



Safety Issue Report - Risk Assessments Based on Previous Normal Operations are No Longer Valid

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A Collaborative Document Produced by EASA Together4Safety

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COVID-19 SR Portfolio Safety Issue Assessment - Risk assessments based on previous normal operations are no longer valid (SI-5008)

Introduction

The COVID-19 crisis that hit us in early 2020 has created a situation never experienced before. These new conditions of operations may have invalidated your safety risk assessments based on normal operations.

Assessing the risk is a central element of the [Risk Management](#) process. This assessment is based, for a given operation, on the precise knowledge and analysis of the conditions (exposure to identified hazards, strength of controls in place) in order to determine whether the associated resulting risks (probability and severity of an accident outcome) and the mitigation strategies, are acceptable and compliant with the applicable regulations.

The conditions under which the operations are conducted in the context of the COVID-19 crisis have changed, either by changing the exposure to known hazards, by bringing new hazards, or by affecting the strength/effectiveness of the controls in place. These changes of conditions may lead to an increased level of resulting risks (even though flight activity might have reduced, for example), which might not be captured and addressed if the risk assessment is not revised.

This document provides guidance to support organisations in identifying the risk assessments which need to be revised and helps them to effectively apply the principles of change management in the context of the COVID-19 crisis.

6 Steps to Reassessing Your Safety Risks

- 1 Structure your list of changes by phases of disruption
- 2 Identify which change may affect the safety of your operations
- 3 Cross-check safety issues with those you identified in previous crises
- 4 Consolidate your safety issues with those published in other guidance
- 5 Focus on the issues with a direct impact on operational safety
- 6 Identify and address possible risk transfers

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The essential role of Change Management

In the present context of COVID-19 return to normal operations, you are probably concerned about how to safely restart operations and asking yourself questions such as what potential negative impact does COVID-19 have on aviation safety? Are we facing new hazards and risks? Have previously known hazards and risks changed? Which risk assessment needs to be revised? Are current mitigations still appropriate?

These questions are fully relevant as returning to normal operations after the initial impact of the COVID-19 crisis will certainly entail changes that will need to be managed. Like any other changes that may ultimately affect safety of an operation, changes resulting from the current crisis fall under the governance of your change management procedures. For most operators and service providers, this inherently includes application of your Safety Management System (SMS), in accordance with the applicable Regulations and Legislation for the scope of your operation¹.

Managing the safety risks related to a change is a standard component of SMS, as specified in the various EASA regulations for a Management System (1). Refer for instance to the AMC related to ORO.GEN.200 Management system applying to operators (extract here below). Similar European regulatory provisions exist for other aviation actors.

AMC1 ORO.GEN.200(a)(1);(2);(3);(5) Management system

NON-COMPLEX OPERATORS — GENERAL

(b) The operator should manage safety risks related to a change. The management of change should be a documented process to identify external and internal change that may have an adverse effect on safety. It should make use of the operator's existing hazard identification, risk assessment and mitigation processes.

AMC1 ORO.GEN.200(a)(3) Management system

COMPLEX OPERATORS — SAFETY RISK MANAGEMENT

(e) The management of change.

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How to efficiently determine which risk assessments need to be revised?

¹ Not all service providers are obligated to formally document a Safety Management System. For example, ATM/ANS service providers that do not also provide an Air Traffic Service are not required by (EU) 2017/373 to hold an SMS, but are still obligated to document their compliant change management procedures within their Management System. For organisations that are not required to hold an SMS, for the purposes of this document all references to an SMS and safety management should be interpreted to the scope of supply in accordance with all applicable Regulations and Legislation (e.g. for a CNS service provider, rather than a determination of *safety risk* introduced owing to the impacts of COVID-19, the focus would be on the potential for the operated services to not behave as specified and only as specified, in the specified context, as a consequence of those impacts).

The 6 steps proposed below aim to help you determine where a revision of risk assessment may be necessary, in order to focus your effort where it is the most needed.

This process is intended to complement and support the SMS process already in place in your organisation. Its purpose is only to provide further guidance in the identification of the changes induced by the COVID-19 which may affect negatively the safety of operations, and therefore necessitate a revision of your risk assessments.

