



SRVSOP

**Regional Safety Oversight
Cooperation System**

**Guidance booklet for the safety
risk analysis and management
applicable to the issuance of new
ATC rating during COVID-19**

Air traffic controllers

Approved by the General Coordinator of the
SRVSOP and published under his responsibility

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Index

| | Page |
|---|------|
| Amendment Record | i |
| Index..... | ii |
| 1. Purpose | 1 |
| 2. Scope | 1 |
| 3. Rules, regulations and related documents..... | 1 |
| 4. Background | 1 |
| 5. Analysis | 2 |
| 6. Procedure for the implementation of safety risk management and the granting of exemptions..... | 4 |
| 7. Safety risk management | 4 |
| Appendix A..... | 5 |
| Appendix B..... | 6 |

1. Purpose

This booklet provides information on safety risk analysis and management applicable to the issuance of a new ATC rating to ATCOs who carry out on-the-job training (OJT) during the period of COVID-19 pandemic measures.

2. Scope

2.1. This booklet is intended for civil aviation authorities (CAAs) who shall issue exemptions when, due to COVID-19 issues, air traffic levels are significantly reduced, and it becomes necessary to use alternative methods of assessing real-time traffic situations, in order to demonstrate an adequate level of skill as an *ab-initio* trainee, or as an air traffic controller trainee for a new rating and about to complete his/her training. This condition shall be valid until the date on which the CAA can conduct a final assessment of the competence of the ATCO for rating under real-time traffic conditions, which is considered to be realistic.

2.2. In addition, this document provides guidance to States on the postponement of inspections by which the CAA, according with its oversight obligations, would determine the validity of the requirements of the ratings granted

3. Rules, regulations and related documents

This guidance material is applied to cover the requirements established in:

- a) Annex 1, para. 4.5.2.2 - Experience, paras. 4.5.2.2.1, (a), (b), (c) y (d); and 4.5.2.2.3 when the applicant holds a rating and 4.5.2.3 – Skill;
- b) LAR 65, Section 65.250 - Practical experience requirements to accelerate an air traffic controller rating, items (a), (b), (c), (d) and (f), and Section 65.220 -- Expertise requirements, items (a) and (b).
- c) Doc 10056 - Manual on Air Traffic Controller Competency-based Training and Assessment.

4. Background

4.1. Due to restrictions on physical distancing, workplace closing and other preventive measures imposed by States to prevent or reduce the spread of Coronavirus, the International Civil Aviation Organization (ICAO), with a view to facilitating operations under appropriate safety conditions during the COVID-19 pandemic, encouraged States, through Letter AN 11/55-20/50 of 3 April 2020, to be flexible with their positions, while observing their obligations under the Convention on International Civil Aviation (Doc 7300, Chicago Convention).

4.2. Following ICAO guidelines, States have taken various measures for service providers and aeronautical personnel to keep valid their certificates, licences and other approvals during the COVID-19 pandemic. These measures, that may include temporary extensions to the requirements of national regulations, also known as extensions, waivers or flexibilizations, and which are necessary to maintain aviation operations during the COVID-19 pandemic, constitute temporary exemptions or exceptions and must, therefore, be notified as differences under Article 38 of the Chicago Convention. Refer to ICAO Doc 10050, paragraph 1.2.5, on temporary or short-term differences.

4.3. As part of the risk management process of the State Safety Programme (SSP) and in accordance with Document 9859, Section 8.5.6, *States should evaluate and manage the consequences of changes in their aviation systems*. In this regard, States should proactively identify the safety-related dangers and consequences of any changes necessary to introduce in the aeronautical system resulting from the public health emergency that the world is experiencing, before they are implemented, in order to enable risk management, planning, implementation of actions, and mediate mitigation measures that alleviate the heavy social, political and economic cost that the aviation industry lives due to COVID-19.

4.4. In this sense, the framework of the Safety Management System (SMS), Element 3.2 – Management change of Component 3 – Safety assurance, explains the factors that change the experience of service providers, such as changes to the organization's operational environment, as well as external regulatory changes, economical changes, and emerging risks.

4.5. Changes may affect the effectiveness of existing safety risk controls. In addition, new hazards and associated safety risks can be inadvertently introduced into an operation when changes occur. Hazards should be identified, and associated safety risks assessed and controlled, as defined in the risk identification or safety risk management (SRM) procedures in the organization.

5. Analysis

5.1. ICAO SARPs contained in Annex 1, para. 4.5.2.2, regarding the experience required from the rating applicant, provide a minimum overall safety standard that is harmonised by Member States in order to guarantee the recognition of their ratings.

