporting evidence, findings and records of meetings (forms TEMS3b and TEMS3c).

Using checklists and forms should not restrict the extent of the inspection activities, which can change as a result of issues identified during the SMS inspections.

Work documents, including records resulting from their use, should be recorded on COIN.

Step 3 Agree the audit inspection programme

To make the most of the time spent with organisations, and to keep disruption to a minimum, the lead inspector should agree an inspection programme with both the inspection team and the organisation.

Form TEMS2 is a template which the lead inspector can use to set out the inspection programme. The lead inspector should give a copy of the programme to the inspection team and the organisations so they can each prepare for the SMS inspection.

When planning the interviews that will be held as part of the inspection, some ‘free’ time in the day should be timetabled to allow the inspection team to discuss any issues that arise, collect documents they need, and allow for interviews that go on for longer than expected. We suggest that in a 7.5-hour day, no more than five hours is set aside for interviews.

The programme should be finalised at least two weeks before the inspection starts. A meeting with the organisation’s representative can help the lead inspector finalise the programme.

The lead inspector should consider who needs to be interviewed, and in what order, to provide a snapshot of all levels of the organisation.

SMS inspections may focus on a limited number of risk controls and track them up through the levels of the organisation. They may also start at senior management level and track the relevant risk controls down through the organisation.

During the planning process, the account holder should have set how long the inspection team will be on-site. That length of time should reflect the size and complexity of the organisation. For an average train-operating company, two inspectors would be on-site over three to four consecutive days. There may be other days when extra inspections are carried out to focus on risk-control systems being put in place and associated precautions in the workplace.

The inspections should take place where the person being interviewed works, during their working hours.

Step 4 Carry out the SMS inspection

a Opening meeting

In many instances (for example, internal audits in a small organisation), the opening meeting may simply be to state that an inspection is being carried out and to explain the nature of the inspection.

In other situations, the meeting should be formal and a record of the people there should be kept. The meeting should be chaired by the lead inspector, and should involve the following where appropriate.

- Introducing the members of the inspection team and explaining their specific roles.
- Confirming the objectives and scope of the inspection, and the criteria that will be used.
- Confirming the timetable and other relevant arrangements, such as the date and time for the closing meeting, and any meetings to be held between the inspection team and the organisation's management.
- Explaining methods and procedures that will be used to carry out the inspection, including telling the organisation that the evidence gathered will only be based on a sample of the information available and so will not be conclusive.
- Confirming the formal points of contact for communication between the inspection team and the organisation.
- Confirming that the resources and facilities the inspection team needs will be available.
- Confirming matters relating to confidentiality.
- Confirming relevant safety, emergency and security procedures for the inspection team.
- Giving details of any guidance that may help.

- Explaining the RM3 criteria and how the findings of the inspection will be reported.
- Providing information about conditions under which the inspection may be terminated.

b Carrying out the inspection

Interviews and inspections should all be carried out in line with the inspection programme agreed with the organisation. If changes need to be made to the programme these should be agreed by the leads inspector and the organisation.

All findings and interview responses should be recorded on form TEMS 3b or TEMS 3c. These findings should specify anything that the organisation does well, areas that need to be improved, and any issues that need immediate attention.

The inspector conducting an interview, in consultation with the lead inspector, must decide whether an observer appointed by the organisation (such as the safety manager) should be present.

c Closing meeting

A closing meeting allows inspectors to give the organisation a summary of their findings. This can be useful as it helps the organisation decide whether they have provided all of the evidence the inspectors needed, so preventing inaccuracies in the inspection report. The closing meeting will explain what the report will include and will allow the organisation to start producing an action plan to tackle any areas that need to be improved.

Step 5 Report writing

The inspection report should be written within three weeks of the closing meeting, as long as the organisation has provided any extra information asked for in good time. Form TEMS4 provides a template for capturing inspection report summaries. It is structured using the RM3 criteria and should be tailored to suit the areas inspected. Account holders should define the organisation’s level of achievement for the RM3 criteria.

The lead inspector should give the dutyholder a draft copy of the report so they can correct any mistakes. The lead inspector should then give the organisation a copy of the final report and attach a copy to the relevant COIN record.

