



Notice of Proposed Amendment 2023-01

in accordance with
Article 6(1) of MB Decision No 01-2022

Regular update of the air operations rules

Training requirements for flight operations officers and flight dispatchers

Amendments related to the fuel planning and management and all- weather operations regulatory packages

RMT.0392 (SUBTASK 1B)

EXECUTIVE SUMMARY

The objective of this Notice of Proposed Amendment is to propose standards for the duties, responsibilities, and training of personnel performing functions related to the operational control system of an aircraft operator.

This NPA proposes to mandate air operators to define the standards of their operational control system, identify the duties and responsibilities of the personnel (other than flight crew) responsible for the implementation of that system, and ensure that they are competent to perform their tasks. It also proposes new requirements on the training of operational control personnel, establishing a standard minimum flight operations officer (FOO) qualification and advanced qualification for flight dispatchers (FDs) and other roles associated with the operational control processes and procedures. It is proposed that the training programme for operational control personnel is developed and implemented based on the principles of the competency-based training and assessment (CBTA) compliant with ICAO Annex 1 and ICAO Docs 9868 and 10106. The NPA also includes proposed provisions on the qualification of instructors for the FOOs and FDs, based on the above-mentioned ICAO documents.

The proposed amendments are expected to improve safety by enhancing the competencies of operational control personnel and thus prepare them for present and future challenges posed by an increasingly complex technological and operational environment. They are also expected to standardise the training for operational control personnel across the EASA Member States and to ensure a level playing field for a safety-critical category of personnel whose duties are intrinsic to an air operator's system of operational control. The proposed amendments will ensure the alignment of Regulation (EU) No 965/2012 and the related AMC and GM with ICAO Annex 6 Standards And Recommended Practices (SARPs) in this regard.

Finally, this NPA proposes some amendments to provisions on fuel planning and management and all-weather operations, to address some minor issues identified during implementation of the recent amendments made by Regulations.

The proposed amendments are expected to increase clarity and have a neutral or positive safety and economic impact.

Domain:	Air operations		
Related rules:	Regulation (EU) No 965/2012 and related AMC & GM		
Affected stakeholders:	Air operators performing CAT operations with aeroplanes; NCC operators, SPO operators, NCO operators		
Driver:	Efficiency/proportionality	Rulemaking group:	Yes
Impact assessment:	Detailed		

EASA rulemaking procedure milestones

Start Terms of Reference	Public consultation NPA 2023-XX	Proposal to the Commission EASA Opinion	Adoption by the Commission Implementing act	Decision Acceptable Means of Compliance, Guidance Material
7.10.2020	24.4.2023	2024	2025	2025



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1. About this NPA

1.1. How this NPA was developed

The European Union Aviation Safety Agency (EASA) developed this NPA in line with Regulation (EU) 2018/1139¹ (the 'Basic Regulation') and the Rulemaking Procedure². This Rulemaking Task (RMT).0392 is included in Volume II of the European Plan for Aviation Safety (EPAS) for 2023-2025³. The scope and timescales of the task were defined in the related Terms of Reference (ToR)⁴. This activity is identified in the EPAS as Subtask 1b, covering the training of operations control personnel (FOOs / FDs), considering the transposition of the related ICAO SARPs.

EASA developed this NPA with the contribution of a rulemaking group representing all categories of affected stakeholders. The NPA is hereby submitted for consultation in accordance with Article 115 of the Basic Regulation, and Article 6(1) of the Rulemaking Procedure.

1.2. How to comment on this NPA

Please submit your comments using the automated **Comment-Response Tool (CRT)** available at <http://hub.easa.europa.eu/crt/>⁵.

The deadline for the submission of comments is **24 July 2023**.

1.3. The next steps

Following the public consultation, EASA will review all the comments received. Based on the comments received, EASA will revise, if necessary, the proposed amendments to Regulation (EU) No 965/2012⁶ (the 'Air OPS Regulation') and issue an opinion. A summary of the comments received will be provided in the explanatory note to the opinion. The opinion will be submitted to the European Commission, which will decide whether to amend the Air OPS Regulation based on the opinion.

If the European Commission decides to amend the Air OPS Regulation based on the opinion, EASA will publish a decision to amend the related acceptable means of compliance (AMC) and guidance material (GM) to support the implementation of the amendments to the Regulation.

¹ Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139>).

² EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 01-2022 of 2 May 2022 on the procedure to be applied by EASA for the issuing of opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure'), and repealing Management Board Decision No 18-2015 (<https://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-01-2022-rulemaking-procedure-repealing-mb>).

³ <https://www.easa.europa.eu/en/document-library/general-publications/european-plan-aviation-safety-epas-2023-2025>

⁴ <https://www.easa.europa.eu/en/document-library/terms-of-reference-and-group-compositions/tor-rmt0392>

⁵ In case of technical problems, please send an email to crt@easa.europa.eu with a short description.

⁶ Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012R0965&qid=1680078326113>).



2. In summary — why and what

2.1. Why we need to act — issue/rationale

2.1.1. Training requirements for flight operations officers (FOOs) and flight dispatchers (FDs)

The Air OPS Regulation establishes the technical requirements and administrative procedures applicable to air operations in the EU regulatory system, implementing the essential requirements for air operations established in Annex V to the Basic Regulation.

Those essential requirements establish that commercial air transport operators must ‘use only suitably qualified and trained personnel and implement and maintain training and checking programmes for the crew members and other relevant personnel’.

However, despite the fact that both industry and Member States acknowledge that operational control personnel are safety-critical, the Air OPS Regulation does not include requirements to identify the tasks and responsibilities of operational control personnel (e.g. FOOs, FDs and their instructors), nor training requirements for them.

This lack of requirements has resulted in several issues.

Lack of harmonisation with ICAO SARPs

The lack of requirements on the tasks, responsibilities and training of operational control personnel has been marked by ICAO as a non-alignment with the SARPs of Chapters 4.6 and 10 of ICAO Annex 6 Part I at the ICAO audits performed in 2017 to the EU Member States and EASA.

Lack of compliance with EU requirements

According to point (e) of ORO.GEN.110, air operators ‘shall ensure that all personnel assigned to, or directly involved in, ground and flight operations are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole’. This provision implements point 8.1(b) of the Essential Requirements for air operations (Annex V to the Basic Regulation), which states that ‘the aircraft operator must use only suitably qualified and trained personnel and implement and maintain training and checking programmes for the crew members and other relevant personnel [...]’.

