

Part 1 Development guidelines

1.1 Introduction

1.1.1 Safety management system – an overview

A safety management system (SMS) is a document which lists the strategies and policies which guide decision-making about activities on the roading network. It also lists the expertise, standards and guidelines which should be applied. The focus of an SMS is to ensure that safety is considered in all roading network management activities.

An SMS helps road controlling authorities to ensure consistent strategies, policies, expertise, standards and procedures are in place.

Safety management systems are an effective way to improve the safety of road networks. As such, they form an integral part of overall management systems for road networks.

Benefits of a safety management system

The systematic approach to safety management of the road network through the use of safety management systems helps to ensure:

- € safety is considered in decisions about construction, maintenance, planning and management of the road network, assisting in the achievement of targets and goals identified in the national and local road safety strategies
- € implementation of road management procedures is consistent and efficient
- € risk management is documented, providing protection from litigation
- € road safety knowledge and expertise needs are documented
- € methods to address any gaps are in place
- € documentation provides clear guidance for all staff and can be used for training new employees
- € development and auditing of the roading network are undertaken in a systematic way
- € improved safety for all road users.

Content

A safety management system should contain:

- € direction – the RCA's road safety strategy
- € means of delivery – including:
 - standards, guidelines and policies for the RCA's roads
 - the RCA's requirement for expertise, qualifications and experience.
- € control – a management system with processes identified and responsibilities allocated, including a continuous improvement process
- € audit – a review, monitoring and evaluation regime of the SMS including the systems and processes within it and the on road outcomes.

This is illustrated in figure 1.

1.1.1 Safety management system – an overview, continued

Figure 1



1.1.2 Purpose of this guideline document

These guidelines aim to assist road controlling authorities (RCA) develop and implement a safety management system (SMS) for their road network. They:

- € provide an outline of the process, development and implementation methodology and the scope of work
- € identify some key options, relationships, inputs and decisions that the RCAs will need to consider
- € provide checklists for reference and guidance.

These guidelines are intended to make the process of establishing a safety management system easier, rather than prescribe the format and operation for the system. They provide an outline for:

- € scope of work
 - € methodology
 - € achieving buy-in
 - € review, monitoring and evaluation.
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1.1.3 Steps in developing a SMS document

An RCA needs to establish the best approach for the development of their SMS. The process should:

- € establish the SMS development team and the roles of all team members
 - € identify the current systems that are in place
 - € identify the preferred template for the development of the SMS
 - € identify the safety components that need to be developed or amended to ensure that the SMS is able to be endorsed by Land Transport NZ
 - € identify input sources for the safety components and assess their availability and completeness
 - € outline the methodology and estimate the timelines required to deliver the SMS
 - € undertake the development and implementation of an SMS document for the RCA that is consistent with the Land Transport NZ guidelines
 - € include a document review process to identify opportunities for further improvement and to sign-off the document as being endorsed by Land Transport NZ and the RCA.
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1.1.4 Format of this document

Part 1 Development guidelines.

Part 2 Implementation guidelines.

Part 3 Toolbox.

Part 4 Examples.

Part 1

Development guidelines

€ Section 1 Introduction

€ Section 2 SMS development process

Methodology, programme, deliverables.

A timeline is included for the three stages of development through to sign-off.

€ Section 3 Memorandum of Understanding

Outlines the proposed partnership between the RCA and Land Transport NZ in the development, implementation and audit of the SMS.

€ Section 4 Safety management system form

The first two parts of this section relate to general housekeeping topics:

Philosophy of SMS – how the SMS fits with the rest of the RCA's systems (eg strategy, finance, quality systems, established procedures and asset management).

Structure of SMS – how it is structured to meet RCA operational requirements.

The remaining five parts are consistent with Land Transport NZ's five-element model for an SMS:

Safety strategy – direction.

Standards, procedures, policies and guidelines – means of delivery.

Expertise, experience and qualifications – means of delivery.

Management system – control.

Review, monitor and evaluation processes – audit regime.

To help in these decisions, this section is set out in a tabular form, listing the following for each part:

purpose

options and key decisions

inputs and influences

examples and references.

€ Section 5 Road safety strategy guidelines for road controlling authorities

Discusses the form and the component parts of a road safety strategy comprising:

introduction

components of a road safety strategy

road safety strategy and risk targeted patrol plans.

1.1.4 Format of this document, continued

Part 1

Development guidelines, continued

- € Section 6 Delivery planning
Describes the component parts of a delivery plan and provides indicative timeframes.
 - € Section 7 Document control
This section discusses document control issues for a safety management system.
 - € Section 8 Timeline and format for safety management system implementation and audit
This section provides indicative timeframes, objectives and roles in the implementation and audit of a safety management system.
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Part 2

Implementation guidelines

- € Section 1 Introduction
Aim.
Stakeholders.
 - € Section 2 Direct stakeholder roles
Councillors.
Community board members.
RCA staff.
Consultants: network and project.
Contractors: network and project.
 - € Section 3 Implementation
Delivery plan.
Buy-in.
Planning and operations.
Process implementation.
 - € Section 4 Continuous improvement
What is continuous improvement?
What is the SMS continuous improvement programme?
How could an SMS continuous improvement programme be conducted?
Document control.
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Part 3

Toolbox

- Part 3 which can be found on a CD inside the back cover, contains tools to assist the RCA in developing and implementing their safety management system comprising:
- A SMS stage 1 scoping workshop and draft agenda
 - B Memorandum of Understanding
 - C Delivery plan spreadsheets
 - D Road safety strategy checklist
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1.1.4 Format of this document, continued

Part 3

Toolbox, continued

- E SMS component workbook and checklist
 - F SMS stage 3 document review checklist and meeting agenda
 - G Deficiency database and prioritisation process
 - H List of possible standards and guidelines
 - I Continuous improvement monitoring workbook
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Part 4

Examples

Part 4 which can be found on a CD inside the back cover, contains a series of examples of key components of a safety management system and other associated documents.