Part E Evaluating the organisation's ability to deliver excellence

evidence of the capability (or otherwise) of the dutyholder will be built up during inspection and investigation activities. Account holders should use the information gathered to inform their opinion of the organisation's management arrangements against the RM3 criteria. The account holder should then fill in the RM3 collation table (TEMS5). This table should be populated with a short summary statement and a cross reference to the relevant COIN records. The table should be stored on the parent COIN case and updated every three months.

The RM3 criteria are intended to be a guide for inspectors. It is possible that the evidence collected would fall across a range of maturity levels. Inspectors should use the criteria to help shape their opinion. As the volume of evidence increases there should be greater clarity over where an organisation's maturity lies. Inspectors should use their judgement when decide which criteria and evidence to use. The following issues should be considered.

- Currency of the information – when the evidence was gathered and whether there is likely to have been any significant changes since then.

- Quality of the evidence – whether the evidence is based on a limited observation from one site or is consistent across a number of sites.

- Volume of the evidence – whether there is enough evidence to provide an informed opinion on the organisation as a whole. For example, if evidence on document control for a small depot revealed an 'ad hoc' level of achievement, is that sufficient to form an opinion on the document-control system for 30 other, much larger, depots?

- Consistency of the evidence – if evidence from a number of sources suggests a similar level of maturity this would indicate that the findings of the inspection are accurate.

Part F Quality control

Dutyholder's must be given the opportunity to correct any factual inaccuracies in the inspection reports. Therefore a draft report should be provided to the nominated contact.

Dutyholders may provide additional evidence to support a higher maturity evaluation

It is essential that our evaluations of management systems are consistent. To achieve this, account holders will be regularly assessed by colleagues or one of our management systems specialists.

Part G Enforcement issues

Enforcement should be in line with our enforcement policy statement and our enforcement management model should be used.

Inspectors will want to distinguish between dealing with serious local risks (traditional occupational health and safety risks) via prohibition or improvement notice and
wider systemic failures of the safety-management system which in the main are likely to be resolved via an improvement notice addressing ROGS schedule 1 or MHSWR reg 5 matters.

Inspectors will want to consider how the safety management system has been deployed, whether there are complete systems, sub systems and how well they interlink.

It is important for inspectors to bear in mind that organisations may operate parts of their safety-management systems at a number of levels. Duty holders performance could be excellent for many areas of their business but , whilst at the same time having pockets of very poor compliance for others. Inspectors should tackle the serious risk.

An inspector's obligation extends to considering using enforcement notices when an organisation has fallen far below the expected standard. In these instances, inspectors must consider the evidence and how serious the risk is. Inspectors should then consider how the safety-management system failed to identify, control or monitor that risk.

Example
When assessing an organisation's safety-management system for keeping control of contractors, the inspector assesses the maintenance of rail vehicles. The inspector has been the account holder for three years and the organisation's level of achievement is
level 4 – predictable. The inspector assesses two depots and finds strong

evidence that, in one depot, the TPWS units are not properly maintained and document control in this depot is also poor. The assessment finds that leadership of the maintenance roles across the depots is weak. The inspector should consider taking enforcement action to:

- restrict use of the vehicles until they have been properly maintained; and
- tackle poor document control for maintenance activities.

Inspectors should consider using regulation 19 of ROGS, or regulations 3 and 5 of MHSWR, for specific local issues. Under these regulations a management system must:

- make suitable and sufficient assessments of risk;
- act on the findings of the risk assessment;
- reassess the situation if conditions change;
- record all findings; and
- give effect to such arrangements as are appropriate with regard to his activities etc

Using these regulations also sends a strong message about the importance of safety-management systems.

Weak leadership within the senior managers of the depot needs to be tackled, but this is not something that inspectors should enforce at present.

Dealing with these issues separately allows the organisation to tackle different levels of risk separately.

More advice on enforcement is available from Iain Ferguson or the Investigation and Legal Support team.

