



SMS FOR AERODROMES – BLOCK 6

ROOT CAUSES & CORRECTIVE ACTION PLANS

RDIMS#14617018



Canada

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In this section we take a look at corrective action plans and root cause. This was identified by Canadian inspectors as an area of concern and was often done improperly by SMS aerodrome managers.

Root Cause Analysis

Root Cause Analysis:

- Without knowing the root causes of an issue, it is not possible to develop an effective corrective action for the defined problem.
- Root Cause Analysis approaches include but are not limited to:

The “5 whys”

The “5 Whys” is a repetitive question-asking technique used to explore the cause and effect relationships underlying a particular problem.

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Root Cause Analysis has been identified as a big area in which airports large and small often struggle.

Identifying root causes requires everyone to look beyond the obvious causes at other possible contributing factors, including, (but not limited to), organizational issues. Key operational staff must be properly trained to

conduct safety investigations and have appropriate management support. Their findings should be disseminated throughout the organization.

Lessons learned about safety are more beneficial when they include a focus on root causes (‘why?’) rather than on a description of the accident or incident only (‘what?’).

Transport Canada has developed an Advisory Circular AC SUR-002- Root Cause Analysis and Corrective Action for TCCA Findings that can help the enterprise develop its QAP root cause analysis and preventative corrective action process.

Worksheets available in SUR-002 to help with root cause analysis

Example:

Problem Statement: The vehicle will not start.

Why? - The battery is dead. **(the first “why”)**

Why? - The alternator is not functioning. **(the second “why”)**

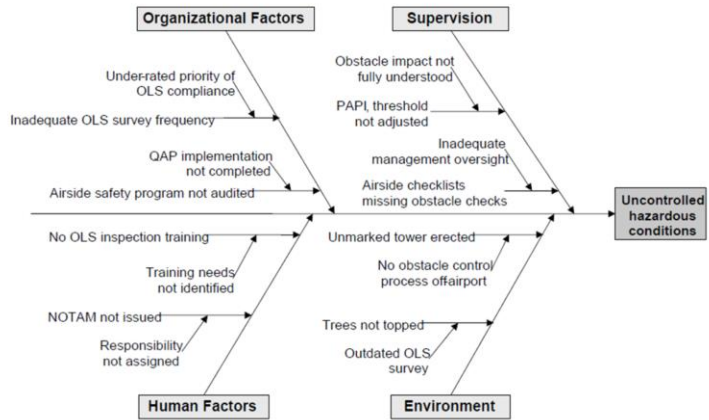
Why? - The alternator belt has broken. **(the third “why”)**

Why? - The alternator belt was well beyond its useful service life and not replaced. **(the fourth “why”)**

Why? - The vehicle was not maintained according to the recommended service schedule. **(the fifth “why”, a root cause)**

Causal Analysis – The organization used a fishbone diagram to brainstorm possible factors and causes, as shown in Figure 1

Figure 1 – Fishbone Diagram



Corrective Action Plan: How we fix it

A **Corrective Action Plan** outlines the manner in which an organization proposes to either correct identified deficiencies. Carrying out the plan should allow the organisation to standardize its activities and be fully compliant with SMS requirements.

The Checklist

A) Factual review of the finding

- The aerodrome completes a review of the finding and clearly identifies what happened; how widespread it was; where it occurred in the system; what type of problem it was.

B) Root cause analysis

- The aerodrome provides the root cause analysis as well as any causal factors that contributed to the finding.

The Checklist

C) Proposed corrective actions

- The aerodrome provides corrective actions, both long and short term, to mitigate the identified root causes

D) Implementation timeline

E) Managerial approval

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PNR CAP EVALUATION CHECKLIST			
ENTERPRISE: FILE NUMBER: SURVEILLANCE ACTIVITY: FINDING #: Cap Submission # (1, 2, 3, etc.):		MEETS REQUIREMENTS	
		As referenced in AC SUR-004 v1, section 12.2 - CAP Evaluation See also AC SUR-002 - Root Cause Analysis and Corrective Action for TCCA Findings	
CORRECTIVE ACTION PLAN REQUIREMENTS			
		YES	NO
COMMENTS			
A) [FACTUAL REVIEW OF THE FINDING (SUR-004 section 12.2.1)]			
The enterprise shall complete a review of the finding and clearly identify what happened, how widespread it was, where it occurred in the enterprise's system and what type of problem it was.			
a a description of the relevant factual information related to the finding			
b identification of the system(s) or portion thereof that led to the finding			
c identification of the process, procedure, practice and/or culture(s) involved			
B) [ROOT CAUSE ANALYSIS (SUR-004 section 12.2.2)]			
The enterprise shall provide the root cause analysis as well as any causal factors that contributed to the finding.			
a identify the process used, how they logically arrived at root cause			
b other considerations used in the conduct of the root cause analysis			
c did they consider the "system" involved in the finding?			
ii input of the people involved with the system in question			
iii processes, procedures, forms, templates, training etc associated with the system(s)			
iv performance data/history associated with the systems identified			
C) [PROPOSED CORRECTIVE ACTIONS (SUR-004 section 12.2.3)]			
The enterprise shall provide corrective actions (both long and short term) to mitigate the identified root causes.			
a detailed description of the short-term action(s) to address the specific examples in the finding as well as the review to determine if other examples exist.			
b detailed description of the long term actions to prevent re-occurrence of the non-compliance			
c identify the person responsible for implementing the actions			
d an assessment of any induced hazards or risks associated with implementing the CAP			
D) [IMPLEMENTATION TIMELINE (SUR-004 section 12.2.4)]			
a Does the CAP include timelines for the implementation of each proposed corrective action?			
b Is the timeline aimed at implementing effective corrective actions in the shortest reasonable time period?			
c Inspector SHALL confirm there are due dates, targets and planned follow up to ensure effectiveness of the proposed CAP			
E) [MANAGERIAL APPROVAL (SUR-004 section 12.2.5)]			
Is the corrective action plan approved by an individual within the certificate holder's management structure who has the authority to commit the necessary resources required to fulfill the plan?			
CAP Manager:			
Date (Y/M/D):			

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End of Module Confirmation

- Presentation of group questions
- Further discussion & reflection