However, the current AMC1 ORO.GEN.110(c)&(e) does not fully cover operational control personnel. The AMC covers only the theoretical knowledge content as per ICAO Annex 1 and industry best practices. It does not address the development of adequate skills or attitudes and does not provide enough flexibility to adapt the training to the specificities of the operator or to enhance personnel’s competencies required by more complex tasks. Moreover, the AMC is only applicable to CAT operators using the tools of flight monitoring or flight watch for the purpose of fuel planning and management.

Furthermore, according to AMC3 ORO.MLR.100, commercial air transport (CAT) operators of aeroplanes should describe the training programmes for FOOs or FDs in their operations manual (OM-D)⁷. Nevertheless, many air operators do not describe these training programmes in their OM-D because they argue that there are no standards for training and no identified duties and responsibilities for this category of personnel in the Air OPS Regulation. This has been identified as a

⁷ See point (a) D. 1 of AMC3 ORO.MLR.100: ‘Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight’

non-compliance for several Member States though standardisation inspections in the OPS domain. Further analysis to identify the best way to address the ICAO finding has led to the identification of a harmonisation issue and a potential safety issue. These are further detailed in Chapter 4 of this NPA.

Lack of level playing field

Only a few Member States have national requirements for training of operational control personnel, but the degree to which they are compliant with ICAO SARPs varies. Some Member States refer to the most recent ICAO documents, others to an obsolete ICAO document.

Moreover, some Member States restrict the access to certain operational control tasks (e.g. load control, air navigation, or meteorological tasks) to licensed personnel only. However, these national licences are issued for different tasks, and the level of qualification acknowledged through a licence differs between Member States. This leads to a total lack of harmonisation and recognition of training and qualifications at European level. Refer to Section 4.5.3 for more details.

Lack of adequate training standards

As already stated, the current AMC1 ORO.GEN.110(c)&(e) does not fully cover operational control personnel. The reference to ICAO Annex 1 and ICAO Docs 9868 and 10106 in this AMC is insufficient to clearly distinguish between the training for entry level (FOOs) and the one for intermediate to advanced levels (FDs). Furthermore, standardisation activities have shown that the training programmes developed by air operators for operational control personnel are inconsistently overseen across Europe. Thus, a minimum standard level of training is not consistently ensured throughout Europe.

Quick decision-making and management of an overwhelming data flow under high time pressure, using sophisticated last-hour technology, describe today's normal picture of an operations control centre (OCC) of an air operator. Additional factors such as interactions between the airport, OCC and air traffic control (ATC), come to change the decision output. As highlighted in ICAO Doc 10106, the software used by operational control personnel is becoming increasingly complex so as to enable processing of large amounts of available data. With more available operational data, better decisions can be reached, but this also enhances the risk that people become overloaded by data — both relevant and irrelevant in certain contexts. The risk of taking wrong decisions based on irrelevant data is higher. This triggers the need to filter the huge amount of data and better focus on the relevant bits. As systems and technology evolve and become more complex, the people who are part of those systems should also keep pace with this development.

The science of training is also evolving; while teaching a person how to use a simple tool to do their job and providing them with some knowledge was enough 40 years ago, today this is no longer sufficient. Today, improved training processes can equip a person with life-long capabilities to find solutions to complex problems and better techniques to adapt to new challenges and the unknown. New training approaches help people to develop competencies to cope with both day-to-day challenges and longer-term changes. Such competencies 'define what can be *done* versus what is *known*, placing the emphasis on the individual to adapt and utilize their abilities in any scenario' (ICAO Doc 10106). People are trained to understand the consequences of their actions in an extremely complex context rather than act without understanding what they do or why they do it.

Considering the different standards applicable in the Member States for the minimum qualification and training of the FOOs and FDs, as well as the inconsistent oversight of that training programme,



there is insufficient assurance that the level of qualification of this personnel is adequate to the complexity of the tasks allocated to them. This could constitute a potential safety concern.

A survey conducted in April 2021 and further investigations in this area have provided a better view of the current situation across the EU. Refer to Section 4.1 for more details.

Different meaning of the term ‘flight dispatcher’ used in flight operations versus ground handling operations

The Basic Regulation has extended the scope of EU aviation safety legislation to a new domain — ground handling, and ‘flight dispatch’ is included in the Basic Regulation definition of ground handling services (Article 3, definition (23)⁸). Several discussions with numerous experts from the air operations and ground handling domains have confirmed that the term ‘flight dispatcher’ is used in both domains and obviously with a different meaning, often leading to confusion in discussions, expected tasks and responsibilities. The confusion is maintained by the lack of a clear identification of the FD tasks in relation to the operational control system in the Air OPS rules on the one hand, and the lack of additional clarification of the term ‘flight dispatch’ in ground handling. This would have potential safety implications due to the numerous interfaces between air operations and ground handling for ground operational procedures.

Related safety issues

The potential safety impact of the lack of adequate and harmonised training for operational control personnel is difficult to assess, because in the EU regulatory system the ultimate responsibility for the operational control of a flight remains solely with the commander/pilot-in-command. Consequently, when a reported event indicates, for example, ‘fuel starvation’ as the main cause of an event, this cause is rarely linked unequivocally to the inadequate training of the FD, nor is that inadequate training considered a systemic contributing cause. At the same time, many of the serious incidents and accidents caused by fuel starvation can be easily used to justify that the lack of proper training of operational control personnel was a contributing factor to those events.

A full analysis of the issue is included in Chapter 4 ‘Impact assessment’. A detailed safety risk assessment is included in Section 4.1.2.

There are no related safety recommendations, no exemptions in accordance with Articles 70, 71 or 76 of the Basic Regulation, and no alternative means of compliance pertinent to the scope of this task.

2.1.2. Amendments related to the fuel planning and management and all-weather operations regulatory packages

The technical requirements of the Air OPS Regulation on fuel planning and management and all-weather operations (AWOs) as well as the related AMC and GM were recently amended⁹. Since the

⁸ ‘(23) ‘groundhandling service’ means any service provided at aerodromes comprising safety -related activities in the areas of ground supervision, **flight dispatch** and load control, passenger handling, baggage handling, freight and mail handling, apron handling of aircraft, aircraft services, fuel and oil handling, and loading of catering; including the case where aircraft operators provide those groundhandling services to themselves (self-handling);’

⁹ Regulation (EU) No 965/2012 was amended by Commission Implementing Regulation (EU) 2021/1296 of 4 August 2021 amending and correcting Regulation (EU) No 965/2012 as regards the requirements for fuel/energy planning and management, and as regards requirements on support programmes and psychological assessment of flight crew, as well as testing of psychoactive substances (OJ L 282, 5.8.2021, p. 5) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1296&qid=1680085244702>) and Commission Implementing Regulation (EU) 2021/2237 of 15 December 2021 amending Regulation (EU) No 965/2012 as regards the requirements for all-weather

new provisions have been applicable, experience with implementation has highlighted several small items that need to be amended to fully achieve the initial intent of the new provisions.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This NPA will contribute to achieving the overall objectives by addressing the issues described in Section 2.1.

