# Introduction.

## Organisations required to have a Safety Management System by regulation, are also then required to have a Management of Change process to document and assess the impact of any organisational or operational change on aviation safety.

## This Evaluation Guide provides organisations with a framework/tool to review and self-assess their Management of Change within their governance structure and associated documentation. It is intended to be used to ensure that an organisation that is going through a change has considered all aspects that the CAA expect to be addressed and documented. It can also be used to check the quality and compliance of the change documentation before being presented to senior management and relevant stakeholders for their acceptance and, when required, submission to the CAA.

# Change Notification.

## Applicable changes fall into the following categories:

* Changes that ***will*** require CAA prior approval before implementation.
* Changes that require CAA review and *may* require approval before implementation.
* Changes that do not require CAA approval before implementation.
* Changes that do not need notifying to the CAA.

## The CAA’s role is to confirm the validity of applicable changes, supported by appropriate evidence and data. The CAA is also responsible for ensuring that any changes do not impact the organisation’s compliance with regulations. Where an alternative means of compliance, exemption or permission is being requested, the change documentation should accompany the application.

## This guidance will help ensure that the right level of detail has been captured and all safety impacts have been considered, as well as meeting any regulatory requirements. This includes the importance of involving the appropriate subject matter experts in the management of change process. Evidence and justification can then be documented.

# Documentation.

* 1. The change documentation may come under different titles or formats, depending on the organisation and the regulatory requirements, but are commonly referred to as: Safety Cases, Safety Risk Assessments and Aeronautical Studies. A suggested [management of change guidance template](https://www.caa.co.uk/media/a0xdtxum/moc-guidance-template-20240819.docx) is available to download.

## When compiling the documentation, at each step, consider the ‘rules’ for effective communication:

* Be clear.
* Be concise.
* Be unambiguous.
* Be consistent.
* Be coherent.
* Be appropriate.

## Ultimately, the aim is to check the change makes sense. The objective is to document a systematic approach to the change, ensuring that any risks that emerge as a result of the change are managed by the organisation (entity) to As Low As Reasonably Practicable (ALARP) and, where applicable, commensurate with an assessed Acceptable Level Of Safety from the CAA.

# Systematic Approach.

## There are a number a change management models available however most are formed using a series of common steps as a foundation:

Fig 1 – 6 Step System

## This SMS Management of Change guidance uses a modified 6 step process that is targeted on the safety and risk management elements:

1. [**Define the Change**](#_Step_1_–)**[[1]](#footnote-2).** An assessment of the nature, scope, need and impact of the proposed change.
2. [**Identify Stakeholders**](#_Step_2_–)**.** Identification of who the change will impact upon and selection of suitable subject matter expertise to support the hazard ID and risk management process.
3. [**Identify the Hazards**](#_Step_3_–)**.** Hazard and consequence identification. Ensure that an appropriate hazard identification process has been carried and the range of consequences have been identified and documented.
4. [**Risk Management**](#_Step_4_-)**.** Identify mitigations and actions to manage the risk to ALARP/ALOS.
5. [**Preparation and Implementation**](#_Step_5_–)**[[2]](#footnote-3)**. Prepare/review documentation to capture the systematic approach.
6. [**Review and Assure**](#_Step_6_–)**[[3]](#footnote-4).** Monitor the change implementation and verify that risks and mitigations are effectively managed after the change has been implemented.

## Each step includes a series of actions to be taken by the responsible assessor. For each action there is guidance to assist the assessor and a comments box to assist:

**Organisation/Entity Change Manager** to aid in systematically producing any required documentation.

**Regulator/Approver** as a tool to ensure a comprehensive assessment against any submitted documentation.

Ensure document version control of any completed Evaluation Guide.

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| Step 1 – Define the Change An assessment of the nature, scope, need and impact of the proposed change. | | |
| **Actions** | **Evaluation Guidance** | **Comments:** |
| 1.1 Ensure the documentation adequately describes the nature and scope of the change. | Who is making the change?  What is being changed?  Why is it being changed?  How is it being changed?  How long will it take? |  |
| 1.2 Ensure the documentation defines any assumptions. | Document why was the assumption made.  These will be validated at Part 6 once the change has been implemented. |  |
| 1.3 Ensure the documentation defines the direct and indirect impact of the proposed change. | Do the defined impacts consider:  • Direct interactions with what have been changed?  • Knock-on effects from the direct interactions? |  |

