
MANAGEMENT OF CHANGE

1.0 PURPOSE

- 1.1 The purpose of this Advisory Circular (AC) is to provide guidance to service providers on how to manage change in an SMS environment. This AC provides the necessary information to enable service providers to establish a formal process that guides the effective management of changes as they occur in an operational environment.
- 1.2 The implementation of processes related to management of change shall be in accordance with requirements prescribed by the Authority in the Civil Aviation (Safety Management) Regulations. This AC provides information necessary to enable service providers to comply with these regulations.

2.0 REFERENCES

- 2.1 The Civil Aviation Act
2.2 The Civil Aviation (Safety Management) Regulations

3.0 INTRODUCTION

- 3.1 Service providers experience change due to a number of factors including:
- a) organizational expansion or contraction;
 - b) business improvements that impact safety; these may result in changes to internal systems, processes or procedures that support the safe delivery of the products and services;
 - c) changes to the organization's operating environment;
 - d) changes to the SMS interfaces with external organizations; and
 - e) external regulatory changes, economic changes and emerging risks.

Examples

- a) *organizational change such as a new company structure or new key personnel;*

- b) operational changes such as a new fleet, a new operational contract, introduction of a new major system, the introduction of a new route;*
- c) changes to operational or administrative processes or procedures;*
- d) physical change such as addition of a new base, moving to a new head office;*
- e) editorial changes or amendments to the organization's documentation.*

3.1 Change may affect the effectiveness of existing safety risk controls. In addition, new hazards and related safety risks may be inadvertently introduced into an operation when change occurs. Hazards should be identified and related safety risks assessed and controlled as defined in the organization's existing hazard identification or safety risk management procedures.

3.2 The changes may also affect the appropriateness or effectiveness of existing safety risk mitigation strategies. Such existing safety risk mitigation strategies, therefore, require periodic review to ensure they remain appropriate and effective. New hazards introduced into the system by operational changes should be identified so as to enable the assessment and control of any related safety risks.

4.0 THE MANAGEMENT OF CHANGE

4.1 The Civil Aviation (Safety Management) Regulations require that a service provider shall, as part of its SMS safety assurance activities, develop and maintain a formal process for the management of change.

4.2 The application of change management can maximize the effectiveness of the change, engage staff, and minimize the risks inherent in the change. Regardless of the magnitude of the change, large or small, there must always be a predictive consideration for safety implications.

4.3 The organization's management of change process should take into account the following considerations:

4.3.2 Criticality.

How critical is the change? The service provider should consider the impact on their organization's activities, and the impact on other organizations and the aviation system.

4.3.3 Availability of subject matter experts.

It is important that key members of the aviation community are involved in the change management activities; this may include individuals from external organizations.

4.3.4 Availability of safety performance data and information.

What data and information is available that can be used to give information on the situation and enable analysis of the change?

4.4 The magnitude of a change, its effect on safety, and its potential impact on human

- performance should be assessed in any change management process. Small incremental changes often go unnoticed, but the cumulative effect can be considerable. Particular attention should be given to identifying unintended consequences that can emerge by accidentally introducing new hazards into the system.
- 4.5 The service provider should also consider the impact of the change on personnel. This could affect the way the change is accepted by those affected. Early communication and engagement will normally improve the way the change is perceived and implemented. Change is most successful if all personnel affected by the change are engaged, involved and participate in the process.
- 4.6 The organization should identify the changes likely to occur in the business/ operation which would have a noticeable impact on:
- 4.6.1 Resources – material and human;
 - 4.6.2 Management direction – processes, procedures, training and
 - 4.6.3 Management control.
- 4.7 Change is the catalyst for the organization to seek out hazards and understand the risks they present. An organization should establish a list of triggers for the formal start of the change process. Some examples of changes that may trigger the formal change process include, but are not limited to the following situations:
- 4.7.1 Changes resulting from the installation of new equipment;
 - 4.7.2 New areas of operations, whether geographical or other;
 - 4.7.3 Changes in response to operating experience;
 - 4.7.4 Changes in an organization's policies, procedures and manuals;
 - 4.7.5 Changes in scope of the organizations' certificate;
 - 4.7.6 Passenger safety information;
 - 4.7.7 Products or services;
 - 4.7.8 Operational changes;
 - 4.7.9 Exemptions, special approvals or alternative means of compliance;
 - 4.7.10 Changes for purposes of maintaining cross fleet standardization;
 - 4.7.11 After major events (mergers, acquisitions, rapid growth, downsizing, accidents;
 - 4.7.12 After significant occurrences involving the company or similar companies where unanticipated hazards or incidents were implicated; and
 - 4.7.13 After changes in relevant applicable safety regulations, or any time so directed by the Authority.