The specific objectives of this proposal are to:

- ensure that tasks and responsibilities of an AOC holder’s operational control personnel are clearly identified;
- address the lack of EU training requirements for the AOC holder personnel involved in a system of operational control and their instructors;
- clarify the confusion created by the term ‘flight dispatcher’ used with a different meaning in flight operations and ground handling operations; and
- improve the clarity of some of the provisions on fuel planning and management and AWOs to fully achieve the intention behind their recent revision.

A transition period will be proposed in the Opinion, to allow the affected stakeholders sufficient time to implement the proposed amendments.

2.3. How we want to achieve it — overview of the proposed amendments

The proposed means to achieve objective (1) is by establishing a requirement for CAT operators to define the standards and roles required for the safe functioning of their system of operational control, based on the procedures described in their operations manual, as well as the tasks and responsibilities associated with those roles. This objective supports the implementation of the next objectives.

The proposed means to achieve objective (2) is by transposing the relevant ICAO SARPs of Annex 6 Part I into the Air OPS Regulation (EU) and providing guidelines for the development of a CBTA programme.

The proposed means to achieve objective (3) is by providing a definition of the term, adequate to the role and tasks in the operational control system of an air operator and in line with ICAO Annex 6.

2.3.1. Training requirements for flight operations officers (FOOs) and flight dispatchers (FDs)

To address the level playing field and the potential safety issue, two options were compared and assessed to achieve the objectives mentioned in Section 2.2. Option 0, which proposes no changes to the rules, was considered the baseline for the comparison. The Option 1 proposal is to require the air operator to clearly identify the duties and tasks of operational control personnel, and the operator’s operational control personnel to be competent to perform their tasks as per the required standards. This option also proposes a CBTA programme for operational control personnel, based on ICAO Docs 9868 and 10106. The proposed training programme covers the development of knowledge, skills and

operations and for flight crew training and checking (OJ L 450, 16.12.2021, p. 21) (<https://eur-lex.europa.eu/search.html?scope=EURLEX&text=2021%2F2237&lang=en&type=quick&gid=1680085286395>). The related AMC and GM were amended by ED Decisions 2022/005/R of 25 March 2022, 2022/012/R of 30 June 2022, and 2022/014/R of 19 August 2022.



attitude. Details about the qualification of trainers are also proposed with this option. These proposals ensure full alignment with the relevant ICAO standards of Annex 6 Part I. They also support further standardisation of training at European level, the definition of training targets and the assessment of the effectiveness of the training programme.

Option 1 was identified as the preferred option, and this is the basis for the rules proposed in this NPA.

For detailed information about the comparison of options, refer to Chapter 4.

The following principles have been applied to the proposed implementing rules, AMC & GM:

- The identification of evidence by actual, relevant, adequate and realistic competence requirements is important for the CBTA process. The term ‘evidence’ has been established since decades, at first in the medicine and public health sector. CBTA is full of evidence because a training that lacks evidence would not make sense.
- The items where the operator must take responsibility have been added at implementing rule level:
 - Define and continually re-define entry and exit competencies for each role- and operator-related training;
 - Define minimum training and assessment standards.
- The ‘how to’ elements have been added at AMC and GM level.

2.3.2. Amendments related to the fuel planning and management and AWO regulatory packages

Several amendments related to destination alternate aerodrome in Part-NCO and specific approval criteria for low-visibility operations are proposed to support the implementation of the requirements on the following topics that were recently amended or introduced in the Air OPS Regulation:

- AWOs,
- meteorological information, and
- flight crew training.

One proposed amendment affects NCO.OP.143; the other ones are at AMC and GM level.

A detailed rationale for each of the changes proposed in this NPA is included in Chapter 3 below.

2.4. Expected benefits and drawbacks of the proposed amendments

To address the issues identified in Section 2.1, rulemaking was deemed necessary, since the current requirements in the Air OPS Regulation need to be amended to achieve the objectives identified in Section 2.2. When developing the regulatory material, EASA attempted to find the simplest and least costly way to regulate the issue to achieve the greatest possible benefits.



2.4.1. Training requirements for flight operations officers (FOOs) and flight dispatchers (FDs)

The expected benefits and drawbacks of the proposed amendments are summarised below. For the full impact assessment, please refer to Chapter 4.

Expected benefits

- Common training standards for operational control personnel across the EU, which will ensure a level playing field.
- A higher level of safety in operations. Operational control personnel will be better prepared to understand and manage the risk of operations, take the right decision and use the right information at the right time, even in situations they have not already encountered. They will be better prepared to adequately manage the data flow and filter the relevant safety information for every flight. The training process will build, further develop and maintain competencies and allow for constant improvement to address the operational risk in the constantly developing technological and operational environment. The CBTA programme will allow full customisation per operator's type of operation.

The expected drawbacks of the proposal

- Those Member States and AOC holders that currently do not apply a CBTA programme for operational control personnel or are implementing a different training model or different requirements will need additional resources (time, money, expertise) to develop or adjust their current training programme to implement the changes proposed in this NPA. However, the additional resources required are expected to be very low or low.
- AOC holders will have to develop operator-specific requirements (if not already done) for job-specific competencies, which will also require additional resources that are though expected to be very low.
- AOC holders will also have to dedicate resources to manage the changes needed to implement the proposals in this NPA; these resources are also expected to be very low.

2.4.2 Amendments related to the fuel planning and management and AWO regulatory packages

The proposals in this NPA intend to clarify the existing requirements and thus facilitate their implementation. More details on the concrete impact of the changes proposed in this NPA are included in the rationale behind the changes in Chapter 3 below.

2.4.2. Further information relevant to the topic of this NPA

FOO and FD licences

The scope of this RMT does not include requirements for a European licence for FOOs or FDs. There is no specific provision in the Basic Regulation to mandate an FD licence in the EU, and ICAO Annex 6 also does not mandate a licence for FOOs or FDs. This NPA does not propose a shared responsibility between the DF and the commander of a flight. There will be no change in the responsibility for the operational control of a flight, which will remain solely with the commander, as established today through the Air OPS Regulation and the Basic Regulation. In this aspect, the EU rules will not align with the corresponding Federal Aviation Administration (FAA) rules, where the responsibility for the operational control of a flight is shared between the pilot-in-command and the FD.



To further harmonise the training standards for the operational control personnel, EASA intends to clarify the approach regarding the current licensing regime in the EU. For a more detailed analysis, refer to Sections 4.1.4 and 4.5.