5.2. Annex 1, para. 4.5.2.2.1, regarding the experience to issue an ATCOs rating, requires that the applicant shall have:

- a) satisfactorily completed an approved training course;
- b) provided, satisfactorily, under the supervision of an appropriately rated air traffic controller:
 - 1) aerodrome control rating: an aerodrome control service, for a period of not less than 90 hours or one month, whichever is greater, at the unit for which the rating is sought;
 - 2) approach control procedural, approach control surveillance, area control procedural or area control surveillance rating: the control service for which the rating is sought, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought; and
 - 3) approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Licensing Authority. Not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought; and

if the privileges of the approach control surveillance rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator approaches on the surveillance equipment of the type in use at the unit for which the rating is sought and under the supervision of an appropriately rated controller.

5.3. Likewise, Annex 1, para. 4.5.2.2.3, establishes that, when the applicant already holds an air traffic controller rating in another category, or the same rating for another unit, the Licensing Authority shall determine whether the experience requirement detailed in Annex 1, para. 4.5.2.2 can be reduced, and if so, to what extent.

5.4. With regard to the expertise referred to in Annex 1, para. 4.5.2.3, it is required that the applicant for a rating shall have demonstrated, at a level appropriate to the privileges conferred upon him, the expertise, judgement and action required to provide a safe, orderly and expeditious air traffic control service, including the recognition and dealing with threats and errors.

5.5. The regulations established by the SRVSOP for its member States establish in LAR 65, Section 65.240 - Practical experience requirements to issue an air traffic controller rating, that:

- a) The applicant for an aerodrome control rating, must:
 - 1) successfully complete a recognized training course; and
 - 2) satisfactorily provide aerodrome control service for a period of not less than ninety (90) hours or one month, whichever is greater, at the unit in which the rating is requested, under the supervision of a duly authorized and qualified air traffic controller.

- b) The applicant for a procedure approach control, a surveillance approach control, a procedure area control, or a surveillance area control rating, must:
 - 1) Successfully complete a recognized training course; and
 - 2) satisfactorily provide control service pertaining to the rating being sought, for a period of not less than one hundred eighty (180) hours or three (3) months, whichever is greater, at the unit in which the rating is requested, under the supervision of a duly authorized and qualified air traffic controller.
- c) The applicant for a precision radar rating for the approach, must:
 - 1) successfully complete a recognized training course; and
 - 2) satisfactorily provide precision radar control service for not less than two hundred (200) precision approaches, of which not more than one hundred (100) have been carried out in a radar simulator approved for that purpose by the aeronautical authority. Not less than fifty (50) of these precision approaches will have been carried out in the respective unit, and with the equipment for which the rating is requested.
- d) If the surveillance approach control rating includes surveillance radar approaches, experience must include at least twenty-five (25) panoramic indicator approaches with surveillance equipment used in the unit for which rating is sought, under the supervision of a suitably qualified and licensed controller.

5.6. In addition to the foregoing, LAR 65, Section 65.240, item (f), establishes that, if the applicant holds an air traffic controller rating in another category, or the same rating in another unit, the aviation authority must determine whether and to what extent the required experience can be reduced.

5.7. With regard to the expertise requirements in LAR 65, Section 65.220, it is established that the applicant for an air traffic controller license, must:

- a) Pass a proficiency test before a CAA inspector, or nominated examiner, on the subjects set out therein, that are appropriate to the duties conferred upon him, in so far as they affect his area of responsibility in each operational position of the air traffic services unit; and
- b) demonstrate at a level appropriate to the privileges granted to him/her, the expertise, judgement and performance required to provide a safe, orderly and expeditious control service.

5.8. Taking into account the current situation due to the COVID 19 pandemic, when it is not possible to comply with the provisions of the reference regulations regarding the practical experience and / or expertise necessary to issue an air traffic controller rating, States may establish a temporary exemption for the issuance of ratings, if it is to guarantee the continuity in the provision of the service, for example, when:

- a) Due to issues related to COVID-19, air traffic levels reduce significantly, and it is necessary to use alternative methods of evaluating traffic situations in real time, in order to demonstrate an adequate level of proficiency to enable an *ab-initio* ATCO learner, or an ATCO about to complete his/her training for a new rating and;
- b) the enabled controllers experience a degradation of skills due to less than normal traffic volume; or
- c) Modified shifts been established that require controllers to perform a minimum number of hours and / or work in all positions within their unit in a given period of time.

5.9. This exemption is made on the basis that, as soon as normal operations are resumed, a final evaluation of the competence for qualification under real-time traffic conditions must be carried out, with the presence of a CAA inspector.

5.10. These contingency actions aim to establish alternative measures for their application to ATSPs that carry out on-the-job training (OJT) to ATCO trainees until the moment when air traffic levels return to normal, or considered typical, and / or to ATCOs practicing for a new rating.