5.0 RISK MANAGEMENT

- 5.1 Safety risk management processes described in the organization's SMS manual should be followed whenever changes occur in their operational environment. The identified safety risks shall be assessed, and their effects appropriately mitigated to ensure safety risk controls remain appropriate and effective.
- 5.2 Risk Management aims at a balanced allocation of resources to address all risks and viable

risk controls and mitigations. This encompasses identification, analysis and elimination, and/or mitigation to an acceptable level of risk.

6.0 CHANGE MANAGEMENT PROCESS

6.1 The change management process should include the following activities:

- (a) **Understand and define the change;** this should include a description of the change and why it is being implemented;
- (b) **Understand and define who and what it will affect;** this may be individuals within the organization, other departments or external people or organizations. Equipment, systems and processes may also be impacted. A review of the system description and organizations' interfaces may be needed. This is an opportunity to determine who should be involved in the change. Changes might affect risk controls already in place to mitigate other risks, and therefore change could increase risks in areas that are not immediately obvious;
- (c) **Identify hazards related to the change and carry out a safety risk assessment;** this should identify any hazards directly related to the change. The impact on existing hazards and safety risk controls that may be affected by the change should also be reviewed. This step should use the existing organization's SRM processes;
- (d) **Develop an action plan;** this should define what is to be done, by whom and by when. There should be a clear plan describing how the change will be implemented and who will be responsible for which actions, and the sequencing and scheduling of each task;
- (e) **Sign off on the change;** this is to confirm that the change is safe to implement. The individual with overall responsibility and authority for implementing the change should sign the change plan; and
- (f) **Assurance plan;** this is to determine what follow-up action is needed. Consider how the change will be communicated and whether additional activities (such as audits) are needed during or after the change.

6.2 By taking a systematic approach to implementing change, organizations can gain a much clearer picture of the objectives of change and how to achieve them safely as well as complying with the regulatory change provisions. The steps in the change process are:

Step 1: Communicate and consult to define the change.

Step 2: Develop the case, identify who and what will be affected.

Step 3: Consider impact on known hazards /risk, and conduct risk assessment.

Step 4: Prepare the project plan.

Step 5: Obtain regulatory approval (if required; significant change)