Appendix A – Legal framework for safety-management systems

The Law and Safety Management Systems

We are the enforcing authority for the HSWA 1974 and regulations made under it, including the Management of Health and Safety at Work Regulations 1999 (MHSWR 1999), the Railways and Other Guided Transport System Regulations 2006 (ROGS) and other pieces of railway specific legislation. As such we are independent of industry and reach our own view on how it complies with legislation. In relation to safety management systems we do this by inspection against criteria that reflects good practice

Where we find that a dutyholder has failed to comply with their legal duty we will take appropriate action in accordance with our Enforcement Policy. One relevant duty is that in regulation 5 of MHSWR 1999. This requires employers to make and give effect to such arrangements as are appropriate, having regard to the nature of his activities and the size of his undertaking, for the effective planning, organisation, control, monitoring and review of the preventive and protective measures. This is repeated (with a focus on system safety) in regulation 19 of ROGS 2006.

The MHSWR 1999 are supported by an approved code of practice. The approved code makes specific reference to HSE's HS(G)65 "Successful Health and Safety Management", which provides further guidance on what employers need to have in place.

The Secretary of State[1] has directed us to ensure that rail safety is maintained and improved in a manner which makes *best use of the financial resources available and provides value for money for both the fare payer and the tax payer*. That guidance is reflected in our corporate strategy which says that we will "introduce more systematic audit, as well as inspection, of duty-holders' management systems, incident investigations and action tracking process, both in mainline and other parts of the industry", and that we will "use our powers to ensure the industry manages, in an *effective* way, the safety of the railway system as a whole, and the safety interfaces between different companies and organisations".

To do this we will inspect duty holders using criteria derived from relevant legislation, approved codes of practice and appropriate guidance and assess duty holder performance against criteria derived from existing management systems good practice. Our intention is to identify the capability of the management system to adequately control risk, *efficiently* and *effectively* at the point at which the risk is created.

[1] Section 4(5B) of the 1993 Act as inserted by the 2005 Act, places the ORR under a duty to have regard to any general guidance given to it by the Secretary of State in relation to the ORR's exercise of its safety functions, other than in relation to the ORR's functions as an enforcing authority for the purposes of the Health & Safety at Work Act 1974.

Details of ORR enforceable legislation requiring a safety management system:

The Management of Health and Safety Regulations 1999:

Regulation **5.** - (1) Every employer shall make and give effect to such arrangements as are appropriate, having regard to the nature of his activities and the size of his undertaking, for the effective planning, organisation, control, monitoring and review of the preventive and protective measures.

ACOP

This regulation requires employers to have arrangements in place to cover health and safety. Effective management of health and safety will depend, amongst other things, on a suitable and sufficient risk assessment being carried out and the findings being used effectively. The health and safety arrangements can be integrated into the management system for all other aspects of the organisation's activities. The management system adopted will need to reflect the complexity of the organisation's activities and working environment. Where the work process is straightforward and the risks generated are relatively simple to control, then very straightforward management systems may be appropriate. For large complicated organisations more complex systems may be appropriate. Although the principles of the management arrangements are the same irrespective of the size of an organisation. The key elements of such effective systems can be found in *Successful health and safety management* (see References and further reading section) or the British Standard for health and safety management systems BS8800. A successful health and safety management system will include all the following elements.

Planning

Employers should set up an effective health and safety management system to implement their health and safety policy which is proportionate to the hazards and risks. Adequate planning includes:

(a) adopting a systematic approach to the completion of a risk assessment. Risk assessment methods should be used to decide on priorities and to set objectives for eliminating hazards and reducing risks. This should include a programme, with deadlines for the completion of the risk assessment process, together with suitable deadlines for the design and implementation of the preventive and protective measures which are necessary;

(b) selecting appropriate methods of risk control to minimise risks;

(c) establishing priorities and developing performance standards both for the completion of the risk assessment(s) and the implementation of preventive and protective measures, which at each stage minimises the risk of harm to people. Wherever possible, risks are eliminated through selection and design of facilities, equipment and processes.