Non-commercial operations (NCC and NCO)

For non-commercial operators (identified as general aviation operators per ICAO Annex 6 Part II), training and familiarisation with all features of the operation that are pertinent to the operational control duties are included in ICAO Annex 6 at the level of a recommendation. EASA does not propose any requirements for the training of operational control personnel for NCC¹⁰ operators but intends to prepare a safety promotion package with a CBTA programme for NCC operators, similar to that for CAT operators.

Helicopter operations

This NPA does not include a proposal for training of operational control personnel involved in helicopter operations. This means that the SARPs 8.1 to 8.5 of Section 3 of ICAO Annex 6 Part III will not be transposed, and Member States will have to continue to notify a difference under the Chicago Convention on the transposition of those SARPs.

Stakeholders are invited to submit comments on whether the implementing rules proposed in this NPA could be valid and suitable for commercial air transport operators of helicopters, with the caveat that additional AMC and GM may need to be developed to support the implementation of the requirements by helicopter operators.

¹⁰ NCC: non-commercial operations with complex motor-powered aircraft



3. Proposed amendments and rationale

The amendment is arranged to show deleted, new or amended, and unchanged text as follows:

- deleted text is ~~struck through~~;
- new or amended text is highlighted in **blue**;
- an ellipsis '[...]' indicates that the rest of the text is unchanged.

Where necessary, the rationale is provided in *blue italics*.

3.1. Draft regulation (draft EASA opinion)

Draft regulation

3.1.1. Annex I (Definitions)

Annex I – Definitions of terms

[...]

(49a) ~~'flight operations officer' or 'flight dispatcher' means a person designated by the operator to engage in the control and supervision of flight operations, who is suitably qualified, who supports, briefs or assists, or both, the pilot-in-command in the safe conduct of the flight;~~ 'flight dispatcher (FD)' means a specific function or role associated with the operational control system of the aircraft operator, which indicates an advanced level of qualification. An FD is qualified to perform specific tasks for the preparation and execution of flights, including to support, brief or assist, or both, the pilot-in-command in the safe conduct of the flight. It requires an initial FOO qualification followed by operator- and advanced role-specific training.

[...]

(49f) 'flight operations officer (FOO)' means a generic function or role associated with the operational control system of the aircraft operator, which indicates a standard initial qualification in compliance with ICAO Annex 1 and ICAO Docs 9868 and 10106. An FOO is qualified to perform general tasks to support the preparation and execution of a flight, which do not require advanced role-specific training.

[...]

(91b) 'operational control personnel' means trained and qualified personnel, other than flight crew members, having different roles and performing specific tasks directly related to the operator's system of operational control, including but not limited to the activities related to the preparation and execution of the flight; typical roles for operational control personnel include but are not limited to flight dispatcher, operations controller, operational control data manager.

Rationale

Three new definitions are proposed for FOO, FD, and operational control personnel.



The definition of operational control personnel is more generic and includes both FOOs and FDs, while encompassing also other roles related to the implementation of the operational control system of an aircraft operator.

ICAO Annex 6 and Annex 1 use 'flight operations officer/flight dispatcher' (FOO/FD) without making any distinction between the two terms. The current definition in the Air OPS Regulation, following the same approach, creates confusion and leads to the understanding that the two terms are synonyms and therefore interchangeable, which in fact is not the case. The difference between FOO and FD is clarified in ICAO Doc 9868 (Section 3, Ch. 1) Ed. 2020. It consists in the level of training and depth of competencies, and the specificity and complexity of tasks associated with each of them. ICAO Doc 10106 specifies further:

'The title "flight operations officer" distinguishes the individual of the basic qualification level from the higher role- and operator-related qualification level. [...]

Flight dispatcher and all other functions and roles in operational control require a successful initial FOO qualification and an operator- and role-specific qualification.'

The purpose of the proposed new definitions of FOO and FD is therefore to distinguish between the two in order to better implement the proposed new rules regarding training. The proposed definitions link the operational control personnel to the specific operational control tasks and responsibilities for the preparation and execution of flights, as specified in the Basic Regulation (Annex V Essential requirements for air operations, point 1.1).

3.1.2. Annex III (Part-ORO)

ORO.GEN.110 Operator responsibilities

[...]

- (c) The operator shall establish and maintain a system for exercising operational control over any flight operated under the terms of its certificate, SPO authorisation or declaration, which shall be included in the operator's operations manual. The operator shall, taking into account its operational procedures as described in its operations manual, define the standards for its operational control activities and, as applicable, the roles of its operational control personnel, including the associated decision-making authority, tasks and responsibilities.

[...]

- (e) The operator shall ensure that all personnel assigned to, or directly involved in, ground and flight operations are properly instructed, trained or qualified, have demonstrated their abilities in their particular duties, remain current in them, and are aware of their responsibilities and the relationship of such duties to the operation as a whole.

[...]

Rationale

The new text in point (c) proposes a requirement for the air operator to establish the standards of its operational control activities (who does what, why and when), defines the tasks and procedures to indicate how standards would be achieved, and finally describes the responsibilities of the operational



control personnel. The standards are expected to reflect the specificities of the operation and therefore should be based on the procedures included in the operator's operations manual.

The proposed new requirement creates the basis for the implementation of the FD tasks described in ICAO Annex 6 Part I Chapter 4.6 and respectively Part III Chapter 2.6 for helicopter operators.

The proposed requirement applies to all the operators to which Part-ORO applies; this includes, besides AOC holders performing CAT operations, also NCC and SPO operators. The new text does not require operators to use operational control personnel for the implementation of its operational control system. This rule allows for a scalable application: when, for example, an operator only uses pilots for the implementation of the operational control tasks, they may do so without having to hire or use any operational control personnel. In such cases, their operations manual will adapt the description of their operational standards and tasks only to pilots.

The use of the word 'authority' added in point (c) refers to the right and responsibility to take operational control decisions and to execute (manage) the operation as a whole, according to the delegated authority referenced in OM-A Chapter 1 or/and 2. See also the proposed AMC1 ORO.GEN.110(c).

The new text also facilitates the implementation of the proposed amendments to ORO.AOC.135 'Personnel requirements'. When operational standards are established, the personnel's roles and tasks can also be established clearly. This way, the operator can adapt the training targets for operational control personnel to ensure their competence and enhance the effectiveness of training.

The requirement that the operational control system of the operator needs to be included in the operations manual has been moved from the current AMC1 ORO.GEN.110(c).

