Deciding if a Road Safety Audit is needed

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Abstract

An effective road safety audit process has great potential for improving road safety. This can only be gained if the framework to support the road safety audit process works well. One of the key elements of the road safety audit framework is guidance. Effective guidance provides clear and concise direction, actions, identification of responsibilities, and explanation of how to implement directions and actions.

The New South Wales Centre for Road Safety undertook an assessment of the Roads and Traffic Authority of New South Wales’ existing road safety audit policy to establish where areas could be fruitfully targeted for improvements. This assessment identified that the existing methodology for determining if a road safety audit was needed could be significantly improved.

A different line of attack was embarked on for making these decisions. This included taking into consideration the expected outcomes from the overall road safety audit process. The expected end result was a new methodology for making these decisions based on a risk approach. This paper discusses the manner in which this new methodology was developed and its outcomes.

Keywords

Road safety, Road Safety Audit, Road Safety Evaluation, Road Safety Check, improved methodology, project managers

Introduction

The New South Wales (NSW) Centre for Road Safety undertook assessments of the Roads and Traffic Authority’s (RTA) road safety audit framework to establish which areas could be targeted for improvement. The assessment indicated one of the key areas that must work effectively to maximise the value of road safety audits was guidance.

A review of the RTA’s existing policies, procedures and guidelines relating to road safety audits was undertaken. This review identified a number of areas which could be significantly improved. This paper discusses the review of RTA’s existing policies, procedures and guidelines relating to road safety audits and subsequently improvements put into practice.

Background

The NSW Centre for Road Safety undertook assessments of the RTA’s road safety audit framework to establish which areas could be targeted for improvement.

The road safety audit framework included:

- Policy, procedures and guidelines for conducting road safety audits.
- Road safety auditor training courses.
- Road safety auditor performance schemes.
- Supply of road safety audit professional services.
- Information systems used to collect and report on corrective action requests from road safety audits.
- Dissemination of information relating to road safety audits.
1. Assessment process
The assessment was conducted in two distinct stages:
- An internal workshop to identify and prioritise concerns related to the existing road safety audit program and practices; and
- A formal systems audit of the road safety audit process across the organisation to assure that the road safety audits process was undertaken effectively, efficiently and in compliance with RTA policy.

As part of the formal systems audit, a number of case studies from different work areas across the organisation were also comprehensively reviewed. This involved examining 43 road safety audit reports, based on maintenance, development, traffic and road safety projects ranging in total costs from $115,000 to $121 million. It is acknowledged that the appraisal was based on a small sample. However, the sample was sufficient to focus future improvement strategies. The results were categorised into the following indicators:
- Understanding of road safety audits
- Awareness of RTA policy
- Indication of quality outputs.

2. Assessment outcomes
The NSW Centre for Road Safety’s overall assessment process identified areas where the RTA could undertake further enhancements to improve the application of road safety audits. The assessment indicated five key areas that must work effectively to maximise the value of road safety audits (1):
- Guidance to improve understanding of the road safety audit framework and the quality of road safety audits,
- Training to improve understanding of road safety audit framework and the quality of road safety audits,
- Auditor performance schemes to improve quality of road safety audits, and
- Information systems to improve awareness, understanding and quality of the road safety audit framework, and
- Communications to improve awareness of the road safety audit framework.

This paper continues discussion on the review undertaken of guidance on road safety audits.

Guidance review
To improve the understanding, practices and quality of road safety audits the NSW Centre for Road Safety comprehensively reviewed RTA’s policies, procedures and guidelines in relation to road safety audits. This included identifying the documents focus in regard to the different phases of a project.

The documents reviewed included:
- Austroads Road Safety Audit guide (initially) (2) and Austroads Guide to Road Safety Part 6 Road Safety Audits (once released) (3). This provided guidance at a National level for road safety auditors on how to conduct road safety audits for the pre-construction, construction and post-construction phases of a project; and for project managers on how to select the road safety audit team and how to respond to a road safety audit report.
- RTA’s Technical Direction TD 2003/RS03 Policy for road safety audits of construction and reconstruction projects (4). This provided guidance at a State level on the RTA’s organisational position (policy) and procedures on conducting road safety audits for the pre-construction phases of a project, including pre-opening stage. The Technical Direction included coverage, policy statements, intervention levels of when to road safety audits, implementation and management procedures.
- RTA’s Accident Reduction Guide Part 2 Road Safety Audits (5). This supported the Technical Direction and translated the Austroads Road Safety Audit guide into State level procedures and practices. It provided guidance for road safety auditors on how to conduct road safety audits for projects delivered by the RTA during the pre-construction phases of a project. It also provided some guidance for project mangers on how to prepare a road safety audit program, select and engage the road safety audit team and how to manage corrective action requests following a road safety audit.
1. Review approach
The review process basically involved:
- Researching other relevant road jurisdiction policies, procedures and guidelines on road safety audits.
- Reviewing the assessment process findings with research findings.
- Establishing areas for improvement with existing practices and in the documentation. This involved engaging a risk consultant and technical experts in a series of workshops to assist in establishing these areas for improvement and developing them further.
- Development and drafting of improvements.
- Consultation across the relevant Branches of the RTA.