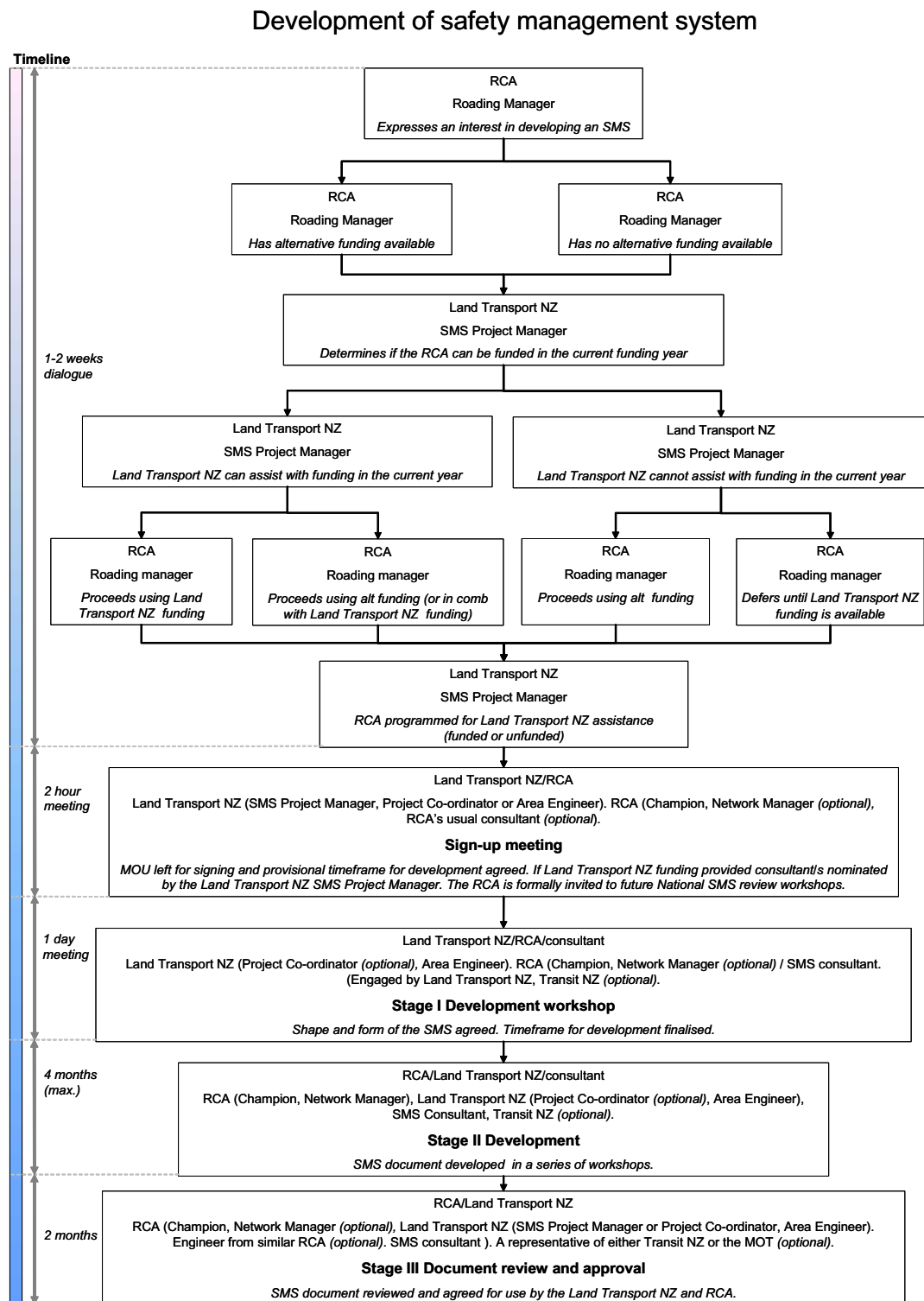
These examples show a variety of formats and styles of the key components of an SMS and their associated documents. Part 4 includes:

- A Model road safety strategy
 - B Document control examples
 - C Rangitikei/Ruapehu/Wanganui SMS
 - D Palmerston North City safety management system
 - E Communication plans and tools
 - 1 Communication plan – Clutha District Council
 - 2 Councillor SMS presentation – Marlborough Roads
 - 3 Community board and asset committee SMS buy-in presentation – Otorohanga District Council
 - 4 Contractor SMS presentation – Southland District Council
 - 5 Staff publicity flyer – North Shore City Council
 - 6 Publicity flyer – North Shore City Council
 - F Opportunities for improvements and SMS gaps
 - 1 Gaps and opportunities for improvements – Marlborough Roads
 - 2 Action list – Far North District Council
 - G Continuous improvement evaluation report – Christchurch City Council
 - H Safety management plan
 - 1 Safety management plan within an SMS – Rodney District Council
 - 2 Safety management plan external to an SMS – New Plymouth District Council
 - I Safety intervention plan – Southland District Council
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1.2 SMS development process

The following diagram (figure 2) demonstrates the process involved in the development of a safety management system.

Figure 2



1.2.1 Sign-up meeting

Activity	Sign-up meeting
Timeframe	Two hours for each party
Objectives	<ul style="list-style-type: none"> € To ensure RCAs want to be involved in SMS development and implementation in partnership with Land Transport NZ € Agree on the timing and consultant/s
Land Transport NZ's role	<ul style="list-style-type: none"> € Co-ordinate meeting € Leadership € Marketing of SMS concept € Provide an overview of process € Commit to a partnership with the RCA € Provide a draft Memorandum of Understanding to the RCA
RCA's role	<ul style="list-style-type: none"> € Commit to development and implementation of an SMS in partnership with Land Transport NZ € Identify the SMS champion € Commit to a partnership with Land Transport NZ
Consultant's role	Nil

1.2.2 Stage 1 SMS scoping workshop

The suggested methodology for the development process is based on a scoping workshop meeting. A collaborative approach makes the most of the expertise directly involved in managing the road network and promotes commitment and understanding of the development and delivery of an SMS from the outset.

The scoping team should be decided by the RCA and should include:

- € the RCA SMS champion
- € Land Transport NZ representative
- € a consultant.

The workshop may also include:

- € RCA network manager (internal and/or consultant)
- € road safety co-ordinator.

A team leader should be agreed and provide focus throughout the development process. The team leader is likely to be the consultant. It is important that the team leader should remain focused to ensure that the SMS can be developed in a timely fashion.

We suggest the following structure for a one-day SMS scoping workshop:

- € brief the workshop participants
- € confirm the project objectives
- € confirm the methodology
- € confirm the purpose of the SMS
- € list the existing safety components and assess their availability and suitability
- € identify any likely gaps in the component listing based on identifying and minimising risks
- € select the preferred template/form/structure/detailed content
- € programme the development and implementation process via the delivery plan
- € identify the programme, time and resources required to complete the process (both RCA staff time and consultant time).

To illustrate time commitments and topics that should be addressed in the meeting, an agenda that has been used successfully for a number of projects has been included in part 3–A.

At least one week prior to the commencement of this workshop, the RCA should supply the scoping team members with the following documentation:

- € a listing of the road hierarchy for the RCA road network if one exists
 - € a copy of any existing documented systems/processes
 - € a list of their suggested additional safety components (from part 3–E) for inclusion in the SMS.
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1.2.2 Stage 1 SMS scoping workshop, continued

The most important step in the scoping workshop is defining the purpose and possible forms for the SMS.

Fundamental questions to be addressed at this stage are:

How big should it be?, Who will use it? and What do we want it for?.

The workshop needs to confirm the programme, time and resources required to complete the SMS development and commence implementation.

Activity	Stage 1 SMS scoping workshop
Time frame	One day for each party
Objectives	<ul style="list-style-type: none"> € Scope the process for the development € Identify existing/current systems/inputs € Identify development needs € Identify key users of the SMS € Confirm form/function of the SMS € Confirm methodology/team inputs and tasks (who does what) € Programme for development, delivery and costs
Land Transport NZ's role	<ul style="list-style-type: none"> € Sponsorship € Guidance € Financial support via engagement of consultant € Agree to timeline and proposed costs € Sign up Memorandum of Understanding
RCA's role	<ul style="list-style-type: none"> € Provide necessary information in preparation for meeting € Agree to timeframe for development and commit to input requirements for next stage € Sign up Memorandum of Understanding
Consultant's role	<ul style="list-style-type: none"> € Review RCA's documentation prior to the meeting € Organise, chair and produce minutes for the meeting € Gain understanding of RCA's requirements for their SMS € Agree to timeframe for delivery and commit to input requirements for next stage € Confirm funding requirements with Land Transport NZ

1.2.2 Stage 1 SMS scoping workshop, continued

Delivery plan

The consultant should develop a delivery plan based on the programme agreed in the Stage 1 SMS scoping workshop. The delivery plan should be agreed to by all team members at the commencement of the Stage 2 SMS development workshops. An example is shown in part 3–C.