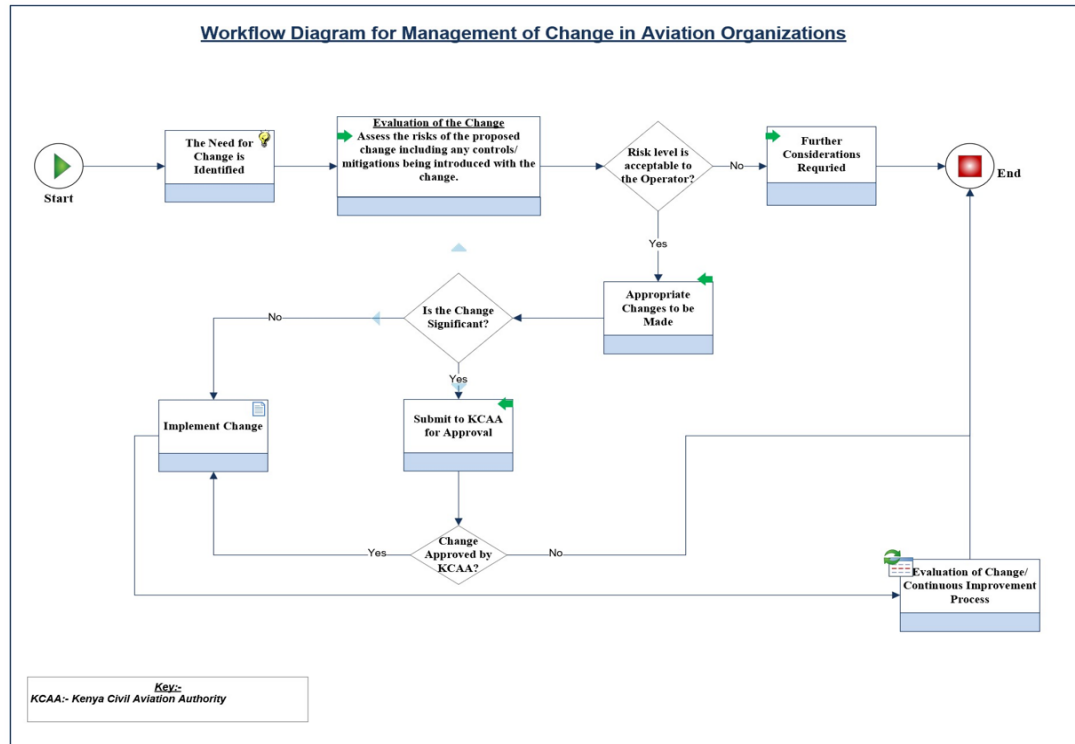
Step 6: Implement the change.

Step 7: Do ongoing monitoring and review.

Note:

A significant change requires CAA approval prior to implementation.

A non-significant change does not require CAA approval prior to implementation.



- 6.3 Throughout all steps in the process, there must be ongoing communication and consultations with all those involved.
- 6.4 The outcome of the risk assessment conducted in Step 3 should determine the resources allocated to subsequent steps.
- 6.5 The service provider is required to prepare a “Safety Case” to provide substantial evidence that the SMS activities associated with the change have been appropriately managed to maintain operations/activities to an acceptably safe level.
- 6.6 A Safety Case is a document that provides substantial evidence that the system to which it pertains meets its safety objectives. A Safety Case is not an additional or separate requirement to an SMS, but rather documented evidence that the SMS activities associated with the change have been appropriately managed to maintain operations/activities to an acceptably safe level.
- 6.7 A Safety Case would provide specific documented evidence that shows that the organization has not only identified and implemented the appropriate change management necessary to deliver new activity/equipment, but that the associated risk assessments were also conducted in support of implementation and ongoing activities associated with that change.
- 6.8 The regulator utilizes Safety Cases as transitional evidence to support a regulatory application, exemption or variation. The Safety Case will include the applicable change and

risk management activities in addition to revised operating procedures that will apply to the changed operations/activities. When accepted, these revisions should be incorporated into the relevant operating procedures.

A handwritten signature in black ink, appearing to be the initials 'BA' with a stylized flourish.

Civil Aviation Authority

SAMPLE MANAGEMENT OF CHANGE-TEMPLATE

1. What is the proposed change?

Describe the change.

2. Who is responsible?

Describe who is responsible for implementing the change.

3. Describe the major components of the change.

This will help identify the main risks of each component you address in section 7.

4. Who does the change affect?

Consider who it affects: individuals, departments, and organisations.

5. What is the impact of the change?

Consider why the change is taking place and the impact on the organization and its presses and procedures.

6. What follow up action is needed? (assurance)

Consider how you will communicate the change and whether you will need additional activities such as audits during the change and after it has taken place.

7. Safety Issues and Risk Assessment

No.	What is the issue? Hazard	What could happen as a result? (associated risk(s) and risk scenarios(s))	How likely is it to occur? (Likelihood)	How bad will it be? (severity)	What action(s) are being taken? (mitigation)	Action by whom and when
1.						
2.						
3.						
4.						
5.						

The Change is acceptable to implement.

Final Approval (Accountable Executive)	Name	Date

