# MAIB-NOR 21/03 06 OCT

# A procedure to write a procedure: A guide developed by the airworthiness industry

References:

- www.caa.co.uk/CAP1798

## Introduction

In May 2019 the UK CAA published the guidance for writing procedures in CAP 1798. This is considered a very good guidance to understand how to write appropriate and useful procedures to be used in the aviation industry. MAA-NOR uses these guidelines both when writing internal procedures and also when reviewing procedures which are required by EMAR.

The content in this MAIB is an extract from the UK CAA guidelines, but MAA-NOR encourage any organisation to read through the referenced document as well.

## What are procedures?

**Policies** provide guidance concerning what to do; they define the boundaries of what may or may not be done. As such, policies provide for latitude in interpretation while guiding decision making. The MOE is a policy document that describes how the people in the Organisation control and use the resources that the Organisation has at its disposal, allocating who is responsible for doing what, to achieve the Outputs. The MOE may not even describe the processes within an Organisation and any procedures it does contain are likely to be at a very high level.

**Processes** collate many subordinate procedures to produce outputs to given standards. In an MRO, 'production' is a process that coherently and efficiently aligns many procedures to re-deliver aircraft.

**Procedures** are subordinate to policies and to processes. Where an organisation's output relies on many, sometimes complex, interactions within an overall process, at every functional level, individual written procedures standardise the processes we use our resources to achieve our outputs, repeatably.

**Written Procedures** describe how to complete a task or process. They should be brief, clear, unambiguous, discrete and repeatable. They are action-oriented, they are usually instructions and, they describe the steps to take, in the order in which those steps need to be taken and, the materiel, tools and skills to use. Well-written procedures are bounded, precise, clear, factual and to the point. They may include warnings and cautions regarding relevant hazards of not following the procedure assiduously.

**Unwritten Ways** of working may be perfectly valid, repeatable and safe without being needed to be written down. Unwritten Ways may be standardised but, more often, they are not. Like language, they may be personal, may have

evolved, may have been copied or varied. They may permit individualism or idiosyncrasy, they may accommodate personal difficulties, taste or habits and they may only be possible to achieve for people with particular skills. Unwritten Ways may be efficient, effective and repeatable or, they may not be. If they are not, Written Procedures are required instead.

## Who should write procedures?

The benefits of effective procedures are realised in each department that needs them. It follows that each responsible departmental manager and subordinate section manager and subordinate section should own, and write, or have written, the procedures that their team needs to use.

The quality manager is responsible for ensuring the procedures are compliant.

## What should a procedure look like?

**Written procedures should follow one of the Organisation's accepted formats** (so that they are immediately recognisable and easily searchable). Whatever format is used, they should be:

- Simple;
- Clear;
- Concise;
- Written for the actual end-user (not the owner, the expert, the scribe, the Quality Manager or the Authority).

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**Caution - written procedures should be useful**

Written procedures can become lengthy (and less useful) when they describe what readers *want* to know. Readers might *like to* know why they have to do something a certain way, where they can go for help, what methods have been tried before and have been discarded and why. This 'padding' reduces the clarity, brevity and, often, utility of the written procedure.

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**Answer these questions:**

1. What (needs to be done)
2. Why (do they need to do it)
3. When (must it be done, within the wider contextual process)
4. What (materiel, tools and skills are required to do it)
5. Where (can it, or must it, be done)
6. Who (can do it)
7. How (must they do it)
8. How (must they record that they have done it)

# (Step by step) Instructions for writing a procedure

1. **Gather all the relevant information**

    *Note.*

    *As the procedure writer, you need a clear understanding of what is required in as much detail as possible.*

    1.1 **Before starting to write, gather and table detailed information on the whole process, activities and surrounding context.**

    1.2 **Learn what information is crucial to the Written Procedure by talking with competent experts who hold key information and, if possible, liaise with other organisations who may already have similar procedures.**

    *Note.*

    *These competent people may be long-serving staff members, experts, supervisors, stakeholders, technical staff, specialists in other organisations and, potential users of the intended Written Procedure.*

    1.3 **If possible, 'walk through' the process yourself.**

2. **Draft the written procedure**

    2.1 **Take all the gathered information and order the content so that it can be followed sequentially.**

    2.2 **Then, cut down the information to what the end-user really needs to be able to follow the procedure.**

    *Note.*

    *In the first draft of your Written Procedure, exact words and format are not vital but you must include the information needed by the user.*

    2.3 **Then, work on the words, tenses, phraseology, format and organization.**

    **Some good rules to follow are:**

    1. Write at an appropriate reading level.
    2. List the:
        a. References required
        b. Material required.
        c. Tools required.