2. Review outcomes
The review identified a number of areas for improvement which would enhance RTA practices towards achieving road safety outcomes of minimising road crashes and injuries. Effective guidance provides clear and concise direction, actions, identification of responsibilities, and explanation of how to implement directions and actions. The key areas identified for improvement included:
- The methodology for determining the intervention levels for when to undertake a road safety audit. The existing methodology was financially based. It focussed on (a) under which program (work type) the project was funded and (b) the total cost of the project.
- Instructions for project managers on how to commission and manage a successful road safety audit. The existing guidance offered too little direction and advice on objectives, roles, responsibilities, outcomes and descriptive procedures.
- Instructions for project managers on how to effectively respond to and manage deficiencies identified from a road safety audit as well as how to complete the road safety audit process. The existing guidance offered minimal direction and advice on objectives, roles, responsibilities, outcomes and descriptive procedures.
- A process for analysing trends from all road safety audits conducted across a region and providing feedback into policies, procedures, operational practices, standards, etc. to prevent or remediate the recurring issues.

Guidance improvements
The NSW Centre for Road Safety’s key improvements to guidance relating to road safety audits for the RTA included:
- Re-developing the Technical Direction, and
- Producing a set of guidelines.

1. Re-developed Technical Direction
A different line of attack was embarked on for determining whether a road safety audit was needed for a specific project. This included taking into consideration the expected outcomes from the overall road safety audit process.

The end result was a new methodology for making these decisions based on a risk approach. The methodology targeted pre-construction, construction and post-construction phases in a project.

This new methodology asked a series of questions and depending upon the response considered a range of risk factors which may affect the road safety outputs of the project. The risk factor categories considered included:
- Type of works
- Organisational risks
- Road / path characteristics
- Road network characteristics
- Hazards
- Road use characteristics
- Adjacent land uses
- Road safety outcome
As part of the development of this methodology it was recognised that the intensity of road safety assessment needed varied for different projects. Therefore, a range of road safety audit practices were defined. The road safety audit practices included:

- **Road safety audits.** These are about identifying road safety deficiencies and areas of risk in the pre-construction, construction or post-construction phases of a project and implementing corrective actions to address each identified deficiency. It is a formal process. It does not consider crash history. The road safety audit is conducted by an independent, qualified team of professionals.

- **Road safety evaluations.** These Evaluations are about identifying road safety deficiencies and areas of risk in the post-construction phase of a project and implementing corrective actions to address each identified deficiency. It is a formal process. It involves both a road safety audit and a crash investigation. The evaluation is conducted by independent, qualified professional teams.

- **Road safety checks.** These Checks are about identifying road safety deficiencies and areas of risk in the pre-construction, construction or post-construction phases of a project and implementing corrective actions to address identified deficiencies. It involves the principles of road safety auditing and crash investigation. Whilst the check is conducted by a professional with road safety experience the process is less formal and rigorous than a Road Safety Audit or Road Safety Evaluation.

2. **Set of Guidelines**

To support the re-developed Technical Direction, the existing guidelines were updated and expanded into a set of guidelines capturing all the road safety audit practices. This set of guidelines included:

- **Commissioning a road safety audit.** This included information on preparing a road safety audit brief, selecting the road safety audit team, gathering and delivering background information and holding a commencement meeting.

- **Conducting a road safety audit.** This included information on undertaking the road safety audit, preparing the road safety audit report, holding the completion meeting and finalising the road safety audit report.

- **Conducting a road safety evaluation.** This included information on commissioning a road safety evaluation, undertaking a road safety audit, preparing the road safety evaluation report, and finalising the road safety evaluation report.

- **Road safety checks.** This included information on commissioning a road safety check, undertaking the road safety check, preparing the road safety check response, and completing a road safety check.

- **Completing a road safety audit / evaluation.** This included information on accepting and reviewing the road safety audit or evaluation report, producing a Corrective Action program to address each road safety deficiency identified in the road safety audit / evaluation, implementing corrective actions and closing out the Corrective Action program.

- **Analysing trends from a number of road safety audits / evaluations.** This included information on undertaking a trend analysis of road safety deficiencies identified across a region, suggesting preventative actions for each finding and producing a trends analysis report.

- **Improving practices to attain safer roads.** This included information on developing a Preventative Action program, implementing and monitoring preventative actions, and documenting the completed actions.

**Conclusion**

The NSW Centre for Road Safety undertook a review of RTA’s policies, procedures and guidelines in relation to road safety audits to establish where areas could be fruitfully targeted for improvements. This review identified that (a) the existing methodology used in the policy for determining if a road safety audit was needed could be significantly improved, (b) instructions for project managers on how to effectively manage the overall road safety audit process could be extensively enhanced, and (c) a process was needed for analysing trends from all road safety audits conducted across a region and providing feedback into policies, procedures, operational practices, standards, etc. to prevent or remediate the recurring issues.

The key improvements to RTA’s policies, procedures and guidelines in relation to road safety audits implemented by the NSW Centre for Road Safety included: (a) re-developing the Technical Direction which included a new methodology based on a risk approach for determining whether a road safety audit
was needed for a specific project, and (b) supporting this re-developed Technical Direction by producing a set of guidelines capturing all the road safety audit practices.

These key improvements to guidance on road safety audits strengthened RTA’s knowledge, support and practices in road safety audits. This in turn has the potential to heighten the quality of road safety audit outputs, enhance road safety in RTA’s business practices and ultimately benefit the community through reduced road trauma.

References