Organisation

This includes:
(a) involving employees and their representatives in carrying out risk assessments, deciding on preventive and protective measures and implementing those requirements in the workplace. This may be achieved by the use of formal health and safety committees where they exist, and by the use of teamworking, where employees are involved in deciding on the appropriate preventive and protective measures and written procedures etc;
(b) establishing effective means of communication and consultation in which a positive approach to health and safety is visible and clear. The employer should have adequate health and safety information and make sure it is communicated to employees and their representatives, so informed decisions can be made about the choice of preventive and protective measures. Effective communication will ensure that employees are provided with sufficient information so that control measures can be implemented effectively;
(c) securing competence by the provision of adequate information, instruction and training and its evaluation, particularly for those who carry out risk assessments and make decisions about preventive and protective measures. Where necessary this will need to be supported by the provision of adequate health and safety assistance or advice.

Control

Establishing control includes:

(a) clarifying health and safety responsibilities and ensuring that the activities of everyone are well co-ordinated;
(b) ensuring everyone with responsibilities understands clearly what they have to do to discharge their responsibilities, and ensure they have the time and resources to discharge them effectively;
(c) setting standards to judge the performance of those with responsibilities and ensure they meet them. It is important to reward good performance as well as to take action to improve poor performance; and
(d) ensuring adequate and appropriate supervision, particularly for those who are learning and who are new to a job.

Monitoring

Employers should measure what they are doing to implement their health and safety policy, to assess how effectively they are

controlling risks, and how well they are developing a positive health and safety culture. Monitoring includes:

(a) having a plan and making adequate routine inspections and checks to ensure that preventive and protective measures are in place and effective. Active monitoring reveals how effectively the health and safety management system is functioning;

(b) adequately investigating the immediate and underlying causes of incidents and accidents to ensure that remedial action

In both cases it may be appropriate to record and analyse the results of monitoring activity, to identify any underlying themes or trends which may not be apparent from looking at events in isolation.

Review

Review involves:

(a) establishing priorities for necessary remedial action that were discovered as a result of monitoring to ensure that suitable action is taken in good time and is completed;

(b) periodically reviewing the whole of the health and safety management system including the elements of planning, organisation, control and monitoring to ensure that the whole system remains effective.

Consulting employees or their representatives about matters to do with their health and safety is good management practice, as well as being a requirement under health and safety law. Employees are a valuable source of information and can provide feedback about the effectiveness of health and safety management arrangements and control measures. Where safety representatives exist, they can act as an effective channel for employees' views.

Safety representatives' experience of workplace conditions and their commitment to health and safety means they often identify potential problems, allowing the employer to take prompt action. They can also have an important part to play in explaining safety measures to the workforce and gaining commitment.

Regulations 3,4 5 and 6

Use of infrastructure on the mainline railway

3. —(1) After 30th September 2006 no person shall operate a train in relation to any infrastructure on the mainline railway unless—

(a) he has established and is maintaining a safety management system which meets the requirements set out in regulation 5(1) to (4); and

(b) he holds a current safety certificate in relation to the operation in question,

except to the extent that he is doing so within an engineering possession.

(2) After 30th September 2006 no person who is responsible for developing and maintaining infrastructure other than a station or who is responsible for managing and operating a station on the mainline railway shall manage and use it, or permit it to be used, for the operation of trains unless—

(a) he has established and is maintaining a safety management system which meets the requirements referred to in regulation 5(7);

(b) he holds a current safety authorisation in relation to the infrastructure in question; and

(c) where he is using it or permitting such use, the person who is to use the infrastructure has complied with paragraph (1)(b).

Use of infrastructure on other transport systems

4. —(1) After 30th September 2006 no person shall operate a vehicle in relation to any infrastructure on a transport system other than the mainline railway unless—

(a) he has established and is maintaining a safety management system which meets the requirements set out in regulation 6; and

(b) subject to paragraph (3), he holds a current safety certificate in relation to the operation in question,

except to the extent that he is doing so within an engineering possession.