    3. Write actions out in the order in which they happen.
        a. Start with the first action, and end with the last action.

    4. Avoid too many words:
        a. Be specific enough to communicate clearly;
        b. While not padding it out, do not be so brief you lose clarity

    5. Use the 'active, imperative' voice to write instructions as unambiguous 'orders:'
        a. eg. 'people a, b and c' are to 'use y' to 'do z'.

> **Caution**.
> If you want to provide a warning or caution, ensure that the warning or caution is easily identified (using a standardised and easily recognisable format) and that it immediately precedes the relevant activity.

6. Arrange instructions as bulleted lists or, (where the sequence – matters: will improve output or the documentary record or will reduce the risk of errors) or as **numbered lists**.

7. Where decisions are required, or the detailed procedure may follow different branches and sequels depending on the findings of preceding instructions, consider using flow charts to clarify the procedure to the end-user to reduce the risk of mistakes when the procedure is being followed.

*Note.*
*If you need to explain your reasoning or assumptions, ensure they are valid and use a standard, easily recognisable format so readers know that the text is an explanation and not an instruction.*

> **Emergency recovery steps**
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> **If there is a chance that something can go wrong, and users might need to implement Emergency Recovery or Mitigation steps then these emergency instructions must be particularly clear so that they can be successfully and correctly followed even when the user is under considerable pressure.**

3. **Arrange the text and any diagrams in an appropriate design format**

**3.1 Use appropriate formats to make instructions easier to follow and, thereby, more useful and effective.**
The content is essential, but the design and format of the Written Procedure can add significant value to it.

3.1.1 The format used for Written Procedures should be appropriate to the size and complexity of the facility, the process and the relevant task. The training, skills, attitude, knowledge and experience of the end-user should be considered when deciding the format and design.

3.1.2 A design format that is consistent with other Written Procedures in the relevant users' existing manuals makes it easier for the user to recognise the important elements of the Written Procedure and, thereby, increases its effectiveness and efficiency. It follows that, unless applying wholesale change to a document set, if users are accustomed to a particular format, the Writer should use that format if it is appropriate.

**3.2 Baseline format requirements include:**

1. **Reason** for having / using the Written Procedure
2. **Scope** (what it considers and covers and who it addresses)
3. **Responsibility**(ies) (for the Written Procedure and who can conduct it)
4. **Reference Documents**
5. **Definitions**

6. **Materiel List**
7. **Tooling List**
8. **Step by Step Instructions**
9. **Documentary Records** (of the activity and the specific actions taken)

4. **Check that your written procedure actually works.** Perform a '3-step Quality Check' as follows:

**4.1 Take the questions you tried to answer in the beginning** (which were):

- WHAT (needs to be done)
- WHY (do they need to do it)
- WHEN (must it be done, within the wider contextual process)
- WHAT (materiel, tools and skills are required to do it)
- WHERE (can it, or must it, be done)
- WHO (can do it)
- HOW (must they do it)
- HOW (must they record that they have done it)

And **ensure your Written Procedure answers these questions clearly and unambiguously.**

**4.2 Test your written procedure on at least 2 end-users, in a controlled way, in the live environment:**
4.2.1    Task relevant end-users to use the Written Procedure to conduct the task;
4.2.2    Note any unexpected errors or omissions;
4.2.3    Record *and listen to* their feedback on the utility of the Written Procedure;

**4.3 Improve the written procedure in response to the feedback and any lessons identified:**
4.3.1    Revise and refine the Written Procedure;
4.3.2    Repeat the test (using new end-users as well as the original ones if possible) and
4.3.3    Refine the Written Procedure again if necessary.

5. **Promulgate it**

Once proven to be useful, your new Written Procedure must be incorporated in the Organisation's procedures repository. This may be a manual, an electronic database or a stand-alone document set. However, people won't use procedures that they don't know are there so, your new Written Procedure must be 'marketed' to its intended end-users and, formally, be rolled out. So…

**5.1 Produce it.**
**5.2 Explain why it is needed.**
**5.3 Promulgate it and incorporate it in the relevant place.**
**5.4 Train users to use it, where appropriate by formal demonstration, highlighting pitfalls to avoid.**
**5.5 Identify, take and record opportunities for users to practise using it.**