The additions in point (e) are to align the requirement for training with the provisions of Annex V to the Basic Regulation in point 8.1(b), and to provide a link to the proposed new requirements for the training of operational control personnel in points ORO.AOC.135 (b)(3) and (b)(4). It is also proposed to delete the word 'instructed' to avoid any confusion between the scope of point (e), which refers to training, and the scope of point (f) of ORO.GEN.110, which refers to the way in which operations are expected to be performed.

ORO.AOC.135 Personnel requirements

[...]

(b) Adequacy and competence^y of personnel

[...]

(3) The operator conducting CAT operations with aeroplanes shall ensure that:

(i) only personnel that have successfully completed the minimum training as a flight operations officer may perform operational control tasks; and

(ii) only personnel that have successfully completed training for advanced competence level as a flight dispatcher or other operational control roles are allowed to perform complex operational control tasks without supervision.

(4) The operator conducting CAT operations with aeroplanes shall:



- (i) develop and implement an initial and recurrent training and assessment programme for its operational control personnel, based on a competency-based training and assessment (CBTA) method, to ensure they achieve the required competencies and maintain those competencies at the necessary level to perform their tasks as per the standards and assigned roles established in accordance with ORO.GEN.110(c).

The CBTA programme shall include:

- (A) Training standards and objectives based on the specificities of the operation and the assigned roles in the operator's operational control system;
- (B) A basic competence level and an advanced competence level for the operational control personnel.

The basic competence level for flight operations officers shall cover knowledge, skills, and attitudes commensurate with the generic flight operations officer tasks.

The knowledge component shall cover air law, aircraft general knowledge, flight performance calculation, planning procedures, loading, human performance, meteorology, navigation, operational procedures, principles of flight, and radio communication.

The skill component shall address both technical and human skills, to allow the individual to prepare a flight and provide the expected support to the operation of the flight as defined by the tasks established by the operator.

The attitude component shall aim at preparing the personnel to address the complexities of the operational control tasks safely and efficiently.

The training for the advanced competence level shall include operator-specific elements and role-specific elements, commensurate with the complexities of the assigned roles.

- (C) For the basic competence level, on-the-job training to cover practical aspects and ensure that competence standards appropriate to the exercise of duty are consistently achieved.

The on-the-job training shall include observing one familiarisation flight in the flight crew compartment of an aircraft over one of the areas or route segments for which that individual is authorised to exercise their operational control tasks and duties.

Under exceptional circumstances, duly identified and justified by the operator as part of the training programme, the familiarisation flight may be replaced by observing a line operational simulation (LOS) profile in a representative flight simulator approved by the competent authority for this purpose. Such profile shall address areas or route segments where the assigned role related to the operational control will be exercised;



- (ii) establish criteria for the training and qualifications of instructors and assessors of the operational control personnel; and
- (iii) include all these elements in its operations manual.

[...]

Rationale

The proposed new requirements transpose the SARPs of ICAO Annex 6 Part I, on the training of operational control personnel, in the EU regulatory framework, and are expected to ensure a level playing field across the EU. They also create a link between the training standards and the operational standards established by the operator, in compliance with ORO.GEN.110(c).

The proposed new requirement allows for the establishment of different qualification levels, with appropriate training for each, including the minimum FOO qualification as an entry level, as well as the advanced training adjusted to different roles in the operational control system. Further description of the training programme is provided at AMC and GM level.

The new point (b)(3) establishes an important condition – that of the minimum competence level necessary for any job in the operational control (the basic FOO qualification). Furthermore, it establishes that only those individuals who have completed additional training (specific to the role and the operational context of the air operator), and consequently have achieved an enhanced competence level, may perform complex tasks without supervision.

The proposed new point (b)(4) establishes training requirements for operational control personnel used by an AOC holder (either employed directly or as a contracted service) for its operational control system. Point (b)(4) requires that the training is customised, and its objectives reflect the specificities of the operation. It also requires that the training programme is described in the operator's manual; this requirement addresses the non-compliance of some operators identified through the oversight activities.

Point (b)(4) establishes that the training programme is developed as a CBTA programme, as required by ICAO Annex 1 and detailed in ICAO Docs 9868 PANS-TRG and 10106 Manual on Flight Operations Officers/Flight Dispatchers Competency-based Training and Assessment. It also addresses the ICAO finding to EASA and several Member States, as it requires the operator to include in its training programme criteria for the training and qualification of instructors and assessors of operational control personnel.

Only the relevant elements of ICAO Annex 1, i.e. the knowledge component of Standard 4.1.6.2 are proposed to be included at implementing rule level. The skills and attitudes components are proposed to be included at AMC level, as being an integral part of the training as a whole.

The advanced role-specific training must also be developed using the CBTA method, similarly to the initial FOO training. As ICAO Doc 10106 describes the CBTA method for FOO level but does not develop additional instructions for the development of advanced competencies specific to different roles in the operational control, the proposed new GM5 ORO.AOC.135(b)(4)(i) provides an example of how the operator can enhance the competence level from FOO entry level to advanced role-specific level through training.



Point (b)(4)(i)(C) includes the on-the-job training component, which is an ICAO SARP. The rule also contains the possibility to replace the familiarisation flight in the cockpit with a simulator flight in exceptional circumstances (which the operator must describe in its training programme). Introducing the possibility to apply exceptions is based on the lessons learned from the COVID-19 pandemic when the flights were drastically reduced and thus it was sometimes impossible to comply with the training requirements; or the cases when a trainee cannot perform a flight due to physical or medical considerations. These examples are provided in the proposed GM8 ORO.AOC.135(b)(4)(i).

Point (b)(4) also aims at ensuring that the operational control personnel are competent at the end of the training. Moreover, its purpose is to ensure that the effectiveness of the training is measured against the defined standards and the roles that the operator must establish and describe in its operations manual. It also aims at ensuring the completeness of the training, covering the full preparation of the operational control personnel. A list of possible additional training, operator-specific, is provided in AMC3 ORO.AOC.135(b)(4)(i) and it includes, but is not limited to, dangerous goods, security, and SMS training.

The new points (b)(3) and (4) have been added under Subpart ORO.AOC to ensure that the requirement applies to AOC holders only. The Agency considered including it under ORO.GEN.100, but this would mean that the proposed requirements would also apply to NCC and SPO operators, and this is not intended. Point ORO.SPO.100 is also proposed to be amended to ensure that SPO operators are not affected by this proposal.

Furthermore, the scope of this proposal is limited to AOC holders performing CAT operations with aeroplanes.

Stakeholders are invited to comment on whether this proposed amendment in points (b)(3) and (4) could be extended also to AOC holders performing CAT operations with helicopters.

ORO.SPO.100 Common requirements for commercial specialised operators

- (a) A commercial specialised operator shall, in addition to ORO.DEC.100, ~~also~~ comply with ORO.AOC.135, **except for points (b)(3) and (b)(4)**, ORO.AOC.140 and ORO.AOC.150.