Although the delivery plan shows detail of all the steps including implementation of the SMS, the development process must be given priority at this stage. Other procedures largely follow the development of the SMS but some buy-in procedures and preparation for implementation run in parallel to the SMS development and must also be considered at this stage. It is unlikely that the audit/review stage can be developed in detail at this time.

The delivery plan needs to be reviewed regularly to ensure progress is consistent with the plan. It can also become more detailed as the development process continues.

1.2.3 Stage 2 SMS development workshops

Following the stage 1 workshop the consultant will develop the SMS concept, framework and safety items checklist for circulation prior to the SMS development workshops.

We anticipate that these workshops will follow the Stage 1 SMS scoping workshop within two or three weeks.

To maximise efficiency of this workshop they should be undertaken either at the RCA offices or at a location within the local area to allow ease of access to relevant RCA staff and their systems and processes. The consultant should circulate the items prepared after the stage 1 workshop including the delivery plan so that the group can familiarise themselves with the documents prior to the workshop then confirm or edit the documents.

The development workshops are an intensive process. The aim at the conclusion of the workshops is to have completed an SMS document that is consistent with these guidelines.

The participants for the workshops should be decided by the RCA and Land Transport NZ and shall include:

- € the RCA representative/s
- € Land Transport NZ representative/s
- € the consultant/s engaged to assist in this process.

In addition to the above the following persons/organisations may provide information and/or assistance to the SMS development team:

- € the RCA network management consultant
- € the road safety co-ordinator.

Following the workshops the consultant will further develop the SMS document and submit the draft for comment to the team.

It will be the team leader's responsibility to:

- € arrange for the location and timing of workshops
 - € arrange all participants availability for workshops
 - € arrange for the delivery of pre-workshop information to all participants
 - € facilitate workshops
 - € develop the SMS document for delivery to the team members for comment
 - € collate all comments and produce a final document which the RCA will then adopt.
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1.2.3 Stage 2 SMS development workshops, continued

A gap analysis should be carried out at this stage to identify areas where further work is needed to develop procedures for items that may have been neglected in the past. This will be in the form of a table showing what opportunities for improvement have been identified, how they will be remedied, by whom and when. Having items that are incomplete may not prevent the SMS being signed off and used as long as the incomplete items are identified in the table. After all, the SMS is a living document and during the review and auditing process throughout the life of the SMS, further opportunities for improvement will be identified as a result of new technology or more experience with new methods not envisaged at the time of developing the SMS.

Activity	Stage 2 SMS development workshops
Time frame	<ul style="list-style-type: none"> € Completed over a four-month period € Consultant up to 100 hours € RCA up to 75 hours
Objectives	To develop an SMS that is useful to the RCA, is easy to use by all staff and addresses all safety risks identified as being more than medium level
Land Transport NZ's role	<ul style="list-style-type: none"> € Sponsorship € Mentoring € Technical support € Financial support
RCA's role	<ul style="list-style-type: none"> € Provide information to consultants as requested € Attendance at meetings as necessary € Review of consultants work
Consultant's role	<ul style="list-style-type: none"> € Manage the development of the SMS document including co-ordination of the meetings € Production of a draft document for RCA and Land Transport NZ sign-off € Management of time and funding

1.2.4 Stage 3 SMS document review and sign-off

At the completion of the SMS development, the document is to be signed off. The purpose of the sign-off process is for Land Transport NZ and the RCA to ensure that they are satisfied with the document that has been produced. This is the final stage in the development process, and ensures that the consultant has completed this stage of their work in accordance with the contract requirements.

The sign-off process should be completed within two months of the final draft document being received.

The review meeting will be organised by the consultant and held at the RCA offices. People who may be involved in the review meeting process are:

- € Land Transport NZ network engineer/s (chairperson)
- € RCA champion
- € the consultant who developed the SMS
- € RCA network manager (if considered appropriate)
- € an engineer from another similar RCA (optional)
- € a representative from either Transit NZ or MoT (optional)
- € the final list of attendees should be organised by the chairperson in conjunction with the RCA champion.

The review meeting will consist of three parts:

1 Meeting purpose

This part of the meeting will provide an overview of the purpose and process to be used in the review of the safety management system document.

2 Review of document

During this part of the meeting, the team will review the document and ensure that it covers all of the activities the RCA are responsible for that have a risk rating of medium or higher.

The SMS document review checklist in part 3-F is to be used as a prompt for all of the various activities that could be included in a SMS, and provides room for comments to be made on the information included within the SMS document being reviewed.

During the review process, the team also need to consider if the SMS document will be workable, and complies with best practice. Opportunities for improvement should be identified, documented and programmed as required. The SMS delivery plan should also be reviewed.

1.2.4 Stage 3 SMS document review and sign-off, continued

3 Meeting conclusion

The meeting conclusion is an opportunity to provide a roundup of the findings from the review of the document. It should give an indication of the general thoughts and impressions of the review team, and outline the timeframe for the completion of the sign-off process.

The chairperson will co-ordinate the preparation of a report by the consultant giving feedback from the review.

The report may include a list of:

- € critical improvements that are required prior to Land Transport NZ/RCA endorsement of the document. This should include an indication of the desirable timeframe for their implementation and the degree to which Land Transport NZ will help via the employment of a consultant
- € desired and best practice opportunities for improvements which the RCA can work on in the future. Land Transport NZ may be able to assist by funding a consultant.

A draft copy of the report should be made available to the review team for comment within two weeks of the review meeting, with a final report being sent to the RCA within one month of the review meeting.

Once the required improvements are completed, the partnership manager of Land Transport NZ and the mayor and/or CEO of the RCA will be approached to endorse the SMS document. This will indicate that the document is developed in accordance with best practice and is the partnership's commitment to road safety.

The minutes of this meeting should be held with the document as this process is the first audit of the document. Future audits should check back against these minutes to ensure that opportunities for improvement plans (OFI) are being actioned appropriately.

1.2.4 Stage 3 SMS document review and sign-off, continued

Activity	Stage 3 SMS document review and sign-off
Timeframe	<ul style="list-style-type: none"> € One day for each party € Within two months of draft being received
Objectives	<ul style="list-style-type: none"> € Workable document € Identify and programme opportunities for improvement € SMS that complies with best practice € Endorsement of document
Land Transport NZ's role	<ul style="list-style-type: none"> € Co-ordinate review meeting € Financial assistance for travel and consultant costs € Formal feedback on the document € Sign-off SMS document
RCA's role	<ul style="list-style-type: none"> € Review of the SMS document € Implementation of the SMS document € Organisational commitment to implement SMS systems/processes € Sign-off SMS document
Consultant's role	<ul style="list-style-type: none"> € Document review proceedings € Incorporation of any changes made necessary from the RCA and Land Transport NZ sign-off process € Production of a final document

1.3 Memorandum of Understanding

Prior to the SMS being developed, the RCA and Land Transport NZ will enter into a partnership agreement regarding the rights and obligations of each party. This working relationship is to be defined in a Memorandum of Understanding between the partners.

