



The role of operators' management systems in the COVID-19 recovery phase

Guidelines

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Table of contents

The role of operators' management systems in the COVID-19 recovery phase	1
Guidelines.....	1
<i>Table of contents</i>	2
<i>Revision record</i>	2
1. Purpose of these guidelines.....	3
2. Introduction	3
3. Management systems in the context of a safe return to normal operations	3
3.1 Management of change	4
3.2 The compliance monitoring function	5
3.3 Safety performance monitoring and measurement	5
4. Managing emerging risks.....	6
4.1 Operational aspects	6
4.2 Airworthiness aspects.....	7
4.3 Organisational, human and socio economic aspects.....	7
5. Conclusions	8

Revision record

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1. Purpose of these guidelines

The purpose of this document is to provide guidelines for air operators to consider when identifying and addressing the safety threats associated with a return to normal operations (RNO) following the COVID-19 pandemic.

More specifically, this document is intended to support the operators' management systems in identifying the hazards stemming from RNO and in establishing mitigations to reduce the associated risks to an acceptable level.

Note: This document will be complemented by practical examples, to be developed by the EASA RNO Task Force, that will be published as they become available.

2. Introduction

The aviation world has been heavily impacted by the COVID-19 pandemic. Air operations with passengers have been drastically reduced, if not fully suspended, and an unprecedented number of aircraft have been grounded. This situation has caused severe financial pressure on air operators, as well as on their service providers.

Thanks to a gradual lifting of travel restrictions amongst countries, operators are now starting to resume passenger flights. At this point in time, the operator's safety management system (SMS) and compliance monitoring function (i.e. its 'management system' established by the Air Operations Regulation¹) play an essential role in managing the associated risks and ensuring a safe return to normal operations (RNO).

This document provides guidance on the role of the management system in the context of the RNO phase, in order to support the operator's decision-making process in such a context. The operator's senior management is responsible to ensure the availability of adequate resources, as a lack of staff responsible for safety management and compliance monitoring will result in a reduced capability to control risks.

Note: The examples that will supplement this document are based on data collected by EASA when reviewing the regulatory exemptions issued by national competent authorities (NCAs) during the COVID-19 crisis and/or provided to EASA by several stakeholders, including authorities, aircraft manufacturers, industry and staff associations.

3. Management systems in the context of a safe return to normal operations

The initial recovery phase will be characterised by significant uncertainty. Business and financial pressure will remain very high, as most operators may not be in a position to operate in a profitable way for weeks or months. As a consequence, operators will endeavour to reduce any cost not directly related to their operations, and some may be tempted to include key safety functions in their budget cuts.

Moreover, operators will be eager to take new business opportunities, which may entail additional risks or different challenges compared to what they were used to in the past. This is not an issue as

¹ Regulation (EU) No 965/2012 <https://www.easa.europa.eu/document-library/general-publications/easy-access-rules-air-operations>

long as the risks associated to such opportunities are properly assessed and effective mitigation measures are put in place. If, on the contrary, commercial and financial pressure leads to insufficient consideration to safety, this may bring multiple unmanaged risks into the resumption of operations, with a potentially catastrophic outcome.

Some signals already indicate that safety boundaries have been stretched during the crisis, such as unsafe cargo transportation in the passenger cabin, improper storage of aircraft, increase in aircrew flying hours and fatigue, etc.

Therefore, now more than ever, the operators have to rely on their Management System and its core elements during the recovery phase: risk management, compliance and safety assurance functions are the backbone of a safe RNO.

3.1 Management of change

[Regulation (EU) No 965/2012, ORO.GEN.200(a)(3)]

Operators have never faced such an extensive disruption of their operations and cannot rely on previous experience when analysing the possible scenarios and solutions. Furthermore, they do not have sufficient and reliable data to identify all emerging hazards, affecting air operations as well as continuing airworthiness, aerodrome operations, and air navigation services. Unfortunately, the consequences of such hazards concentrate upon the air operator.

Furthermore, the recovery phase may require significant changes in the operator's business model and operational procedures; an inadequate documentation and communication of changes may introduce additional risks. Poor control of changes has significantly contributed to serious incidents and accidents in aviation history.

Therefore, during the RNO phase, operators need to focus on the implementation of a robust management of change (MoC) process in order to successfully identify new risks, determine effective mitigation measures and implement strategies for deploying changes accordingly.

The MoC process relies on a sound hazard identification and risk assessment (HIRA). Safety management and compliance monitoring staff need to approach the hazard identification phase holistically:

- (1) New hazards may be the consequences of rushed business decisions taken under severe financial pressure.
- (2) The new operational environment may encompass additional hazards induced by the way the operator reacted to the crisis. For instance:
 - (a) Socio economic factors and staff reduction may have safety consequences on several organisational areas;
 - (b) Operations can be significantly altered by new procedures, sanitary measures, or unusual restrictions;
 - (c) Operators may increasingly operate on short-term contracts requiring flights to unfamiliar destinations;
 - (d) Erosion of aviation personnel competence due to lack of recent activity.
- (3) Proactive measures to identify hazards will be needed in rapidly changing operating circumstances, since occurrence data will take time to build up.