[...]

Rationale

This change is proposed to clarify that the applicability of ORO.AOC.135 to SPO operators excludes points (b)(3) and (b)(4), which should apply only to AOC holders performing CAT operations with aeroplanes. The requirement related to the operational control personnel is not intended to be applicable to SPO operators.



3.1.3. Annex VII (Part-NCO)

NCO.OP.143 Destination alternate aerodromes planning minima — aeroplanes

An aerodrome shall not be specified as a destination alternate aerodrome unless the available current meteorological information indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period:

[...]

- (d) In the case of training organisations referred to in Articles 5(5) and 6(9) of this Regulation, an alternate aerodrome ceiling, visibility/RVR and crosswind above the planning minima in Table 1 below:

Table 1

Planning minima — aeroplanes

Type of approach operation	Aerodrome ceiling (cloud base or vertical visibility)	RVR/VIS
Type B instrument approach operations	DA/H + 200 ft	RVR/VIS + 800 m
Type A instrument approach operations	DA/H or MDA/H + 400 ft	RVR/VIS + 1 500 m
Circling approach operations	MDA/H + 400 ft	VIS + 1 500 m
Crosswind planning minima:		
Wind limitations should be applied considering the runway condition (dry, wet, contaminated).		

Rationale

Regulation (EU) 2021/1296, applicable since 30 October 2022, introduced in Part-NCO minimum weather conditions to allow the nomination of an aerodrome as a destination alternate aerodrome (also called ‘destination alternate aerodrome planning minima’), which did not exist before.

This change affects the aircrew approved training organisations (ATOs).

Some ATOs have requested approval by their competent authority to apply planning minima similar to those applicable to CAT operations under CAT.OP.MPA.182. The argument was that having planning minima aligned with CAT helps the learning process of students that want to become commercial pilots (CPL) and/or ‘frozen’ ATPL pilots, and proves useful for their skills as future commercial pilots. Pilots will apply the same planning minima at their schools and in their future jobs.

Therefore, this NPA proposes the decrease of the planning minima applicable to ATOs in comparison with what applies to the remaining operations covered by Part-NCO. This decrease is mitigated by the fact that ATOs are required to have a management system in accordance with ORA.GEN.200 and that CAT.OP.MPA.182 and point (d) of NCO.OP.143 consider crosswind limits, while the current provisions in Part-NCO do not consider this weather phenomenon.



The proposed amendment is expected to have a positive impact in terms of safety, as well as a positive economic impact for ATOs.

3.2. Draft acceptable means of compliance and guidance material (draft EASA decision)

3.2.1. Draft AMC & GM to Part-ORO

AMC1 ORO.GEN.110(c) Operator responsibilities

OPERATIONAL CONTROL SYSTEM — DESCRIPTION OF PROCESSES AND PROCEDURES

The ~~system organisation and methods~~ established to exercise operational control should ~~be included in the operations manual and~~ cover the following:

- (a) ~~at least~~ a description of ~~authority and~~ responsibilities concerning the initiation, continuation, and termination or diversion of each flight;
- (b) for the AOC holder performing CAT operations, the main categories of processes and task-related procedures for:
 - (1) operational risk assessment;
 - (2) operational data evaluation and distribution;
 - (3) resource allocation and control;
 - (4) problem-solving and decision-making;
 - (5) distribution, as applicable, of operational control decisions and information to all stakeholders involved, such as ground handling, CAMO, maintenance, repair and overhaul (MRO), ATC, flight operations, aircrew members, etc.; and
 - (6) provision of safety-relevant information and advice to the commander/pilot-in-command during flight.

Rationale

The proposed new text clarifies the content of the processes and procedures, which should remain scalable to the operation. Once the structure of the operational control system is clarified, the operator can further detail the procedures into tasks and duties, which would streamline the identification of the necessary roles for the implementation of the operational control system.

The defined operational control tasks will be used by the operator to set up the training programme for the operational control personnel with the most adequate role-specific competency targets, establish realistic and achievable training target descriptions, and develop realistic and adequate exercises.

Once those tasks, duties and roles are clearly established, they can be used as checkpoints to assess the performance of operational control personnel against those standards and role-specific tasks.

This is how the CBTA programme can be built and implemented in a gradual approach.

Point (b)(5) has been added to cover the ICAO Annex 6 Part I SARPs of 4.6, in a more general wording.

Point (b)(6) covers the in-flight situation when the commander/pilot-in-command has the final say if safety is affected.



GM1 ORO.GEN.110(c) Operator responsibilities

OPERATIONAL CONTROL

- (a) Point ORO.GEN.110(c) does not imply a requirement for licensed flight operations officers, flight dispatchers or personnel performing other operational control tasks or functions.
- (b) If an the operator, other than a CAT operator, uses flight operations officers (FOOs)/flight dispatchers (FDs) in conjunction with a method of operational control, it is recommended that training for such that personnel should be based on relevant parts of ICAO Annex 1 and ICAO Documents 10106 and 9868. This training should be described in the OM.
- (c) The training requirements for operational control personnel of CAT operators are contained in ORO.AOC.135 and the associated AMC and GM.

Rationale

This GM has been amended to illustrate the difference between FOOs and FDs. The additional text in point (a) refers to various other jobs or roles that may exist in conjunction with the operational control system. These other roles have been identified and described in the proposed new GM3 ORO.GEN.110(c).

In point (b) the ICAO references have been maintained as a recommendation for aircraft operators to which ORO.GEN.110 applies, regardless of the type of operation. However, this has been kept at GM level as a recommendation, to ensure proportionality of rules for NCC or SPO operators compared to AOC holders.

New point (c) specifies where the proposed new requirements applicable to AOC holders performing CAT operations can be found.

