

FACTSHEET – DASA LEVEL OF INVOLVEMENT

AIM

This factsheet explains what the DASA level of involvement (LOI) is and outlines the lifecycle of LOI that occurs during certification programmes seeking type-certificate authorisations.

This factsheet does not cover LOI regarding major repair designs.

DEFINITION

LOI is the compliance demonstration activities and data that DASA retains for verification during the certification process, as well as the depth of the verification (AMC 21.A.15(b)(6)).

That is, LOI is about identifying the extent of DASA involvement and DASA independent participation in compliance demonstration activities.

INTRODUCTION

A certification programme is required for all applications for a type-certificate, restricted type-certificate, supplemental type-certificate, or major change to a type-certificate. A stand-alone document that presents the certification programme for formal DASA agreement is termed a certification programme plan (CPP). Amongst other requirements, CPPs require a breakdown of the certification programme into compliance demonstration items (CDI) with an applicant's proposal for LOI. DASA undertakes a determination of LOI for each CDI during the CPP assessment. The DASA determination of LOI is completed independently from, but considerate of, the applicant proposed LOI.

Once the CPP is approved, DASA's involvement in the certification program takes place during the demonstration and verification of compliance activities, prior to the applicant's declaration of compliance. A typical LOI lifecycle in context of a certification programme is presented in Figure 1.

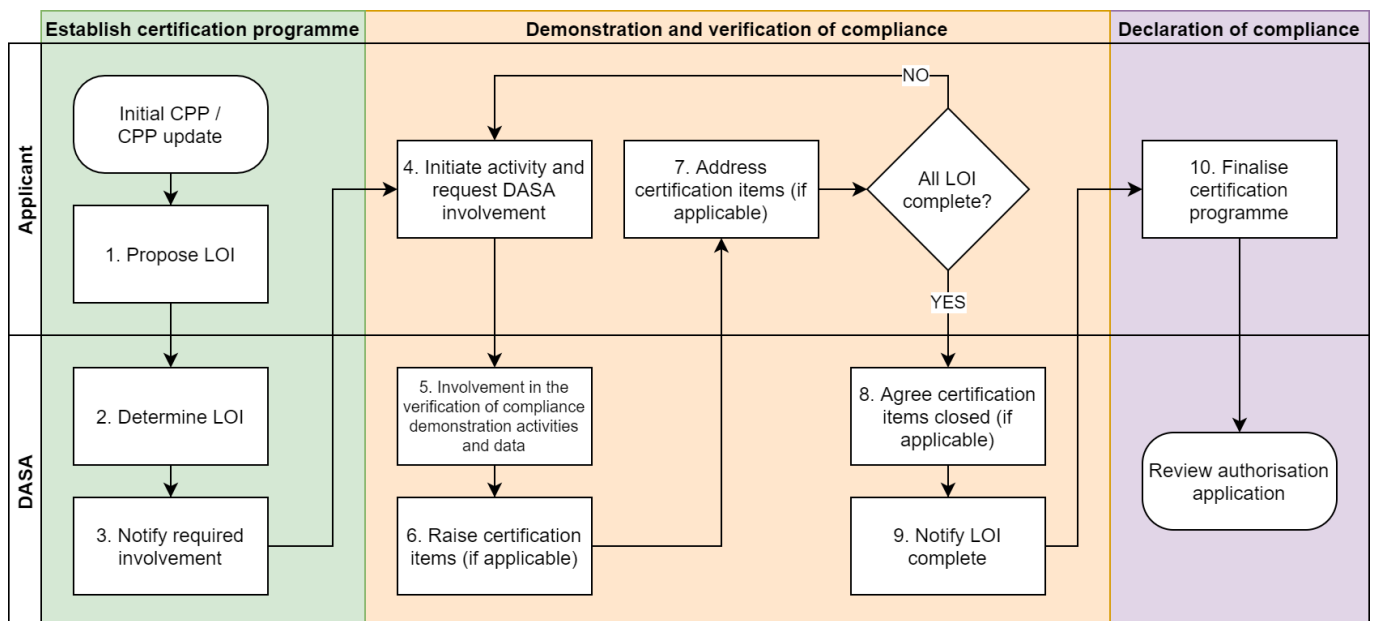


Figure 1. Typical LOI lifecycle.

WHY IS LOI REQUIRED?

LOI is an independent DASA assurance activity, where the compliance demonstration carried out by the applicant is sampled by DASA to provide confidence that the eventual declaration of compliance is credible and defensible. LOI is only one means by which DASA conducts assurance of a certification programme. LOI satisfies that compliance demonstration and verification is or will be complete and correct. LOI is done to improve the efficiency

and effectiveness of the certification process, and to provide greater assurance where there are higher risk aspects.

Why is it important for LOI to be defined early? Some aspects of DASA involvement can only be done during the design and development of products. Incorrect or late determination of LOI can cause duplication of demonstration and verification efforts, undermine the level of assurance afforded by DASA, delay the final certification authorisation, or a combination thereof. These risks are also present when certification programme changes undermine the original determination of LOI. Additionally, insufficient information about a CDI or a certification programme change can result in a conservative determination of LOI by DASA, potentially increasing certification programme cost or time.

APPLICANT PROPOSAL OF LOI

The breakdown of the certification programme into meaningful groups of CDIs is key to the applicant proposing LOI, and for DASA to effectively determine LOI. A CDI is a meaningful group of compliance demonstration activities and data of the certification programme, which can be considered in isolation for the purpose of performing a risk assessment associated with unidentified non-compliances. CDIs can be associated with a specific technology discipline of an item or an activity involved in the certification programme. Establishing a single CDI for all aspects of a major change may also be suitable for certain certification programmes, for example when leveraging prior certification. Information to assist establishing CDIs can be found in DASR AMC 21.A.15(b)(5).