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| 1.4 Consider elements of the regulatory and operating environment pertinent to the organisation/entity. | Not an exhaustive list but will promote a comprehensive consideration across the organisation/entity:  **I**nterfaces: Consider the impact across internal and external organisational interfaces.  **B**usiness: Does the change impact upon normal business? Consider potential for inducing any perceived commercial pressure.  **E**quipment: Does the change involve the introduction/procurement of new equipment?  **D**ocumentation: Does the change induce a requirement to change/develop SOPs?  **C**ompliance: Compliant with regulations (See 1.6)?  **O**rganisation: Does the change impact upon organisational culture?  **P**eople: Consider the impact upon people and Human Factors.  **I**nformation (IT): Do the current IT systems support the change? Has cyber security been considered?  **L**ogistics: Does the change impact upon logistics? Consider equipment, assets, spares delivery, extended commuting etc  **O**perations: Does it change, reduce, grow your operations?  **T**raining: Does the change require additional training to be provided?  **S**takeholders: Consider who the change impacts upon (individual and organisational level) and identify stakeholders accordingly (Step 2). |  |
| 1.5 Consider the cumulative effects of the change. | Have multiple changes been considered on individuals or systems? |  |
| 1.6 Does the impact of the change have an effect on compliance with standards and regulations? | Does this require an application for an alternative means of compliance (AltMOC), permission or an exemption? |  |

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| Step 2 – Stakeholder Identification Identification of who the change will impact upon and selection of suitable subject matter expertise to support the hazard ID and risk management process. | | |
| **Actions** | **Evaluation Guidance** | **Comments** |
| 2.1 Identify internal interfaces and select appropriate stakeholder representation | Consider change stakeholder management techniques and ‘readiness’ or ‘resistance’ to change. |  |
| 2.2 Identify external interfaces and select appropriate stakeholder representation | Consider change stakeholder management techniques and ‘readiness’ or ‘resistance’ to change. |  |
| 2.3 Identify subject matter experts from amongst the stakeholders to support hazard ID and risk management processes. These should be documented. | Ensure departments/ organizations identified as interfaces are involved/consulted during Steps 3 and 4.  This may include subcontractors and external stakeholders.  Feedback loop? |  |

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| Step 3 – Hazard Identification Ensure that an appropriate hazard identification process has been carried and the range of consequences have been identified and documented. | | |
| **Actions** | **Evaluation Guidance** | **Comments** |
| 3.1 Ensure the hazard and consequence identification process is documented. | Confirm that this it has been documented or that existing procedures have been followed.  Provide a reference to existing procedures. |  |
| 3.2 Ensure the methods used enable a comprehensive hazard and consequence identification. | Evaluate the methodology to ensure it identifies hazard and related consequences.  Evaluate whether identified hazards and consequences are appropriate.  Consider if any hazards or consequences have been missed.  Review suitability of data used. |  |
| 3.3 Ensure human performance related hazards and their consequences are considered. | Consider use of the HF ‘Dirty Dozen’ as a guide:   * Communication -Do the stakeholders understand the change and how do you know? * Distraction - Has working environment changed? * Resource – Sufficient people and equipment to deliver change safely? * Stress – Human reaction to change (*Ref Kubler-Ross Change Curve*). * Complacency. * Lack of Teamwork (Consider ‘Readiness’ vs ‘Resistance’ to Change Stakeholder Management). * Pressure – Consider business risks inadvertently transferred to an individual. * Lack of awareness (Promotion of reason for change). * Lack of Knowledge/Competency (Training requirements). * Fatigue. * Lack of Assertiveness (Selection of stakeholders). * Norms (Organisational Culture). |  |
| 3.4 Confirm that the identified hazards and their consequences are recorded. | Sample some of the identified hazards and consequences. This may be included as part of the change documentation or held separately (but cross referred). |  |
| 3.5 Ensure hazards associated with interfaces and external organisations have been considered. | Ensure hazards related to internal and external interfaces outside of the control of the organisation have been considered? |  |
| 3.6 Determine whether hazards associated with the transitional phase have been considered. | Ensure that hazards that could arise during the implementation of the change have been considered. |  |