- (4) Existing hazards may remain and should be accounted for in the overall hazard identification process.
- (5) Each identified hazard must be evaluated and prioritized, and decisions must be taken on the most appropriate actions to reduce or eliminate the consequences of the associated risks to an acceptable level.

This MoC will need to be continuously updated, considering that not all the countries are at the same stages² of the pandemic and that the sanitary situation may quickly evolve.

3.2 The compliance monitoring function

[Regulation (EU) No 965/2012, ORO.GEN.200(a)(6)]

The compliance monitoring function plays an important role during the recovery phase.

Internal compliance monitoring function activities, such as audits and inspections, may have come to a slowdown or a stop during the crisis. When restarting operations, it is important that the compliance monitoring manager (CMM) and his/her staff evaluate any activities that could not take place, as well as the new operational context, in order to prioritise compliance verifications and to establish means to conduct such activities remotely, in case COVID-19 restrictions still apply.

This evaluation should also take into account all exemptions granted by the national competent authority and still used, as well as the new types of operations (i.e. transport of cargo in passenger compartment, revised crew training and checking procedures, etc.). The combined effect of multiple exemptions should also be assessed.

The CMM should thus adapt the compliance monitoring programme to focus on the areas of greater risk, in coordination with the safety manager, and inform the accountable manager accordingly.

3.3 Safety performance monitoring and measurement

[Regulation (EU) No 965/2012, ORO.GEN.200(a)(3)]

The operator should pay attention to any signal hinting to a reduction in the safety margins in the context of RNO. These margins may be lower than those set in pre-crisis operations. The operator's safety performance monitoring and measurement processes are key to assess safety levels during RNO and provide an indication on whether the management system is delivering as expected in such challenging circumstances.

The coordinated functioning of the operational, safety and compliance monitoring organisational units is essential. Effective decision-making relies upon the collection of qualitative and quantitative safety information that indicates whether operations are being conducted at the accepted level of safety. Appropriate feedback needs to reach the operator's senior management, as the accountable manager is ultimately responsible for ensuring that safety remains within the boundaries that were deemed to be tolerable when endorsing the risk assessments.

Safety surveys may be used to collect feedback on new or adapted operations during the restart phase. Such feedback should provide assurance that the activities achieve the expected safety levels and help in the identification of possible improvements, feeding the HIRA process and closing the loop.

Safety audits are also a valid tool to monitor the implementation of actions taken to mitigate risks. The safety and compliance monitoring functions should use these audits to be proactive in hazard

² See chapter 3 of [ICAO Doc 10144 for CAAs on the management of aviation safety risks related to COVID-19](#)

identification, to validate the suitability of established mitigation measures or to propose other mitigations for consideration in the context of HIRA. Operators should either plan ad-hoc safety audits for the most critical operations performed during the recovery phase or include additional verifications in the scope of its prioritised compliance monitoring activities.

4. Managing emerging risks

While operators strive to resume activities, the COVID-19 crisis has significantly changed their operational context. Regulatory exemptions and alternative means of compliance may have introduced deviations to well-established procedures, and temporary revisions to operations manuals may have been issued under significant time pressure.

In preparing for a gradual resumption of their activities, operators should take time to assess the risks associated with operating in such a new and uncertain environment. Crews and front-line personnel may have to implement new or modified procedures under significant pressure, thus working out of their comfort zone, such as increased working hours, fatigue; use of Personal Protective Equipment (PPE).

The following paragraphs illustrate several examples of typical emerging risks to be considered in this phase.

4.1 Operational aspects

Authorities may have granted several regulatory exemptions in a short timeframe during the crisis, in order to support operators to cope with the most urgent needs. The most common exemptions are related to:

- (1) Operator responsibilities (ORO.GEN.110);
- (2) Recurrent training and checking (ORO.FC.130 & ORO.FC.230);
- (3) Cabin crew recurrent training (ORO.CC.140);
- (4) Approval to transport dangerous goods (SPA.DG.105);
- (5) Flight duty period (ORO.FTL.205 and associated CS);
- (6) Rest period (ORO.FTL.235(b) and (c), CS FTL 1.235 (c));
- (7) Operator responsibilities on schedule changes (ORO.FTL.110 (j));
- (8) Transport of cargo in passenger compartment (CAT.OP.MPA.160);
- (9) Medical certificates (MED.A.030);
- (10) Airworthiness matters (see next paragraph).

Such exemptions affect different technical domains and may have been granted by different inspectors; as a consequence, while each exemption should include appropriate risk mitigations, their cumulative effect on safety may not have been fully assessed; possibly, an exemption may affect the mitigations required by another exemption. Exemptions leading to reduced crews' recency and/or training and checking may lead to an erosion of crews' competence, which may become critical when having to apply abnormal or emergency procedures. This, combined with fatigue or aircraft systems' failures, may lead to undesirable outcomes.