The Memorandum of Understanding contained in part 3–B of this folder is a suggested document to be signed by both the RCA and Land Transport NZ. It is envisaged that the RCA will be represented by the mayor and/or the chief executive and Land Transport NZ will be represented by the appropriate partnership manager.

Signing of the Memorandum of Understanding will allow Land Transport NZ to fund development of the SMS.

On completion of the development of the SMS it will be reviewed by both partners to ensure it is consistent with the guidelines. On completion of a review, to the satisfaction of the partners, the SMS will be signed off as being endorsed by Land Transport NZ and the RCA as having been developed in accordance with best practice.

Land Transport NZ and the RCA will continue to work together to ensure the SMS is implemented and audited so as to deliver a consistently safe road environment for all road users.

1.4 Safety management system form

1.4.1 Philosophy of SMS

Purpose	Options and key decisions	Inputs and influences	Examples and references
<p>The SMS should complement the RCA existing systems:</p> <ul style="list-style-type: none"> € road safety strategy € annual plan € strategic plan € financial management € asset management € quality assurance € customer contact € contract management € resource consent (district plan). <p>If the SMS is inconsistent, it is unlikely to become a universally accepted useful tool, and will be harder to implement.</p> <p>If the formats are similar to existing systems, people are likely to find them easier to use.</p>	<p>Options for the SMS document:</p> <ul style="list-style-type: none"> € stand-alone document, few references to external systems – SMS is a key reference tool/manual € cross-referencing document – a high-level tool indicating what other systems are used and how they relate to each other (eg, Transit NZ State highway safety management system manual) € balance between a convenient reference tool and one that calls up relevant established systems. <p>One key decision is who the primary end users will be.</p> <p>Note: If the RCA has established QA systems for referencing and document control, it may be convenient to reflect these within the SMS.</p>	<p>The main influence will be the extent of systematic management in the RCA. Some systems, such as the district plan, annual plan and strategic plan processes are essentially fixed, and the SMS will feed into and support those processes through establishing funding requests, engineering standards and road hierarchies, for example:</p> <ul style="list-style-type: none"> € There may be a significant overlap with the asset management system, in particular in terms of defects reporting. € Human resource and performance appraisal systems may influence responsibilities and expertise requirements within the SMS. € Committee processes, delegated authorities and policies may also impact. 	<p>Flow charts showing the intended operation of the SMS within Rangitikei/Ruapehu/Wanganui SMS (part 4–C, section 1.4, figure 1.2 and section 1.5, figure 1.3).</p> <p>Palmerston North City SMS (part 4–D, section 2.2, figure 2).</p> <p>Transit NZ State highway safety management system manual, diagram 1.7.</p>

1.4.2 Structure of the SMS

Purpose	Options and key decisions	Inputs and influences	Examples and references
<p>The structure of the RCA needs to reflect how the RCA works and how and who will use the SMS.</p> <p>The five-element structure shown in figure 1 describes the minimum contents, but the structure must suit the RCA and may be structured completely differently.</p> <ul style="list-style-type: none"> € Safety strategy – direction. € Policies, procedures, standards and guidelines – means of delivery. € Expertise, qualifications and roles – means of delivery. € Management system – control. € Audit regime – review. 	<p>Options for the SMS document include:</p> <ul style="list-style-type: none"> € functional split, based on the services provided € organisational split based on who delivers them € geographical split € hierarchy split. <p>and various combinations.</p> <p>All will have advantages in some directions and drawbacks in others.</p> <p>The key decisions should focus on what is best for the end users, whether administration staff, network management, field staff or others.</p> <p>The final form (big/small, bound/unbound, electronic, exhaustive/targeted) also needs to be agreed.</p>	<p>The philosophy of this Land Transport NZ guideline is common to all RCAs. It is flexible in that within each section, the level of detail or importance will vary. It is also capable of surviving changes in scope, organisational structure, boundaries or hierarchy.</p> <p>Practical 'index' splits can be contained within the section on policies, standards, procedures and guidelines.</p>	<p>Summary.</p> <p>Suggested SMS components workbook and checklist (part 3–E).</p> <p>Examples of completed SMS from Rangitikei/Ruapehu/Wanganui and Palmerston North City (part 4–C and D).</p>

1.4.3 Safety strategy section – direction

Purpose	Options and key decisions	Inputs and influences	Examples and references
<p>The safety strategy section sets out the RCA's goals in terms of road safety, and the approach the SMS will take to achieve them.</p> <p>It should have a vision and a method for achieving this vision.</p> <p>It should not be inconsistent with the aims of:</p> <ul style="list-style-type: none"> € the national road safety strategy 2010 € regional land transport strategy € the regional road safety strategy. 	<p>Options include:</p> <ul style="list-style-type: none"> € reference to external strategy or policies € development within SMS € references to national strategy peers. <p>The key decisions involve consideration of:</p> <ul style="list-style-type: none"> € how it will work € how it relates to others' interests. <p>Whether these elements fit better in the management section rather than the strategy section needs to be decided.</p>	<ul style="list-style-type: none"> € Road Safety to 2010 strategy. € Regional land transport strategy. € Regional road safety strategy. € Community programmes. € Relationships between service delivery, policy and funding decision-making. € How separate the safety strategy should be from the SMS. € How progress towards the goals/targets are measured. € What level of detail to cover. 	<p>Safety goals, objectives and performance targets (from Transit NZ State highway safety management system manual).</p> <p>Rangitikei/Ruapehu/Wanganui SMS (part 4–C, section 2).</p> <p>Palmerston North City SMS (part 4–D, section 3).</p> <p>Road safety strategy (part 4–A).</p>

1.4.4 Policies, standards, procedures and guidelines section – means of delivery

Purpose	Options and key decisions	Inputs and influences	Examples and references
<p>This section details relevant standards, guidelines, policies and procedures for the RCA's road maintenance, improvement, operations, network management and resource consent activities.</p> <p>The safety matters to be addressed should be decided on the basis of risk.</p> <p>As the concept of safety management systems evolve, a list of required outcomes will be identified by Land Transport NZ.</p>	<p>The structure of this section should make it easy for the primary users.</p> <p>Possible structures include variations or combinations of:</p> <ul style="list-style-type: none"> € functional € hierarchic € organisational € geographical € funding categories € existing RCA categories (eg. asset management) € delivery method. 	<p>Established responsibility or funding splits may be relevant.</p> <p>The scale, complexity and focus of the policies, standards, procedures and guidelines section should be considered in deciding what to include and how to structure it.</p> <p>These could be presented in a summary or reference form, in a consistent format, or template, to make them easy to use.</p> <p>Each activity could have an entry or template setting out the minimum safety requirements in terms of legislation, standards, guidelines, policies, inspection and monitoring, routine maintenance, emergency maintenance, capital works, audit requirements and a method of evaluating the risk consistent with AS/NZS 4360: 2004, Risk management.</p> <p>All safety matters with a risk greater than medium would be addressed in this section. Others could be included if it helps the SMS users.</p>	<p>SMS components workbook and checklist (part 3–E).</p> <p>Example of a series of means of delivery templates for Rangitikei/Ruapehu/Wanganui SMS (part 4–C, section 3).</p> <p>Palmerston North City SMS (part 4–D, section 4 and 5).</p> <p>List of possible standards and guidelines (part 3–H).</p>