① **Structure your list of changes by [phases of disruption](#)**

Break the overall COVID-19 disruption period into phases that are relevant for your operations: these could be for instance the initial drop in operation and collapse in traffic, changes to operations (for example repatriation flights), long term storage of aircraft, Return to Normal Operations (RNO) with initial recovery and sustained growth, and the 'new normal'.

The next steps (2-6) can be applied for all phases of disruption of the COVID-19 period, even though this document is focussing mainly on the RNO phase.

② **Identify which change can create conditions that may [affect the safety of your operations](#)**

As identifying direct links between return to normal operations (the change) and operational hazards and risks might be complicated, start by identifying issues or disruptors caused by the change that may affect safety (being therefore safety issues).

Consider issues such as for example:

- distancing in operational areas
- reduced personnel
- changes to traffic patterns
- decreasing the frequency of or completely postponing certain inspections, checks or maintenance activities
- operational measures such as flying with a mask
- transport of cargo and mail in passenger cabin
- lack of recency in pilots, ATCOs, maintenance engineers and other categories of staff which may affect competence
- concerns about staying healthy
- concerns about staying in the business or becoming redundant, etc.

Think not only about issues induced by changes within your own organisation, but also issues arising from the changes faced by external organisations (service providers, suppliers) which may affect the interfaces which your own operations are relying on.

③ **Cross-check your list of safety issues with the ones you potentially identified and addressed [during previous crises](#)**

Other large-scale crises such as the volcanic ash eruption of the Icelandic volcano Eyjafjallajökull in April 2010 (2), the 2008 financial crash and 9/11 also heavily affected aviation operations, even though not to a comparable extent.

We can however learn from these previous events, in particular which safety issues were identified during the various phases of disruption, and which actions were taken to safely return to normal operations.

④ **Consolidate** your list of safety issues with the ones identified in [published guidance](#) from the aviation communities

Review your list of safety issues against the ones already identified in various published guidance or other relevant documents from collaborative organisations or Authorities, to see what you may have missed.

Check safety promotion material, directives, guidelines, articles, videos, tutorials, discussions on social media, conference proceedings, etc.

Also, occurrences for which it can be shown that COVID-19 was a causal or contributing factor, can provide valuable information on the type of disruptors that can be expected.

The [EASA Review of Aviation Safety Issues Arising from the COVID-19 Pandemic](#) (3) provides a list of generic cross domain COVID-19 safety issues that you can use as a complement to support the identification of safety issues specific to your operation.

In order to help you reach more detailed information, [ANNEX 1](#) below contains a list of recommended documents for the different aviation domains.

⑤ **Focus** on the issues where a [direct impact on operational safety](#) was identified

Analysing how the identified issues impact operational safety can be difficult, when there is a weak relationship between issues, operational hazards and risks, a significant 'distance' between any cause-and-effect relationship, complex causes-effect patterns or no relationship at all.

To rigorously consider all of the COVID-19 implications, but to avoid a disproportionate level of work being spent on redundant risk assessments, focus your effort on the issues where a direct impact on operational safety was identified. This is most probably where you should prioritise efforts in reviewing risk assessments.

Safety issues having a direct impact on operational safety must be risk assessed, in order to quickly determine if any actions should be taken.

⑥ **Identify and address** possible [risk transfers](#)

Among the safety issues you identify impacting your risk assessments, there is one in particular which should not be forgotten: the multiple sanitary mitigation measures taken against the spread of the virus which can transfer the sanitary risks into an aviation operational safety risk. These should be addressed. For a complete list of these measures, refer to the EASA publication [COVID-19 Aviation Health Safety Protocol](#) (4) and to European and national regulatory provisions from Health and Safety authorities.

For instance, wearing a medical face mask in the cockpit can affect Crew Resource Management (CRM) and crew communication, both verbal communication as it is more difficult to speak and non-verbal as facial expressions are less easy to identify. Wearing a medical facemask can also

complicate donning the oxygen mask in the case of an emergency. Measures such as reducing cabin crew staff, wearing medical facemasks and social distancing in the cabin can also slow down evacuation. Social distancing can also affect the work of ATCOs, maintenance personnel and ground staff.