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| Step 4 - Risk Management. Identify mitigations and actions to manage the risk to ALARP/ALOS. | | |
| **Actions** | **Evaluation Guidance** | **Comments** |
| 4.1 Have appropriate likelihood and severity definitions been defined and used to classify the consequences? | This may be qualitative definitions supported by expert judgement or Quantitative definitions when data is available.  Are they the same as in the SMS documentation?  Acceptable to refer to existing Air Safety Manual methodology. |  |
| 4.2 Has a risk tolerability matrix been defined and used? | Is it the same as in the SMS documentation?  Acceptable to refer to existing Air Safety Manual methodology. |  |
| 4.3 Ensure likelihood and severity for each consequence have been recorded and the level of risk assessed. | Is the likelihood, severity and risk assessed before and after mitigating action has been taken?  Consider whether the likelihood and severity identified are reasonable and appropriate. |  |
| 4.4 Does the assessment of risk likelihood and severity include the effectiveness of barriers and defences? | Does the organisation use bow tie models, event tree analysis, fault trees etc?  Has the analysis included how the change may have impacted existing safety barriers/controls?  Has the analysis included any new safety barriers/controls as a result of the change? |  |
| 4.5 Check that the appropriate risk mitigations are implemented, recorded and will continue to be effective. | Confirm that risk mitigations/barriers are appropriately documented.  Some hazards will have more than one mitigation. |  |
| 4.6 Document who was involved in the risk management process. | Were the mitigations and actions generated by appropriate subject matter experts?  Has ownership of the mitigations/actions been allocated appropriately? |  |
| 4.7 Ensure risk mitigations/actions are SMART? | Are the mitigations specified?  Are the mitigations measurable?  Are the mitigations achievable?  Are the mitigations realistic/reasonable?  Has the time to implement been considered? |  |
| 4.8 Determine whether the risk mitigations have created any new risks or affected existing risk mitigations. | Do the mitigation actions impact directly or indirectly impact any existing risks, mitigations, or other safety requirements? |  |
| 4.9 Ensure HF principles have been considered in risk mitigation. | Is there an over reliance on human action as a risk mitigation?  Is the mitigation action fail safe and error tolerant? |  |
| 4.10 Has the risk be manged to ALARP/ALOS and Tolerable as required? | Ensure the decision on risk management activity e.g. accept/treat/escalate/stop etc is documented. |  |
| 4.11 Ensure the risk and decision on its management has been signed off appropriately. | Ensure ownership of the residual risk by an appropriately authorised person, which is documented. |  |
| Step 5 – Preparation and Implementation. Prepare/review documentation to capture the systematic approach. | | |
| **Actions** | **Evaluation Guidance** | **Comments** |
| 5.1Prepare review documentation to capture the management of change process. | Use the 6 Step process as a guide to capturing the process.  A suggested template is available from the CAA website: [Management of change guidance template](https://www.caa.co.uk/media/a0xdtxum/moc-guidance-template-20240819.docx) |  |
| 5.2 Prepare/review any supporting evidence that is presented to justify that the change is safe to implement. | Has an equivalent, or better, level of safety been demonstrated?  Has sufficient and appropriate evidence been presented to support the change? |  |
| 5.3 Ensure review and performance measurement activity (Step 6) is documented. | Whilst Step 6 activity may come after approval and implementation, plans for this activity must be included as part of the risk management and justification for change. |  |
| 5.4 Document any conclusion reached through application of the 6 Step Process. | Addressing the balance of:   * Reason for change. * Hazard ID. * Risk managed to ALARP and is acceptable? * Unidentified transitional Hazard ID and management (Part 6) * Review and Performance Measurement (Part 6)   Ensure conclusion documents justification that the change and the transitional arrangements can be implemented safely. |  |

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| 5.5 Determine whether the documentation makes a clear conclusion for the safety of the proposed change and has been signed and accepted by an appropriately authorised person in the organisation., | For significant changes, you would expect to see the Accountable Manager signing off the change. |  |
| 5.6 Consider CAA notification requirements. | **Does the change require CAA review and approval before implementation?**  Completion of CAA Change Notification Form [SRG 1430](https://www.caa.co.uk/SRG1430) required? |  |

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| Step 6 – Review and Assurance. Monitor the change implementation and verify that risks and mitigations are effectively managed after the change has been implemented.  . | | |
| **Actions** | **Evaluation Guidance** | **Comments** |
| 6.1 Identify measurable critical steps (milestones) to assess progress of change and any associated success criteria. | There may be critical steps or phases in the change that require additional monitoring e.g.   * Operation of new equipment. * Training delivered.   Develop success criteria.  Assign responsibility for ownership. |  |
| 6.2 Assess effectiveness of Hazard ID | Unforeseen hazards or risk could arise because of the implementation.  These could be identified through normal reporting and can be manged according to existing SMS process.  Consideration should be given to whether they impact upon the existing implementation decision and if any documentary update required (Ensure document version control is observed).  **Consider requirement to inform CAA of any arising, as they could impact upon any pre-approval decision.** |  |

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| 6.3 Review how the risk controls will be checked to confirm they are effective | Some of the risk barriers/controls will be more critical than others so should be highlighted.  Critical in terms of:   * Impact. * Robustness of the barriers/controls. * Number of remaining barriers/controls in place.   Check who is responsible for the monitoring activities and verification checks.  Ensure an appropriate plan for checking the risk barriers/controls has been defined and documented.  Have performance indicators been established?  Are adequate contingency plans in place? |  |
| 6.4 Determine how any assumptions made in the change will be validated | How are they going to monitor and review the assumptions after the change has taken place?  Will there be sufficient data available to support the claims? |  |
| 6.5 Define when the change will be reviewed and how frequently | Review change against defined success criteria to ensure the ‘what, why and how’ of the change are being/have been achieved successfully.  Review could be against pre-defined milestones; by calendar; or by an identified hazard or risk.  Whatever the trigger for a review, ensure original assumptions and conclusion for change remain valid.  **The 6 Step Process is an iterative process, and any review could potentially require a return to Step 1 and a redefinition of the original Change.** |  |

1. Assess any requirement for CAA review and approval before implementation. [↑](#footnote-ref-2)
2. If required, obtain CAA approval ahead of implementation. [↑](#footnote-ref-3)
3. Whilst this activity comes after implementation, the assurance plan should be included in any documentation. [↑](#footnote-ref-4)