5.11. Some alternative measures, for the purpose of supplementing the real-time traffic load to be taken into account for rating in the given unit or sector, may be

- a) allow that some of the hours required for aerodrome, approach and / or area control ratings necessary for *ab-initio* controllers, or ATCOs in new ratings, can be carried out at training ATC simulators; and
- b) adapt the ATC simulator training level (STD), if possible, by reproducing the original traffic of the system with the volume of normal operations, before the reduction of traffic by COVID-19, and with competent instructors.

6. **Procedure for the implementation of safety risk management and the granting of exemptions**

6.1. The procedure to be applied should enable the identification of hazards and the risk assessment of potential hazard-related consequences, considering the worst foreseeable condition. The results could enable the CAAs to make their requirements more flexible, and grant exemptions regarding validity of ratings for air traffic controllers.

6.2. The granting of extensions shall be conditional upon compliance with the possible mitigations and to the considerations described for the period of the extension. The following is a simple procedure model that could support in the safety risk and exemption management:

1. Clearly establish the exemption requested with respect to the current requirements that could temporarily extend the period of validity of an ATC rating, allowing the validity extension to continue exercising the prerogatives granted by the corresponding ATC rating.
2. Identify the emerging hazards around the proposed extension;
3. Analyze the possible consequences of the identified hazard;
4. Measure the risk level of the consequences; and
5. Propose strategies for risk mitigation and control.

7. **Safety risk management**

7.1. The validity of an ATC rating for an ATCO for a certain period of time is based on satisfactory evidence of its performance during the arranged training, which will be in accordance with the regulations established by the CAA that granted the rating.

7.2. Implementing these safety principles in the midst of a pandemic such as COVID-19 is of particular relevance because of the risks involved in adopting flexible measures to facilitate the operation of the aeronautical system in the face of this serious global crisis. It is, therefore, of particular interest to make a thorough analysis of operational risks related to certain SARPs when the application of temporary exemptions is necessary, as well as the need to establish mitigation measures and essential considerations in the decision-making process.

7.3. To facilitate the understanding of the above, it is necessary to analyse different scenarios of flexibility for the expiration term of the rating, the identification of the hazard that may arise, the level of the risk, the risk mitigation actions, as well as three (3) approaches on operational considerations regarding the scenarios that could be presented, in order to serve as a guide for States in decision-making.

7.4. [Appendix A](#) of this document presents the matrix for risk management and extensions of ATC ratings for air traffic controllers, and [Appendix B](#) provides examples of probability and severity tables and risk management matrices that can be used to evaluate the identified risks.

Appendix A

Risk management matrix for the granting and issuance of new ATC rating during COVID-19

ICAO: Annex 1, para. 4.5.2.2.1, items (a), (b), (c) and (d); 4.5.2.2.3 and SRVSOP: LAR 65, Section 65.240, items (a), (b), (c), (d) and (f) and Section 65.220, items (a) and (b)

| Exemption | Affected population | Hazard identification | Possible consequences | Risk index | Possible mitigations | Operational considerations during the contingency period | Considerations before entering normal service | Operational considerations during the first few months of normal service |
|---|---|---|--|---|---|--|---|--|
| Granting of a new ATC rating regarding practical training and on-the-job training (OJT) requirement during the mitigation period by COVID 19 ending no later than 31 March 2021 | Trainee of <i>ab-initio</i> ATCO or OJT ATCOs for a new ATC rating. | OJT rating granting to ATCO trainees and / or ATCOs practicing for a new qualification with very low levels of air traffic in real time due to the COVID-19 pandemic. | Impact on the air traffic controllers workforce in some sectors or units to the detriment to the capacity and availability of service provision. | 3D Moderate Remote: 3 Minor: D | <ol style="list-style-type: none"> 1. Establish a programme for active ATCOs that includes the retention of knowledge, competence and professionalism taking into account the possibility of verbal or written tests, review of emergency procedures under different settings, training in phraseology. 2. Establish that, at least one of the air traffic controllers in the executive or planning function at work in pairs, has a valid rating. 3. Instructors have the necessary competencies to use the ATC simulator for training and to manage training with realistic levels of traffic. 4. The simulators must present normal traffic before the reduction of operations and, also, include the management of anomalous or emergency operations. 5. A rational simulator percentage can be a practical load of 25% of hours with traffic, and 10% with simulated emergency situations. 6. Active supervision of ATC supervisors. | <ol style="list-style-type: none"> 1. Request the presentation of all documentation required by the regulations, and the exemption required of it. 2. Follow-up so that all the sanitary protection measures ordered by the health authority and the CAA are established and complied with by the ATSP. 3. Establish that any deviation not approved by the CAA in reference to the fulfillment of the functions and operational capabilities, will lead to the suspension of the exemption granted. 4. Arrange for the ATSP to report any situation that jeopardizes safety in relation to the exemption granted. 5. Follow-up to ensure that the ATSP schedules work shifts that ensure staff rest and a rotation of same according to the contingency. 6. Ensure that the procedures for OJT rating, the lifting of the exemption, and return to standard procedures, are implemented. 7. Implement a mechanism for recording and monitoring reports and trends. | <ol style="list-style-type: none"> 1. The CAA shall work and coordinate with the ATSP on the recovery plan to return to normal oversight activities in an orderly manner after this crisis. 2. Coordinate with the ATSP to carry out the verifications and inspections deemed necessary after the OJT and simulator training. 3. It will be verified that the simulator training includes exercises based on the data of real traffic volumes immediately prior to the pandemic. 4. After the satisfactory completion of the inspections, the CAA shall coordinate with the ATSP a new schedule for the final granting with realistic traffic representation for OJT ratings. | <ol style="list-style-type: none"> 1. Reactivate the State's safety oversight plan in order to verify the requirements established in order to grant the ATC new ratings. 2. Final ATC rating after examination with real-time traffic that is realistic and with the presence of the CAA inspector. |