In case of conflicting risks and mitigation measures, risks must be compared and prioritised.

In case of a drop of cabin pressure for instance, hypoxia is a more serious risk than transmitting COVID-19. Wearing oxygen masks therefore takes precedence over wearing medical facemasks. In emergencies, emergency procedures prevail and in unforeseen situations for which no SOPs exist, professional judgment should be used, considering risk-based reasoning and good common sense.

➔ **Once the affected/not valid risk assessments have been identified, follow your standard Risk Management process in order to re-assess the risk and, where applicable, also the relevant mitigating actions to maintain the risk at the required acceptable level.**

Monitor your safety performance to confirm or revise your updated risk assessment

Safety performance monitoring and measurement is the process by which the organisation's safety performance is measured, e.g. by Safety Performance Indicators (SPIs), and checked against Safety Performance Objectives (SPOs). It is based on safety reviews and on trend reviews performed on a daily, weekly, monthly or otherwise useful regular basis.

Use your SMS Safety Performance Monitoring and Measurement process to ensure that the mitigations remain effective and the risks acceptable, and that the overall safety performance remains in line with the objective. This may require regular continuous oversight activity by safety assurance and compliance monitoring personnel.

Collecting and analysing occurrence data and gathering intelligence as the COVID-19 situation evolves is essential to detect any negative trend early-on and to respond proactively.

Be cautious when building trends or any comparison of safety performance between the pre-COVID-19 period and the COVID-19 period, in particular consider the volume of traffic activity necessary to normalise indicators, allowing meaningful comparison.

Roles of Competent Authorities

As part of their surveillance activities, Competent Authorities should ensure that the organisations apply their change management process within the context of COVID-19, update their risk assessments and mitigations, where relevant, as well as monitor and measure safety performance in order to detect any negative trend early-on and to take action at an organisational level.

As part of their SMS activities, Competent Authorities should also review their own risk management process and make sure their risk assessments are up to date, in order to detect early any negative trend and take action at CA's level, for instance by adapting safety promotion material or increasing oversight during this period in time.

Competent authorities should as well try to maintain a systemic view on the capacity of suppliers and service providers to continuously provide essential services. The organisations depending on these services could suffer from a significant impact if they are disrupted, however, relevant information from an assessment of this risk may be available to the competent authority but not to the organisation who is the customer of such suppliers or service providers.

Competent Authorities should include in their oversight the implementation of COVID-19 related measures. Many national measures are based on the EASA COVID-19 Aviation Health Safety Protocol, which provides operational guidelines for the management of air passengers and aviation personnel. Implementation should be risk-assessed and monitored. Beware in particular that COVID 19 related measures could lead to more unruly passenger events whereas failure to implement measures could result in spreading COVID-19 through air transport.

For additional information and guidance, refer in [ANNEX 1](#) to the documents relevant for Competent Authorities.

References

- (1) For operators, refer to the Easy Access Rules for Air Operations (Regulation (EU) No 965/2012) ANNEX III (Part-ORO) SUBPART GEN: GENERAL REQUIREMENTS Powered by EASA eRules, Oct 2019 https://www.easa.europa.eu/sites/default/files/dfu/EasyAccessRules_for_AirOperations-Oct2019.pdf
- (2) EASA Volcanic Ash website <https://www.easa.europa.eu/domains/safety-management/volcanic-ash>
- (3) EASA Review of Aviation Safety Issues Arising from the COVID-19 Pandemic https://www.easa.europa.eu/sites/default/files/dfu/review_of_aviation_safety_issues_from_covid-19_final_0.pdf
- (4) EASA publication COVID-19 Aviation Health Safety Protocol https://www.easa.europa.eu/sites/default/files/dfu/EASA-ECDC_COVID-19_Operational%20guidelines%20for%20management%20of%20passengers_v2.pdf