1.4.5 Expertise, qualifications and roles section – means of delivery

Purpose	Options and key decisions	Inputs and influences	Examples and references
<p>This section sets out the expertise necessary for the activities so that the safety process is implemented by people competent to do so. It should be based on the actual expectations of expertise for the role rather than mapping the level of expertise currently available.</p>	<p>The option selected should be clear about how competence and requirements relate.</p> <p>The stability of the organisational structure and/or network maintenance management contract arrangements should be considered.</p> <p>Review procedures for identification of skill development.</p>	<ul style="list-style-type: none"> € Human resources policies. € Job descriptions. € Tender evaluation procedures. € Performance appraisal processes. € Training of personnel. 	<p>Rangitikei/Ruapehu/Wanganui SMS has a matrix of competency requirements in table 4.2 (part 4–C).</p>

1.4.6 Management system section – control

Purpose	Options and key decisions	Inputs and influences	Examples and references
<p>The management system section should describe the control, administration systems, responsibilities and functionality of the system.</p>	<p>A clear understanding of how the SMS works is essential.</p> <p>The system should be a complete loop, with outcomes feeding back in to reviews of the goals, effectiveness standards, policies and guidelines.</p> <p>Relationships with external agencies, data sources should be defined.</p>	<p>If not covered in the strategy section, the management section should consider:</p> <ul style="list-style-type: none"> € community programmes € relationships between service delivery, policy and funding decision-making € criteria for whether activities are included in the SMS or excluded to keep it manageable € how separate the strategy should be from the SMS € organisation of RCA road staff, consultants etc – ‘family tree’ € contract scopes, level of service/scope arrangements. 	<p>Rangitikei/Ruapehu/Wanganui SMS (part 4–C, section 5).</p> <p>Palmerston North City SMS (part 4–D, section 7).</p>

1.4.7 Audit regime section

Purpose	Options and key decisions	Inputs and influences	Examples and references
<p>The SMS needs to be reviewed, monitored and evaluated to ensure that it is and remains:</p> <ul style="list-style-type: none"> € technically effective in delivering outcomes and progress towards the strategic goals € systems compliant € able to meet agreed performance targets. 	<ul style="list-style-type: none"> € Frequency of audit. € A list of opportunities for improvements (OFI) recognises the 'live' nature of the SMS. € Who the auditors are (internal/ external). € Key measures (key performance indicators/key performance measures). € Nature of documentation. € Trend analysis. € Continuous improvement process. € Document control process. 	<ul style="list-style-type: none"> € Measures/documentation from previous sections. € RCA existing QA procedures. € Contractual arrangements. € Road network performance. 	<p>Examples from Rangitikei/Ruapehu/Wanganui SMS (part 4-C, section 6).</p> <p>Palmerston North City SMS (part 4-D, section 8 and appendix H for future audits to be recorded).</p> <p>Road network performance project.</p> <p>Guidelines for the auditing of Road Controlling Authorities Safety Management Systems (June 2006).</p> <p>Christchurch City Council SMS document control process (part 4-B, section 2).</p>

1.5 Road safety strategy guidelines for road controlling authorities

1.5.1 Introduction

Purpose

The aim of these guidelines is:

'to provide road controlling authorities with guidance on how to produce road safety strategies. The use of these guidelines as a framework will provide consistency of definitions and terminology used in road safety strategies throughout the country.'

What is a road safety strategy?

Definition of a strategy

A strategy identifies the goals of organisations and then sets out the course of action or set of options to which an organisation wishes to commit its resources to achieve these goals. An alternative term would be to call it a high level plan.

Good strategies are ones which guide the organisations appropriately. They should assist the organisation to move forward with a clear direction while not constraining the ability of the managers to develop innovative solutions.

Strategies

- € are generally stable over time, ie, two or three years or more
- € have timeframes
- € should clearly identify the responsibilities of each partner for delivering on the strategy
- € are realistic and identify any constraints on their achievement.

Definition of a road safety strategy

A road safety strategy is a general framework that provides guidance, rationale and direction for actions to be taken to achieve the desired road safety goals.

Achieving road safety goals requires the commitment of a number of agencies to work together. Local authorities are the natural sponsors/hosts for the development of road safety strategies because of their land transport and land use planning responsibilities, and their close relationship with the community.

A road safety strategy may be embedded within a wider strategy document (eg, a long term community consultation plan¹) or presented as a separate document. Alternatively, the road safety strategy could be included within an overall land transport or traffic strategy. It doesn't matter how the strategy is presented as long as it clearly links into the local authority's strategic planning hierarchy.

¹ LTCCPs will probably only contain high level outcomes or goals of the road safety strategy, with the detail being addressed in a separate plan.

1.5.1 Introduction, continued

What is a road safety strategy?,
continued

It must take account of the relevant national (ie, *Road Safety to 2010* strategy, the *New Zealand Transport Strategy* and the national roading programme) and regional policies (ie, regional land transport strategies). The strategy should be the result of a planning process that involves key road safety partners and stakeholders. At a minimum the RCA (including the road safety co-ordinator/s), NZ Police, Land Transport NZ, Transit NZ and the regional council need to be involved in the development of the strategy.

Other road safety stakeholders may also be consulted in the development of a road safety strategy such as, health authorities, ACC, heavy transport users, community and advocacy groups (eg, AA, pedestrian and cycling groups), as well as the general public.

A road safety strategy should consider five basic areas:

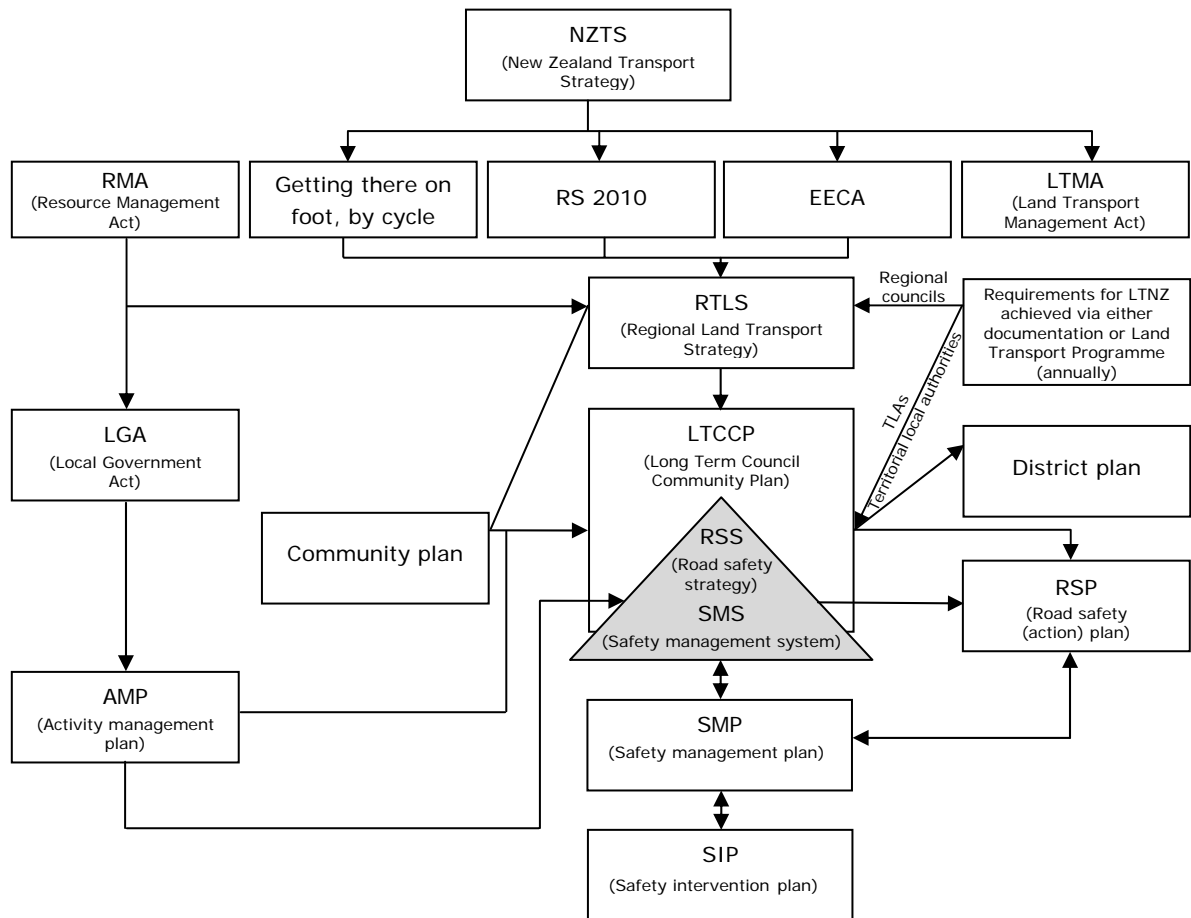
- € engineering and design improvements – eg, development of safety management systems, identification and removal/mitigation of roadside hazards
- € regulatory controls – eg, setting of local speed limits, granting of liquor licenses
- € enforcement – identification of specific problem areas for targeted enforcement
- € road safety education and communication
- € land use activities - including activities that influence land use (resource management), policies, planning and urban design.

Relationship between Acts and plans and the road safety strategy

Figure 3 on the next page shows how the road safety strategy is related to relevant legislation, other strategies and various planning documents.

1.5.1 Introduction, continued

Figure 3



Note: the above diagram does not attempt to capture all linkages and there will be others.

1.5.2 Components of a road safety strategy

Vision

The vision sets the ideal desired results that the local authority wishes to achieve. The vision should be realistic and achievable.

For example: a city with a safe road environment for all users.

Identify the problems/ issues the strategy seeks to address

The strategy should identify the level of road safety currently experienced within the area, identifying the costs to the local community of road crashes. The analysis should be detailed enough to identify the key safety issues which will need to be addressed in the strategy (eg, drink-driving, intersection behaviour).

The problem analysis should be based on a robust analysis of crash patterns on the road network and existing road audit reports.

Goals

Goals are generalised statements of intent – they do not always have a specific timeframe. Goals are not usually specific enough for their achievement to be measured quantitatively or qualitatively. The goals should reflect:

- € the local contribution required to achieve the national and relevant regional road safety goals set by the government in the *Road Safety to 2010* strategy²
- € the identified road safety issues in the region or city/district.

For example:

Our goal is to reduce the incidence and severity of crashes.

Our goal is to reduce the incidence of speed-related crashes.

Targets

Targets are specific statements of intent. They have timeframes for their achievement, should be: SMART- Specific, Measurable (qualitatively if not quantitatively), Achievable, Results orientated and Trackable.

Where possible quantitative targets should be developed (eg, percentage reduction in mean speed, percentage reduction of intersection crashes, percentage reduction of crashes involving pedestrians).

The targets should:

- € be clearly linked to the goals (ie, a percentage reduction in intersection crashes should lead to a predicted reduction in hospitalisations)
- € focus on the achievement of results, as opposed to the delivery of outputs (eg, number of community education programmes delivered), or securing of inputs (ie, the amount of funding secured for community programmes).

For example:

Achieve a x percent reduction in intersection crashes by 2007.

Achieve a x percent reduction of crashes involving pedestrians by 2007.

Achieve a x percent reduction of mean urban speed by 2007.

² There can be no official government targets/goals for deaths at the TLA level because the numbers are too small. Similarly there are no official targets/goals for hospitalisations for TLAs because Land Transport NZ cannot identify in which TLA a casualty was injured.

1.5.2 Components of a road safety strategy, continued

Interventions

These should be considered as a high-level course of action necessary to realise the goals and targets. Interventions fall into five basic areas:

- € engineering and design improvements
- € regulatory controls
- € enforcement
- € education and communication
- € land-use activities.

The high-level interventions should clearly identify the responsibilities of each partner for delivering them, and need to be realistic and identify any constraints to their achievement. These should be complemented by more detailed action plans in annual planning documents and road safety action plans.

For example:

Check design standards at intersections – Council.

Enforce road rules at intersections – Police.

Promote public awareness of intersection road rules – Land Transport NZ/Council.

Monitoring and measuring performance

The road safety strategy should contain a brief outline about how it is proposed to measure and monitor the performance of the strategy. Performance should be reported to and evaluated by the group who has oversight for the strategy on at least an annual basis.

For each target in the road safety strategy, there should be at least one measure of performance. The measures are preferably quantitative, although in some cases it is necessary for them to be qualitative (eg, the impact of community education initiatives are particularly difficult to measure in any quantitative sense).

To put these measurements in perspective there should be an appendix to the strategy showing the past performance on the selected measures. This could be in the form of a table or graphs or both. It is essential that there are adequate references to the sources of the data so that they can easily be updated.

To date, Land Transport NZ has suggested that local authorities use Land Transport NZ's annual road safety reports and road safety issues reports to identify issues of concern and to set objectives. Local authorities can then monitor the road safety performance on their network annually, and review their goals and targets every three years.