Appendix B

Examples of probability and severity tables and risk assessment matrices

Figure 1: Safety risk probability table

| Likelihood | Meaning | Value |
|----------------------|---|-------|
| Frequent | Likely to occur many times that, as a result of the low air traffic load in OJT practice, ATC rating will not be granted. | 5 |
| Occasional | Likely to occur sometimes that, as a result of low air traffic load in OJT practice, an ATC rating will not be granted. | 4 |
| Remote | Unlikely to occur, but possible that, as a result of low air traffic load in OJT practice, an ATC rating will not be granted. | 3 |
| Improbable | Very unlikely to occur that, as a result of low air traffic load in OJT practice, an ATC rating will not be granted. | 2 |
| Extremely improbable | Almost inconceivable to occur that, as a result of low air traffic loads in OJT practice, an ATC rating will not be granted. | 1 |

Figure 2: Severity table

| Severity | Meaning | Value |
|--------------|--|-------|
| Catastrophic | Using the ATC simulator to compensate a percentage of the practice requirement with real-time traffic in the ATCO OJT rating could generate many safety issues. Even incidents. | A |
| Hazardous | Practice in ATC simulator to compensate a percentage of the practice requirement with real-time traffic in the ATCO OJT rating could generate some safety problems in the ATC unit under normal and emergency operations conditions. | B |
| Major | Practice in ATC simulator to compensate a percentage of the practice requirement with real-time traffic in the ATCO OJT rating could create few consequences that do not affect safety. | C |
| Minor | Practice in ATC simulator to compensate a percentage of the practice requirement with real-time traffic in the ATCO OJT rating does not generate a significant consequence to safety. | D |
| Negligible | ATC simulator practice to compensate a percentage of the practice requirement with real-time traffic in the ATCO OJT rating presents no safety risk. | E |

Figure 3: Risk assessment matrix

| Risk probability | Risk severity | | | | |
|------------------------|-------------------|----------------|------------|------------|-----------------|
| | Catastrophic A | Hazardous B | Major C | Minor D | Negligible E |
| Frequent 5 | 5 A | 5 B | 5 C | 5 D | 5 E |
| Occasional 4 | 4 A | 4 B | 4 C | 4 D | 4 E |
| Remote 3 | 3 A | 3 B | 3 C | 3 D | 3 E |
| Improbable 2 | 2 A | 2 B | 2 C | 2 D | 2 E |
| Extremely improbable 1 | 1 A | 1 B | 1 C | 1 D | 1 E |

| Risk Index Range | Description | Recommended Action |
|--|---------------|---|
| 5 A, 5 B, 5 C, 4 A, 4 B, 3 A | High risk | There is no flexibility in the OJT practice of the ATC rating in reference to the requirement of practice with real-time traffic. |
| 5 D, 5 E, 4 C, 4 D 4 E, 3 B, 3 C, 3 D, 2 A, 2 B, 2 C, 1 A | Moderate risk | Provide risk mitigation: limitations, conditions and recommendations for flexibility in the OJT practice of the ATC rating in reference to the practice requirement with real-time traffic. Simulator training with real traffic prior to the COVID-19 pandemic with a practical load of 25% of hours with traffic, and 10% with simulated emergency situations. Permanent oversight and monitoring, ATSP commitment to report events in a timely manner. |
| 3 E, 2 D, 2 E, 1 B, 1 C, 1 D, 1 E | Low risk | Acceptable as is. No subsequent risk mitigation is required. |