(2) After 30th September 2006 no person who is responsible for developing and maintaining infrastructure, other than a station, or who is responsible for managing and operating a station on a transport system other than the mainline railway shall manage and use it, or permit it to be used, for the operation of a vehicle unless—

(a) he has established and is maintaining a safety management system which meets the requirements set out in regulation 6; and

(b) subject to paragraph (3)–

(i) he holds a current safety authorisation in relation to the infrastructure in question; and

(ii) where he is using it or permitting such use, the person who is to use the infrastructure has complied with paragraph (1)(b).

(3) Paragraphs (1)(b) and (2)(b) shall not apply to the extent that the operation in question is only carried out—

(a) on a tramway; or

(b) on a transport system on no part of which there is a permitted maximum speed exceeding 40 kilometres per hour.

(4) Where the operation in question falls within paragraph (3)(a) or (b), the requirement in paragraphs (1)(a) and (2)(a) shall be read as if the date was, in each case, after 31st March 2007.

5. —(1) The requirements for a safety management system referred to in regulation 3(1)(a) are that—

(a) subject to paragraph (2), it is established to ensure that the mainline railway system—

(i) can achieve the CSTs; and

(ii) is in conformity with relevant national safety rules and relevant safety requirements laid down in TSIs;

(b) it applies the relevant parts of CSMs;

(c) it meets the requirements and contains the elements set out in Schedule 1, adapted to the character, extent and other characteristics of the operation in question;

(d) subject to paragraph (2), it ensures the control of all categories of risk including new or existing risks associated with the operation in question which, without prejudice to the generality of the foregoing, shall include such risks relating to the—

(i) supply of maintenance and material;

(ii) use of contractors; and

(iii) placing in service of new or altered vehicles the design or construction of which incorporates significant changes compared to any vehicle already in use on the transport system and which changes would be capable of significantly increasing an existing risk or creating a significant safety risk;

(e) it takes into account, where appropriate and reasonable, the risks arising as a result of activities carried on by other persons; and

(f) all parts of it are documented.

(2) The requirements in paragraphs (1)(a) and (d) shall be met where the safety management system of a transport operator or of an applicant for a safety certificate or a safety authorisation ("the first operator") taken with that of any relevant transport operator is capable of meeting the requirements of the paragraph in question.

(3) In paragraph (2), "relevant transport operator" means another transport operator whose operation is capable of materially affecting the safety of the operation carried on by the first operator.

(4) In paragraph (1)(d)(iii) where such new or altered vehicles are intended to be placed in service, then before that placing in service the transport operator shall ensure that he has–

(a) an established written safety verification scheme which meets the requirements and contains the elements set out in Schedule 4; and

(b) appointed a competent person to undertake that safety verification, and the competent person has undertaken that safety verification in relation to the new or altered vehicles.

(5) Where a new or altered vehicle has been authorised under regulation 4(1)(a) of the Interoperability Regulations for the placing in service on the mainline railway, that authorisation shall be treated as satisfying the requirements of paragraph (4).

(6) In this regulation placing in service shall mean first placed in service for the provision of a transport service, and in ascertaining when this takes place no regard shall be had to any trials or testing that takes place to the relevant vehicle.

(7) The requirements for a safety management system referred to in regulation 3(2)(a) are the requirements in paragraphs (1) to (6) save that any reference to new or altered vehicles in those paragraphs shall be replaced with a reference to new or altered infrastructure and that—

(a) it ensures the control of all categories of risk associated with the placing in service of new or altered infrastructure the design or construction of which incorporates significant changes compared to any infrastructure already in use on the transport system and which changes would be capable of significantly increasing an existing risk or creating a significant safety risk;

(b) it takes into account the effects of operations of transport undertakings; and

(c) it contains provisions to ensure that the way in which the infrastructure manager carries out his operation makes it possible for any transport undertaking to operate in accordance with—

(i) relevant TSIs and national safety rules; and

(ii) the means adopted by the transport undertaking to meet the requirements referred to in regulation 7(4), of which the Office of Rail Regulation accepted that there was sufficient evidence upon issue or

amendment of its safety certificate pursuant to these Regulations; and

(d) it aims to co-ordinate the emergency procedures of the infrastructure manager or of the applicant for a safety authorisation with those of transport undertakings,

and in each case the requirements in sub-paragraphs (a) to (d) shall only apply in relation to transport undertakings that operate or will operate a train in relation to the infrastructure of the infrastructure manager or of the applicant for a safety authorisation in question.