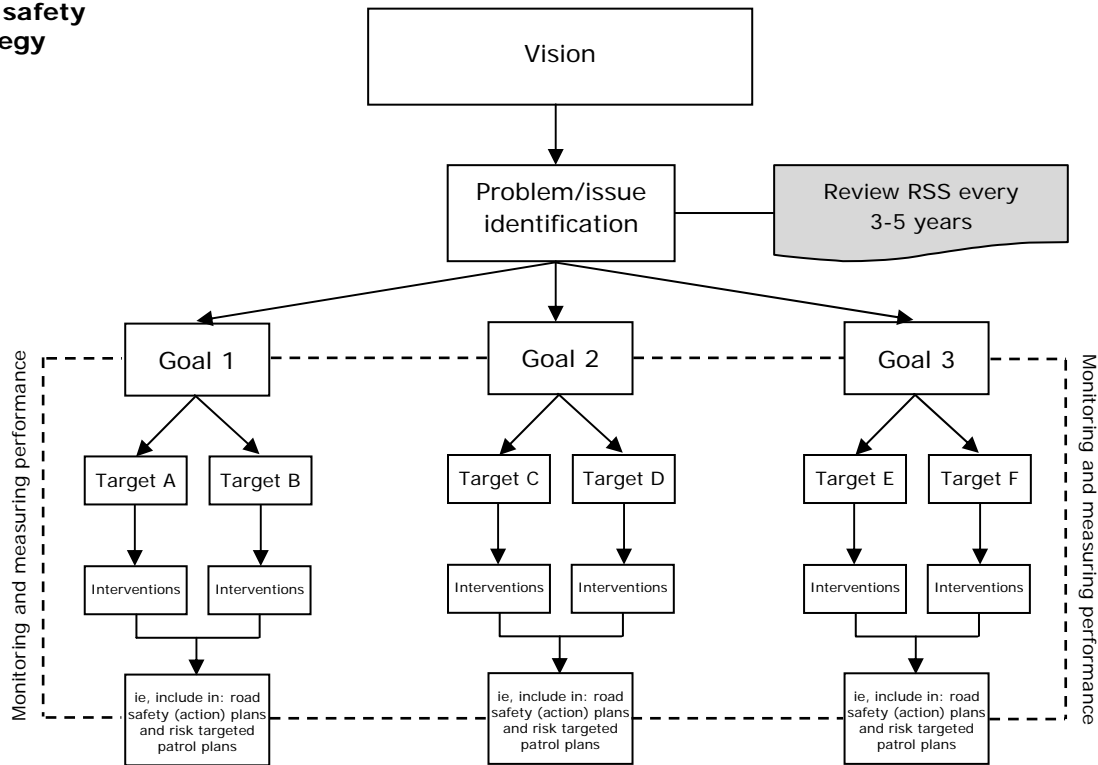
Review date

It is useful to specify when the strategy should be reviewed. A three-year (minimum) to five-year (maximum) review period is appropriate to ensure the document remains in touch with the current safety issues.

1.5.2 Components of a road safety strategy, continued

Schematic example of a road safety strategy

Figure 4 – Organisation of the road safety strategy



1.5.3 Road safety (action) plans and risk targeted patrol plans

While road safety (action) plans and risk targeted patrol plans are not required for a road safety strategy, they are useful tools which can be used to achieve road safety strategy targets.

Road safety (action) plans

A road safety (action) plan is activity-based and sets out specific actions (detailed interventions) to be taken, as well as responsibilities and timelines for completion of the activity. The overriding purpose of the road safety (action) plan is to achieve the goals and targets of the road safety strategy. To be concise the road safety (action) plan provides the specific programme of engineering, enforcement and education initiatives required to achieve the road safety strategy goals.

Road safety (action) plans (RS(A)Ps) are developed at the city or district level or territorial authority cluster area, and play a key role in actioning road safety strategies. RS(A)P meetings are collaborative and involve key road safety partners such as the Land Transport NZ, NZ Police, Transit NZ, local authorities and other stakeholders. Using the road safety strategy as an overriding document, specific road safety issues in the area are identified at key locations. Targets are agreed, action points are developed and progress is reviewed and monitored at subsequent meetings.

Risk targeted patrol plans

Risk targeted patrol plans (RTPPs) are effective tools to assist local authorities to meet the road safety goals articulated in their road safety strategy. Weekly or monthly RTPPs allocate strategic enforcement hours to known safety risks often by location and time. Feedback on the taskings is provided and effects of the enforcement are measured using offence and crash data. Strategic enforcement hours are those allocated to the NZ Police outputs for:

- € drinking or drugged driver control
- € speed control
- € restraint device usage
- € visible road safety enforcement.

Ideally the RTPPs will form part of the RS(A)P.

1.6 Delivery planning

1.6.1 Delivery plan for buy-in, implementation and internal audit phases

This example of a delivery plan (part 3–C) was prepared after the development phase had begun. Hence it does not make reference to the development phase.

The delivery plan spreadsheets (part 3–C) lists the general tasks needed to achieve the buy-in and implementation phases of the SMS for the council. They are reviewed and quantified in the table below. For current SMS developments it is recommended that these phases begin while the SMS is being developed rather than waiting for it to be completed. This approach has the advantages of the SMS not only 'hitting the ground running', but also should increase the level of commitment of other departments within the council. Everyone working within the road boundary will need to take responsibility for particular parts of the SMS.

An electronic copy of the spreadsheets is included in these guidelines. Further copies can be obtained from Land Transport NZ. The delivery plan will need to be tailored for the individual RCA. It is provided as a prompt, not a must do.

The main tasks for buy-in and implementation that come out of the spreadsheet are as follows:

Project management

Ref no	Description	Estimated time	Comment
0-1	Familiarisation, work planning, liaison	Allow about one day	Scoping the work, liaising with Land Transport NZ as appropriate
0-2	Delivery planning	Allow three to four hours	As part of the stage 1 workshop. Once SMS is nearing completion during stage 2 and prior to stage 3 sign-off by Land Transport NZ and RCA

1.6.1 Delivery plan for buy-in, implementation and internal audit phases, continued

Buy-in phase	Ref no	Description	Estimated time	Comment
	1-1	Communication plan	Three to four hours	Develop plan in liaison with Land Transport NZ
	1-2	Presentations to councillors on the SMS approach and the road safety strategy (RSS)	Two hours each for two people plus preparation time, approximately 20 hours in total	Combine with other SMS meetings/workshop activities
	1-3	Management meeting presentation on SMS	One hour plus preparation time, four hours total	Use similar material to staff presentation (see 1-4)
	1-4	Internal units SMS presentation	Two hours (two people) plus preparation time, allow 10 hours total	Develop with input from Land Transport NZ as required plus materials from the guidelines. The desired outcomes are to get champions (see 1-5 below) and develop wider awareness, understanding and commitment within the organisation
	1-5	Nominate members of safety team from within the council's internal units	n/a	Achieve preferably prior to or at presentation in 1-4 above
	1-6	Presentation on opportunities for improvement (OFI)	Two hours (two people) plus preparation time, allow six hours total	Combine timing with 1-3 above
	1-7	Launch SMS	Attendance, short commentary input, allow three hours	Function to involve key council staff and road safety partners to demonstrate the council commitment
	1-8	Presentation to consultants and contractors	Estimate eight hours in total	This needs to be shared between consultants, contractors and council staff to demonstrate the council commitment
	1-9	Development of safety intervention plan	See 2-7 on the next page	This could be initiated after the presentation in 1-8 above It probably needs to be a requirement written into the maintenance contract/s
	1-10	Involvement of key road safety partners	Several hour-long meetings	The council may identify some opportunity to involve their partners in some of the above activities, or it may be necessary to have a separate meeting