AMC1 ORO.GEN.110(c)&(e) Operator responsibilities

~~PERSONNEL RESPONSIBILITIES — OPERATIONAL CONTROL PERSONNEL THAT PERFORMS TASKS RELATED TO FLIGHT MONITORING AND FLIGHT WATCH — TRAINING PROGRAMME~~

- ~~(a) — When a CAT operator uses flight monitoring or flight watch as functions of a system for exercising operational control, FOOs/FDs should perform these functions~~
- ~~(b) — The CAT operator should develop a training programme, based on the relevant parts of ICAO Annex 1, ICAO Documents 10106 and 9868, for FOOs/FDs that perform those functions.~~
- ~~(c) — The training programme specified above should be detailed in the OM of the CAT operator and should be delivered by an instructor for operational control personnel.~~

~~INITIAL TRAINING~~

- ~~(d) — The initial training should include, where relevant to the intended operation, the following elements that should be tailored to the specific duties assigned to each person:~~

~~(1) — air law:~~

~~rules and regulations relevant to the task assignment, appropriate ATS practices and procedures;~~

~~(2) — aircraft general knowledge:~~



- ~~(A) principles of operation of aeroplane engines/systems/instruments;~~
- ~~(B) operating limitations of aeroplanes and engines; and~~
- ~~(C) MEL and configuration deviation list (CDL);~~
- ~~(3) flight performance calculation, planning procedures, and loading:~~
 - ~~(A) effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;~~
 - ~~(B) operational flight planning; fuel consumption and endurance calculations; alternate aerodrome selection procedures; en route cruising control; extended-range operation;~~
 - ~~(C) preparation and filing of ATS flight plans; and~~
 - ~~(D) basic principles of computer assisted planning systems;~~
- ~~(4) human performance:~~

~~human performance related to operational control duties, including principles of threat and error management (TEM); guidance material on how to design training programmes on human performance, including on TEM, is provided in ICAO Doc 9683 Human Factors Training Manual;~~
- ~~(5) meteorology:~~
 - ~~(A) aeronautical meteorology; movement of pressure systems; structure of fronts; origin and characteristics of significant weather phenomena that affect take-off, en route, and landing conditions;~~
 - ~~(B) interpretation and application of aeronautical meteorological reports, charts, and forecasts; codes and abbreviations; use of, and procedures for, obtaining, meteorological information;~~
 - ~~(C) effects of meteorological conditions on aircraft operation and on radio reception in the aircraft that is used by the operator; and~~
 - ~~(D) all weather operations;~~
- ~~(6) navigation:~~
 - ~~(A) principles of air navigation with particular reference to IFR; and~~
 - ~~(B) navigation and radio equipment in the aircraft that is used by the operator;~~
- ~~(7) operational procedures:~~
 - ~~(A) use of aeronautical documentation and SOPs;~~
 - ~~(B) procedures for operations beyond 60 minutes from an adequate aerodrome, including, if applicable, extended diversion time operations (EDTOs);~~
 - ~~(C) operational procedures for the carriage of cargo and dangerous goods;~~
 - ~~(D) de-icing/anti-icing;~~

- ~~(E) procedures related to aircraft accidents and incidents; emergency flight procedures; and~~
- ~~(F) security procedures related to unlawful interference and sabotage of aircraft;~~
- ~~(8) principles of flight:
principles of flight related to the appropriate category of aircraft;~~
- ~~(9) radio communications:
procedures for communicating with other aircraft and ground stations; and~~
- ~~(10) special aerodromes.~~

OPERATOR SPECIFIC TRAINING

- ~~(e) In addition to the initial training, FOOs/FDs should receive training in the specific duties, responsibilities, and tools that are associated with the operational control system of the operator.~~

RECURRENT TRAINING

- ~~(f) When the recurrent training is conducted within the last 12 months of the 36 month validity period, the next 36 month validity period should be calculated from the original expiry date of the previous assessment.~~
- ~~(g) Notwithstanding the 36 month interval of point (f), recurrent training may also be performed at shorter intervals and adjusted to the needs identified after an assessment of the training needs conducted by the operator.~~

KNOWLEDGE, SKILLS, AND QUALIFICATIONS FOR INSTRUCTORS OF OPERATIONAL CONTROL PERSONNEL

- ~~(h) Unless otherwise required by the relevant national regulations, instructors for operational control personnel should:
 - ~~(1) be able to prove that they are current in the subjects covered by the training programme for FOOs/FDs, including the operator specific elements, or otherwise successfully complete an FOO/FD training programme;~~
 - ~~(2) have adequate instructional skills or attend instructor training; if more than 24 months passed since the delivery of the last FOO/FD course, they should attend recurrent instructor training before delivering the next course; and~~
 - ~~(3) have relevant work experience in the areas of the training that they provide.~~~~
- ~~(h) The CAT operator should include in the OM the required knowledge, skills, and qualifications of the instructors for operational control personnel.~~

Rationale

AMC1 ORO.GEN.110(c)&(e) is proposed to be deleted, as it was introduced as a temporary measure for the training of a CAT operator's operational control personnel performing flight monitoring and flight watch, for the purpose of fuel planning and management. This temporary measure with a reduced scope was intended to cover the training gap until the topic of training for operational control personnel would be developed through a dedicated rulemaking task.



Its content has been transferred to point (d) of the new AMC1 ORO.AOC.135(b)(4)(i) and included in a CBTA programme, which is applicable to AOC holders only.

The part referring to the advanced operator training has been included and expanded in AMC2 ORO.AOC.135(b)(4)(i).

The recurrent training part has been included and rendered more flexible and efficient with the continuous assessment proposal included in AMC4 and AMC5 to ORO.AOC.135(b)(4)(i).

The instructor part has been included in the new AMC1 ORO.AOC.135(b)(4)(ii).

For operators other than AOC holders, the more generic reference to ICAO Annex 1 is kept in GM1 ORO.GEN.110(c).

AMC2 ORO.GEN.110(c) Operator responsibilities

DUTIES AND RESPONSIBILITIES OF OPERATIONAL CONTROL PERSONNEL — TASK FAMILIES AND TASK CATEGORIES

The following task families and categories from Appendix B to ICAO Doc 10106 should be used, as applicable, to define the tasks and responsibilities of the operational control personnel and the appropriate roles for the implementation of the operational control processes and procedures.

Task family	Task category
Risk assessment	Analyse weather data
	Analyse AIP / NOTAM data
	OPS engineering
	Political unrest and security threats
	Company resources
Flight planning and flight monitoring	Route selection
	Airport suitability
	Fuel load
	Aircraft suitability
	Payload
	Weather analysis
	Analyse AIP/NOTAM data
	Performance analysis
Post-flight assessment	Assessment of fuel consumption deviation
	Assessment of cost deviation
	Assessment of irregular operations (return to ramp, diversions, air turnback, incidents, accidents)
	Assessment of the aeronautical data management, i.e. weather, AIP/NOTAM, ATM

Assessment of airline market and product definitions, success and risk factors for customer experience
Assessment of areas of responsibility in the operational control environment: CAMO, MRO
Assessment of areas of responsibility in the operational control environment: crew planning and crew scheduling
Assessment of the data flow and data quality in the OCC
Assessment of the route profitability and the factor of influence on the operational risk and the commercial result
Assessment of communication standards and risk factors
Assessment of the decision-making process in the OCC
Assessment of safety management aspects in the OCC
Assessment of the air operator certificates, standards and approvals

GM2 ORO.GEN.110(c) Operator responsibilities

DUTIES AND RESPONSIBILITIES OF OPERATIONAL CONTROL PERSONNEL — EXAMPLES OF TASK FAMILIES

The operational control personnel employed by the aircraft operator are expected to execute operational control tasks for a time interval specified in the operator's operations manual Part A, but at least within the day of operation.