ANNEX 1 - Recommended guidance documents per aviation domain

CAT Fixed Wing Operations

- The role of operators' management system in the COVID-19 recovery phase – Guidelines, June 2020
https://www.easa.europa.eu/sites/default/files/dfu/easa_guidelines_role_of_operators_ms_in_cov_id-19_recovery_phase-issue_1-16.06.2020.pdf
- Practical scenarios to support the Return to Normal Operations for air operators
<https://www.easa.europa.eu/newsroom-and-events/news/easa-publishes-practical-scenarios-support-return-normal-operations-air>

Rotorcraft Operations

- Royal Aeronautical Society (RAeS) publication Adapting helicopter operations to the new realities of Covid-19
<https://www.aerosociety.com/news/adapting-helicopter-operations-to-the-new-realities-of-covid-19>
- EASA Rotorcraft Community COVID-19 Rotorcraft Information page
<https://www.easa.europa.eu/community/topics/recommendations-helicopter-ops-during-covid-19>

General Aviation

- EASA by GASCo presentation (training material) Return to flying in the wake of COVID-19
<https://www.easa.europa.eu/community/topics/preparing-return-flying>

What is in the reference?

It is a presentation focusing on self-assessment by the pilot, currency, pre-flight planning and airworthiness.

Why is the reference recommended?

It is an interactive presentation addressing all aspects of resuming leisure flying in safe conditions. It provides simple, directly applicable guidelines.

Other documents to consider:

- EASA General Aviation Community Recommendations for General Aviation operations during the COVID-19 pandemic page
<https://www.easa.europa.eu/community/topics/recommendations-general-aviation-operations-during-covid-19-pandemic>

- EASA Sunny Swift episode 24 Return to Flight Precautions
<https://www.easa.europa.eu/community/topics/sunny-swift-edition-24-return-flight-precautions>

ATM/ANS

- [ICAO Review of Potential Hazards Resulting from COVID-19](#) (as was based on [EUROCONTROL's SAFOPS List of Potential COVID-19 hazards](#)).

What is in the reference?

A set of hazards, or potential safety issues, relevant to the transition to normal operations following COVID-19 lockdown.

Why is the reference recommended?

The issues listed for consideration in ICAO review are a useful cross-check for disruptors/impact that the service provider may have missed in their own initial assessment, as well as for potential control methods where a disruptor is found to be relevant.

- IATA/IFATCA/CANSO - Safely Navigating the Industry Restart - Bulletin 1 - Mitigating Human Factors Hazards in the context of the operating environment during and post COVID-19
<https://www.iata.org/contentassets/5c8786230ff34e2da406c72a52030e95/bulletin-1-mitigating-human-factors-on-the-aviations-supply-chain-atcos-and-dispatchers.pdf>

What is in the reference?

An example safety risk assessment on mitigating human factors hazards, including identification of hazards and proposed mitigation actions.

Why is the reference recommended?

It provides an example and basis for conducting an internal safety risk assessment (on human factors hazards) by individual organisations.

- IATA/IFATCA/CANSO - Safely Navigating the Industry Restart- Bulletin 2 - Maintaining Competency for ATCOs and Dispatchers during and post COVID-19
<https://www.iata.org/contentassets/5c8786230ff34e2da406c72a52030e95/bulletin-2-maintaining-competency-for--atcos-dispatchers-duringandpost-covid19-final.pdf>

What is in the reference?

An example safety risk assessment, including identification of main hazards and proposed mitigation actions. It is furthermore recommended to adapt training by increased use of virtual training tools (e.g. Augmented Reality (AR) and Virtual Reality (VR)).

Why is the reference recommended?

It provides key considerations for training in the 'new normal' in order to maintain competency for ATCOs and dispatchers.

Aerodromes and Ground Services

- IATA Guidance for ground handling return to service Ed. 1
https://www.iata.org/contentassets/094560b4bd9844fda520e9058a0fbe2e/ground_handling_return_to_service.pdf

What is in the reference?

A guidance on return to service after the partial or total closure of airline operations caused by the COVID19 pandemic.

Why is the reference recommended?

It provides considerations for a risk assessment as well as highlighting various operational factors and safety risks which should be taken into consideration to ensure a safe and effective return to service.