1.6.1 Delivery plan for buy-in, implementation and internal audit phases, continued

Implementation phase	Ref no	Description	Estimated time	Comment
	2-1	Safety team in place	Including above. Possibly additional time to facilitate first safety team meeting (one day)	Achieve as part of buy-in phase
	2-2	OFl process operational	Maybe one to two days plus time for any specific tasks within the plan	Work with the safety team to ensure the plans, responsibilities, resource needs and timeframes are documented
	2-3	Road safety strategy (RSS) approved by council and operational	Maybe two to three days depending on how much additional effort is allocated to develop a road safety action plan	Expect this to require presentation of an RSS outside the SMS, and involving the road safety partners and co-ordinators. Close linkage needed with RLTS. Will need formal report to council as part of, or following the presentation in 1-2 on the previous page
	2-4	Deficiency database and prioritisation process	Approximately one day	Likely to require liaison with the Land Transport NZ to determine the best solution. May also require assistance in defining the user specification setting up the database
	2-5	Crash reduction study (CRS) programme operational	Assume nil	Generally, this appears to be working well now, and may not need much if any additional effort
	2-6	Network evaluation programme operational	One to three days	Network evaluation, such as existing road safety audit, may be undertaken in conjunction with other inspections
	2-7	Safety intervention plan (SIP) contractual requirements in place	Approximately three days	To pick up best practice from other areas, liaise with Land Transport NZ. Following presentation in 1-8, work with contractor to define the framework and facilitate SIP development. Include provisions in future contracts
	2-8	SMS integrated in human resources procedures – job descriptions, induction and performance review processes	Allow two days initially for meetings and short summary of requirements	Meet with HR and key assets staff to discuss requirements, provide advice on relevant provisions

1.6.1 Delivery plan for buy-in, implementation and internal audit phases, continued

Audit and review phases	Ref no	Description	Estimated time	Comment
	3-1	Stage 3 SMS development review	Included in current time allowance for SMS development	The stage 3 sign-off meeting is a contractual requirement of Land Transport NZ, the RCA and the consultant
	3-2	Safety team meetings	Time required depends on the frequency of meetings and numbers participating	Ensure a programme of regular meetings is in place. Advise on agenda and review prior to meetings. Ensure improvement plans (OFI) are incorporated as in 2-3. Review minutes of previous meetings (including stage 3 development review)
	3-3	Continuous improvement monitoring workbook	Allow one day for each participant plus time to provide a short report on the outcomes and recommendations to the safety team	After two to three years, work with Land Transport NZ to undertake external monitoring as outlined in the guidelines on items of significance

1.7 Document control

Without good document control a system will function increasingly poorly as updates are omitted from some copies and the gulf between copies of the document widens. In the longer term it is likely that any system reliant on the document would begin to fail and would be unlikely to be found robust or suitable when audited.

1.7.1 Key issues for document control

**Review team
(this is normally the
safety team)**

A review team should be established to be collectively responsible for the intellectual management of the document. They should have sufficient delegated authority within council to sanction an update of sections of the document as required. The review team should meet regularly with an annual review to implement the suggested opportunities for improvements and update the existing list of opportunities for improvement.

Document controller (this is normally the SMS champion)

Ultimate responsibility for control of the document should rest with one individual. This responsibility should be written into their job description to ensure that the person is either succeeded or the responsibility re-allocated when the incumbent leaves. For the purpose of this overview this person is given the title of 'document controller'.

Master document

There should be a master document where all suggestions for updating are recorded in an opportunity for improvement register appended to the master document.

Document control process

There should be a clearly defined and published process for:

- € recording suggested improvements to the document
- € consideration of the above improvements by the review team
- € effecting changes to the document as approved by the review team.

There should be a list appended to the master document detailing all other hard copies of the document that have been issued. Each issued hard copy should have a unique identifier and a contact name and designation for the person who holds that hard copy.

There should be an update register at the start of each copy of the document. Each update should be chronologically numbered so that should someone inadvertently misplace an update, they will be aware of this upon receiving the next update.

The document control process should be audited annually by the review team to confirm that it is being effectively complied with.

1.8 Timeline and format for safety management system implementation and audit

A need to support RCAs in the areas of SMS implementation and audit was identified at the September 2003 SMS review workshop. Land Transport NZ undertook to assist by developing guidelines on how each of these issues may be addressed. The following table summarises ideas from the workshop. These tables have been expanded into implementation guidelines by consultants with knowledge and experience in the respective areas. These form part 2 of this guideline.

SMS stages	Implementation	Audit (continuous improvement cycle)		
Activity	SMS implementation	Implementation monitoring	Outcome evaluation	Document review
Timeframe	1-3 years (depending on what systems/processes the RCA already have in place)	Ongoing	Ongoing	Ongoing
Objectives	<ul style="list-style-type: none"> ∅ SMS is owned by RCA and is working ∅ Barriers to SMS implementation are addressed ∅ Road safety issues prioritised ∅ Improvement process in place ∅ Implementation timing being met ∅ Community sign-off of RSS 	<ul style="list-style-type: none"> ∅ To assess that documented systems and processes are being followed ∅ To identify opportunities for improvement to existing processes ∅ Good working relationships across RCA boundaries 	<ul style="list-style-type: none"> Measure improvements in safety performance including: <ul style="list-style-type: none"> ∅ consistent road environment ∅ use of standards ∅ good working relationships across RCA boundaries 	<ul style="list-style-type: none"> ∅ SMS including the RSS reflects improvements that have been identified in the monitoring and evaluation process
Land Transport NZ's role	<ul style="list-style-type: none"> ∅ Guidance ∅ Technical support ∅ Financial support 	<ul style="list-style-type: none"> ∅ Guidance ∅ Assist monitoring team ∅ Financial support 	<ul style="list-style-type: none"> ∅ Leadership ∅ Outcome evaluation via road network performance CAS and data analysis. ∅ provision of an evaluation team 	<ul style="list-style-type: none"> ∅ Technical support ∅ Guidance ∅ Monitor outcomes of review
RCA's role	<ul style="list-style-type: none"> ∅ SMS implementation ∅ Implementation of new systems and processes 	<ul style="list-style-type: none"> ∅ Assist own and other RCA monitoring teams ∅ Implement improvements 	<ul style="list-style-type: none"> ∅ Evaluation of progress towards targets and goals set out in road safety strategy ∅ Assist own and other RCA evaluation teams 	<ul style="list-style-type: none"> ∅ Review SMS and RSS documentation ∅ Change as necessary
Consultant's role	<ul style="list-style-type: none"> RCA or Land Transport NZ may undertake or engage consultant to: <ul style="list-style-type: none"> ∅ market SMS internally ∅ develop and document new systems and processes if requested 	<ul style="list-style-type: none"> RCA or Land Transport NZ may undertake or engage consultant to: <ul style="list-style-type: none"> ∅ undertake, organise and chair monitoring meeting ∅ produce report 	<ul style="list-style-type: none"> RCA or Land Transport NZ may engage consultant to: <ul style="list-style-type: none"> ∅ undertake or organise evaluation meeting ∅ produce report 	<ul style="list-style-type: none"> RCA or Land Transport NZ may engage consultant to: <ul style="list-style-type: none"> ∅ undertake or organise review meeting and produce report ∅ complete changes to documents