Safety management system for other transport systems

6. —(1) The requirements for a safety management system referred to in regulation 4(1)(a) and 4(2)(a) are that—

(a) it is adequate to ensure that the relevant statutory provisions which make provision in relation to safety will be complied with in relation to the operation in question;

(b) subject to paragraph (7), it meets the requirements and contains the elements set out in Schedule 1, adapted to the character, extent and other characteristics of the operation in question;

(c) subject to paragraph (2), it ensures the control of all categories of risk associated with the operation in question which, without prejudice to the generality of the foregoing, shall include such risks relating to the—

(i) supply of maintenance and material;

(ii) use of contractors; and

(iii) placing in service of new or altered vehicles or infrastructure the design or construction of which incorporates significant changes compared to any vehicles or infrastructure already in use on the transport system and which changes would be capable of significantly increasing an existing risk or creating a significant safety risk;

(d) it takes into account, where appropriate and reasonable, the risks arising as a result of activities carried on by other

persons; and

(e) all parts of it are documented.

(2) The requirement in paragraph (1)(c) shall be met where the safety management system of a transport operator or an applicant for a safety certificate or a safety authorisation ("the first operator") taken with that of any relevant transport operator is capable of meeting the requirements of the paragraph in question.

(3) In paragraph (2), "relevant transport operator" means another transport operator whose operation is capable of materially affecting the safety of the operation carried on by the first operator.

(4) In paragraph (1)(c)(iii) where such new or altered vehicles or infrastructure are intended to be placed in service, then before that placing in service the transport operator shall ensure that he—

(a) has an established written safety verification scheme which meets the requirements and contains the elements set out in Schedule 4; and

(b) has appointed a competent person to undertake that safety verification and the competent person has undertaken that safety verification in relation to the new or altered vehicle or infrastructure.

(5) In this regulation placed in service shall mean first placed in service for the provision of a transport service, and in ascertaining when this takes place no regard shall be had to any trials or testing that takes place to the relevant vehicle or infrastructure.

(6) In this regulation the requirements of paragraph (4) shall apply in the absence of a transport operator to a responsible person as they would apply to a transport operator.

(7) Paragraph 2(c) of Schedule 1 shall apply in relation to transport systems other than the mainline railway as if it read as follows—

" (c) procedures—

(i) to meet relevant technical specifications; and

(ii) relating to operations or maintenance,

insofar as they relate to the safety of persons, and procedures for ensuring that the procedures in sub-paragraphs (i) and (ii) are followed throughout the life-cycle of any relevant equipment or operation;".

Part 3 Regulation 19 General Duties

Risk assessment

19. —(1) A transport operator shall—

(a) make a suitable and sufficient assessment of the risks to the safety of any persons for the purpose of identifying the measures he needs to take to ensure safe operation of the transport system in question insofar as this is affected by his operation; and

(b) implement the measures referred to in sub-paragraph (a).

(2) When carrying out an assessment or a review under paragraph (1) or (3), a transport operator shall apply the CSMs to the extent that the operation is carried out on the mainline railway.

(3) Any assessment under paragraph (1) shall be reviewed by the transport operator who made it if—

(a) there is a reason to suspect that it is no longer valid; or

(b) there has been a significant change in the matters to which it relates and where as a result of any such review changes to an assessment are required,

the transport operator concerned shall make them, and implement any changes to the measures identified pursuant to paragraph (1) as a result of the review.

(4) The transport operator shall record in relation to any assessment or review under this regulation—

(a) the assessment process undertaken, the methods of any calculation used and any assumptions made; and

(b) the significant findings of the risk assessment including the measures in place and any further measures the transport operator intends to take to ensure safe operation of the transport system in relation to his operation.

(5) Every transport operator shall make and give effect to such arrangements as are appropriate, having regard to the nature of his

activities and the extent of the undertaking, for the effective planning, organisation, control, monitoring and review of the measures identified pursuant to paragraph (1) or (3) and shall record such arrangements.