Airspace restrictions, degraded or unavailable air navigation services, and limitations in aerodrome services may also force the operator to conduct flights in an unfamiliar operational context.

It is thus important for operators restarting their activities to consider the additional risks that may be introduced by the combination of multiple exemptions with unfamiliar operations, such as in the following scenario:

- (a) A flight carrying cargo in the passenger compartment (in accordance with exemption #1);
- (b) To a destination outside its approved area of operations (in accordance with exemption #2);
- (c) With a schedule that exceeds the standard flight duty periods (in accordance with exemption #3); and
- (d) By a crew that does not meet the standard recency and training/checking requirements (in accordance with exemptions #4 and #5).

Furthermore, during the recovery phase, operators will have to operate with a combination of exemptions and normal operating procedures: for example, some crew rosters and flight plans may be based on specific exemptions, while others may not. This “mixed operation” scenario may require additional consideration in terms of organisational processes.

Finally, operations not directly affected by any exemption shall be also considered in the hazard identification and risk assessment process (e.g. personnel for which no exemption is needed but with reduced recent activity).

4.2 Airworthiness aspects

The following elements should be taken into account:

- (1) Exemptions may have deferred the execution of several maintenance tasks (M.A.302) or the airworthiness review (M.A.901);
- (2) Exemptions or the use of the MEL or the delayed rectification of defects or a combination of these may affect aircraft systems, leading to an increased flight crew workload or deactivated alarms detrimental to the flight crew situation awareness (M.A.301);
- (3) Aircraft returning to service after it has been stored in non-optimal conditions or for a long period may increase pressure on engineers or present hidden defects or failures, possibly in emergency systems;
- (4) The introduction of new destinations or stop-overs may increase the risk of improper execution of line maintenance tasks, when performed under temporary contracts without the possibility to perform a thorough evaluation of the maintenance provider(s) (MA.708).

4.3 Organisational, human and socio economic aspects

Operations during the recovery phase may be affected by several organisational and human factors. Most staff will return to duty with a certain level of psychological stress, and operators should evaluate the need to provide targeted support in specific cases. Front-line staff may not feel “fit” for the duties but be willing to “go the extra mile” in order to support their organisation.

Traditional human factor issues, such as distraction, can be exacerbated by COVID-19 related concerns and lead to slips, lapses and mistakes impacting critical actions, such as lowering the landing gear or arming/disarming the door slides.

Just culture principles may be at stake, due to fear that in times of crisis, mistakes may be treated as wilful misconduct [see Regulation (EU) 376/2014³].

Financial pressure during the recovery phase may lead management to seize business opportunities (e.g. charter flights) without a proper risk assessment, or to tolerate violations such as dispatch of flights with unserviceable equipment beyond the acceptable limits. The perceived pressure may also lead crews and maintenance personnel to accept “cutting corners” in order to avoid costly delays and flight cancellations.

Financial pressure may also interfere with sound decision-making in various contexts:

- (1) Flight crews may avoid to request extra fuel or refrain from performing a go-around when the situation dictates;
- (2) Maintenance staff may overlook required actions, while striving to avoid a delayed departure;
- (3) Front-line staff may believe that deviations from the SOPs are justified in the context of the crisis;
- (4) The risks induced by fatigue may also be increased, as operations may stretch flight duty periods to the limits, possibly in combination with reduced rest times (longer sanitary procedures, wearing of PPE, less expensive hotels far away from the airport, unavailability of local crew transportation, etc.).

5. Conclusions

EASA considers that the operator's safety management system (SMS) and compliance monitoring functions play an essential role in managing the risks associated with the gradual recovery of air operations with passengers in the challenging context created by the COVID-19 crisis, and in ensuring a safe return to normal operations (RNO).

The financial pressure generated by the prolonged grounding will require operators to implement significant cost reduction measures across their entire organisation. However, operators should consider their management systems as an essential enabler of the overall recovery strategy, as operations may resume with a combination of weakened safety barriers (e.g. crew competence) and increased risks (e.g. psychological stress of front-line personnel). Serious incidents or accidents during the recovery phase may put the operator's survival at risk.

The operator's senior management should communicate to all staff the importance of safety in the context of recovery, in order to minimise the likelihood that front-line personnel may feel entitled, or even obliged, to “cut corners” or deviate from the approved SOPs in order to cope with the situation.

Senior management should also promote an integrated approach to safety management and compliance monitoring, supporting a management of change process based on a reliable hazard identification and risk assessment; both activities need to be tailored to the operator's specific operational context.

Finally, the compliance monitoring function should verify that operations are conducted in accordance with the applicable procedures, as amended in the light of the changed operational context, including the implementation of any required mitigating measures in order to achieve the expected safety levels.

³ Regulation (EU) No 376/2014 <https://www.easa.europa.eu/document-library/regulations/regulation-eu-no-3762014>