Each CDI is assessed by the applicant to consider the likelihood of a non-compliance with the type certification basis (TCB) remaining unidentified and the potential safety impact that non-compliance would have. This risk based approach recognises assurance is most effective by sampling those CDIs most vulnerable to non-compliances. A basis for this assessment is provided in DASR AMC 21.A.15(b)(6). This process for breaking down CDIs and proposing LOI is also provided in the CPP templates hosted on the [DASA website](#).

Once CDIs are established, and LOI is proposed, the proposed activities that DASA should be involved in are identified. It is important to include these activities within the CPP schedule, to form an agreement between the applicant and DASA. Additionally, applicants should consider the certification programme budget to support LOI, particularly if overseas on-site DASA audits/inspections are anticipated.

While DASA may be involved at various stages of a certification programme, not all activities constitute LOI. LOI is limited to those activities where DASA is assessing the verification of compliance demonstration activities and data, to gain confidence in the veracity of compliance claims. Unless specifically identified in the agreed LOI, all other DASA participation in a certification programme can be considered as general DASA engagement, for example acceptance of a CPP, authorisation of a military certification review item (MCRI), or authorisation of a major change to a type-certificate. The best opportunity for DASA to provide timely assurance of compliance demonstration evidence (CDE) is through LOI, where DASA can review compliance reports during the certification program prior to an authorisation application. Note that the confidence gained through the DASA involvement in the verification of compliance demonstration activities and data is intended to reduce any burden of effort undertaken by the DASA during review of the authorisation application.

DASA DETERMINATION OF LOI

DASA will make a determination of LOI based on the content of the certification programme and the applicant's proposed LOI. This determination is independent from, but considerate of, the applicant proposed LOI. DASA will also consider; if they consider the certification of each CDI as novel or complex, and the performance of the applicant and involved design organisations. Including information in the CPP to support these DASA assessments will aid in an efficient determination of LOI with the correct scope. DASA typically follows DASR AMC 21.A.15(b)(5) and (6) when determining LOI.

DASA INVOLVEMENT IN COMPLIANCE DEMONSTRATION ACTIVITIES AND DATA

The achievement of a certification programme is the responsibility of the applicant, which is aided by open and clear communication between DASA and the applicant. The applicant is best placed to schedule and initiate the DASA involvement, in agreement with DASA. A well planned LOI activity, including early scheduling and the full provision of relevant supporting data, will assist in completing LOI without delay and may minimise visits or audits. To achieve this, DASA will aim to confirm if the provided supporting data is sufficient to agree to the initiation of the DASA involvement. DASA will provide formal correspondence as to the completion of each LOI activity, any issues identified, and for the conclusion of all LOI. It is important to remember that the DASA LOI needs to be completed prior to the applicant making the final declaration of compliance. However, when agreed to with DASA, certification

items identified during the DASA involvement may be resolved outside of LOI through supporting information provided with the declaration of compliance.

The DASA involvement may identify certification items that need resolution, classified as follows:

- **Certification Finding:** An identified shortfall in product compliance to a regulation or standard.
- **Certification Action:** An issue that requires resolution or response, but is not a shortfall in product compliance to a regulation or standard.
- **Certification Observation:** An identification of a potential process improvement, which does not require resolution or response.

Note that certification findings, actions, and observations are product based, and **do not** constitute or relate to organisational findings under DASR 21.A.258.

CHANGES TO LOI

The originally proposed and determined LOI may be altered as the certification programme progresses. The initial activities with DASA involvement may provide significant confidence that the perceived risk of non-compliance is lower than originally determined, therefore, reducing the scope or sampling required to complete LOI. Conversely, DASA may need to increase LOI if sufficient assurance is not being attained. DASA will notify the applicant of any changes to the determined LOI.

Programme changes may alter or invalidate the originally proposed CDIs and LOI. In these circumstances, the applicant should notify DASA to prevent unnecessary LOI, or avoid discovering that additional LOI is required late in the certification programme. Examples of what may trigger the need to report LOI changes are detailed in DASR GM 21.A.20(b).

ADDITIONAL CONSIDERATIONS

While LOI may resemble compliance verification engineer (CVE) like activities, LOI does not demonstrate compliance nor replace any CVE function. Likewise, CVE activities do not constitute LOI on behalf of DASA. In special circumstances, non-DASA personnel may be explicitly appointed in writing to undertake specific LOI activities on behalf of DASA.

The DASA involvement may generate reports, outcomes, and other artefacts which support the conclusion of LOI and type-certificate authorisations. These artefacts do not constitute CDE and cannot be used as a means of compliance within a certification programme. However, the DASA involvement may identify issues, which are rectified by the applicant generating missing CDE. In such a circumstance, the newly generated CDE is not considered to be DASA generated content and becomes part of the body of evidence demonstrating compliance.

Applicant proposal of LOI should take into account any part of the certification programme for which prior certification from a civil aviation authority (CAA) or military aviation authority (MAA) will be leveraged to demonstrate compliance against the TCB. Prior certification may account for LOI by a CAA / MAA or reduce the overall likelihood of a non-compliance remaining unidentified. DASA will also account for circumstances where prior certification is being leveraged.

USEFUL INFORMATION

- DASR 21.A.15(b)(5) and (6) including AMC and GM.
- Factsheet – Certification Programmes.
- AC 002-2018 – Application for Military Type Certifications and Major Design Changes.
- DASR 21 – Certification Programme Plan (CPP) Template (MTC).
- DASR 21 – Certification Programme Plan (CPP) Template (Major Change).
- EMAR 21 AMC GM Edition 2.0 (4 Oct 2022).
- EASA CM 21.A/21.B-001 Issue 2.