- IATA Guidance for ground handling during COVID-19 Ed. 5
https://www.iata.org/contentassets/094560b4bd9844fda520e9058a0fbe2e/ground_handling_guideline_covid.pdf

What is in the reference?

A guidance on how to carry out ground handling during the COVID-19 outbreak as well as on how to deal with various operational challenges arising from the disruption.

Why is the reference recommended?

It provides a quick reference to the various governmental and industry material and updates on COVID-19 outbreak as well as an industry guideline specifically related to the ground handling industry.

- IASA Guidance for the transport of cargo and mail on aircraft configured for the carriage of passenger Ed. 3
<https://www.iata.org/contentassets/094560b4bd9844fda520e9058a0fbe2e/guidance-safe-transportation-cargo-passenger-cabin.pdf>

What is in the reference?

As passenger aircrafts are not certified to carry cargo in the cabin this document provides the means to ensure an acceptable level of safety to be maintained at all times.

Why is the reference recommended?

This document provides information on the considerations for a safety risk assessment and provides recommendations on the carriage of dangerous goods, including dangerous goods restricted to a cargo aircraft.

- EASA SIB 2020-13 - Provision of Ground Handling Services at Aerodromes
<https://ad.easa.europa.eu/ad/2020-13>

What is in the reference?

An EASA safety information bulletin addressed to aerodrome operators regarding ground handling sector which is playing a vital role in the safe and efficient conduct of flight operations.

Why is the reference recommended?

It provides recommendations to an aerodrome operator, in order to ensure that the provision of ground handling services at the aerodrome is available and does not affect the safety of aerodrome operations.

- EASA SIB 2020-07R1 - Safety Information Bulletin: Preparation of Aerodromes to Resume Operations
<https://ad.easa.europa.eu/ad/2020-07R1>

What is in the reference?

An EASA safety information bulletin addressed to aerodrome operators regarding the return to normal operations.

Why is the reference recommended?

It provides aerodrome operators with recommendations that aim to support the safe operation of aircraft at an aerodrome and should be considered along with any other instructions related to health and security issues, as well as the provision of ground handling services. It provides to aerodrome operators guidance to prepare a plan to support the return to normal operations.

Competent Authorities

- ICAO Doc 10144 ICAO Handbook for CAAs on the Management of Aviation Safety Risks related to COVID-19
<https://www.icao.int/safety/SafetyManagement/Doc10144/Doc%2010144.pdf>

What is in the reference?

High-level guidance intended to support civil aviation authorities (CAAs) with the management of aviation safety risks during the COVID-19 pandemic.

Why is the reference recommended?

It highlights the role of the competent authorities in the specific context of the COVID-19 pandemic, within the risk management principles of the ICAO Safety Management Manual (Doc 9859).

- EASA Review of Aviation Safety Issues Arising from the COVID-19 Pandemic
https://www.easa.europa.eu/sites/default/files/dfu/review_of_aviation_safety_issues_from_covid-19_final_0.pdf

What is in the reference?

A list of safety issues related to the pandemic identified by EASA in collaboration with Member State competent authorities and industry partners.

Why is the reference recommended?

The collaborative approach ensures the widest possible coverage of potential safety issues. Competent authorities may want to focus on items where they are better positioned than operators to review or update a risk assessment. The following items may be considered:

- 3.1.2 Reduced oversight by competent authorities due to lockdown
 - 3.1.5 Restarting a complex system is challenging
 - 3.1.9 Reduced availability of aviation medical examiners (AME)
 - 3.1.11 Risk assessment methodology for COVID-19 exemptions and temporary rules
 - 3.6.1 Missing suppliers and difficulty liaising with suppliers
- EASA SIB 2020-07R1 - Safety Information Bulletin: Preparation of Aerodromes to Resume Operations
<https://ad.easa.europa.eu/ad/2020-07R1>

What is in the reference?

An EASA safety information bulletin addressed to aerodrome operators, air navigation service providers and Competent Authorities regarding the return to normal operations.

Why is the reference recommended?

It invites the Competent Authorities to monitor the effective implementation of the plan of aerodrome operators to return to normal operations.