The following are examples of task families in operational control, to be executed for all flights in the time interval of operational control responsibility. Depending on the complexity and type of the operation performed by an operator (e.g. domestic flights versus regional flights versus long-haul flights; or frequency of operation; or fleet complexity and size; hub operation versus point-to-point flights, direct flights versus multi-segment flights), some tasks of these families can be assigned to FOOs, while others can be assigned only to FDs or the operations controller or another advanced operational control role with an advanced qualification:

- (a) Evaluate the operational risks identified through the analysis of weather reports and forecasts in context with traffic regions, airports, runways and specific approach procedures. Coordinate with meteorological experts and units for the selection of optimum heights and routes.
- (b) Evaluate the operational risks in view of:
 - (1) ATM infrastructure and availability,
 - (2) airport and airspace capacities,
 - (3) flight permits, and a potential control mechanism initiated by appropriate air traffic control (ATC) units,
 - (5) restrictions published in the aeronautical information publication (AIP).
- (c) Evaluate the operational risks in view of actual or expected aircraft technical status, aircraft equipment, deferred items, and operational or performance limitations.

- (d) Evaluate the influence of specific requirements for required navigation performance (RNP), extended diversion time operations (EDTO), cold-weather operations, all-weather operations (AWOs) in relation to the type of operation and condition, the assignment of fleet or aircraft and flight crew qualifications; check and apply aircraft and aircrew restrictions.
- (f) Evaluate the relation of payload forecasted or booked versus the available/planned capacity and develop solutions if required, e.g. adjusted aircraft/fleet assignment, rebooking, application of fuel policy schemes, technical landing, rescheduling for improved conditions.
- (g) Evaluate the probability of flight delays and diversions in specific regions, airports, and time intervals.
- (h) Evaluate the capacity of reserve/standby aircraft and aircrews in relation to the expected risks of delays and diversions.
- (i) Evaluate the operational risks deriving from passenger flow, ground handling, strikes, security, direct operating costs, delay costs, passenger satisfaction, and other factors of influence.
- (j) Perform flight crew briefing. Prepare the operational flight plan, provide support to the commander in preparing the preliminary flight plan, if applicable. Prepare, coordinate, file and re-file ATS flight plan with ATC.
- (k) Develop and evaluate proactive countermeasures, including proactive aircraft reassignments, flight delays and cancellations, adjustment of MRO-downtimes, reallocation of aircrew reserves/standby.
- (l) Initiate and perform proactive and reactive problem-solving and decision-making in view of risk predictions and in line with the standard operating procedures described in the operations manual. Develop alternative scenarios based on the available information, the operational procedures and limitations published in the operations manual.
- (m) Coordinate with the stakeholders involved (ATC, CAMO/MRO, ground handling, aircrew) and support during in-flight incidents/medicals.
- (n) Execute the flight planning process in view of selection of aerodromes, alternates, route selection, fuel policy and fuel calculation, landing and planning minima, MEL items, configuration deviation list (CDL), NOTAMs, weather, payload, aircraft/payload handling and delay forecast. Calculate the fuel required to consider minimum reserve fuel components, i.e. contingency fuel, final reserve fuel, minimum additional fuel.

Both the flight planner and the commander/PIC are responsible for the completion of the flight planning process. A significant amount of intelligence may go into the planning of a flight, which is not necessarily always communicated to the commander/PIC during a flight crew briefing. For example, a particular route to be flown may be planned (for specific ATM reasons) without the commander/PIC knowing the different limitations, resulting in FMS usage to try to 'optimise' the flight route, which may cause an ATC sector overload and a potential safety issue as such.
- (o) Monitor active flights (aircraft moving under their own power) in relation to flight planning and flight safety risks and variables (including flight following, flight monitoring and flight watch). Continually monitor and verify weather, airport conditions, navigation facilities and NOTAMs that may affect operational safety in the area of operation and take necessary action. Coordinate and communicate, provide data and recommendations. Perform rescheduling



and/or rerouting. During in-flight scenarios, the final decision about appropriate course of action rests with the commander/PIC.

- (p) Monitor the data flow of flight planning data and briefing packages to ground handling, ATC and crew briefing, initiate problem-solving and decision-making if required.
- (q) Provide support and advice at request to any stakeholder, e.g. last weather reports, NOTAM reports, navigation facilities, security issues, emergency situations, CAMO/MRO, any other flight and ground operations.
- (r) Provide support and take the necessary decision to launch the operator's emergency response plan.

Rationale

The main duties of operational control personnel are generically described in ICAO Annex 6 Part I, Chapter 4.6 'Duties of flight operations officer/flight dispatcher'.

This new GM proposes generic task families integrated in a more structured description rather than providing a few role-related operational control tasks, randomly selected from more than 300 specific tasks listed in ICAO Doc 10106.

The sample tasks listed here are typical for operational control tasks and not limited to flight planning. Most of flight cancellations, re-routings and resource (aircraft/aircrew) re-allocations are executed without flight crews on duty, also during the day of operation. If appropriate, operational control personnel should consult other stakeholders before decision-making.

GM3 ORO.GEN.110(c) Operator responsibilities

ROLES OF OPERATIONAL CONTROL PERSONNEL

- (a) Depending on the size and complexity of its operation, the aircraft operator may establish several different roles for the execution of its operational control system. Operators use different names for these roles (or 'jobs'), but it is recommended to use the terminology established by ICAO whenever possible. The clarification provided below of the levels of qualification between the FOO and the other operational control roles and functions uses the material from ICAO Doc 9868 PANS-TRG and Doc 10106 *Manual on Flight Operations Officers/Flight Dispatchers Competency-based Training and Assessment*.
- (b) The FOO qualification is the mandatory basic qualification that a person should have successfully achieved prior to undergoing further operator-specific and role-specific training. As stated in point (b)(3) of ORO.AOC.135, a FOO may not perform complex tasks without operator- and advanced role-specific training.
- (c) The various intermediary and advanced-level roles used in an aircraft operator's operational control system are assigned to individuals who have successfully completed operator-specific and role-specific training. This role-specific qualification gives them the authority to perform complex operational control tasks without any supervision. The operator also needs to ensure that those individuals have also acquired the necessary operational competencies to allow them to assess the operational impact and take appropriate steps, when necessary, to ensure that flight safety is protected during all phases of flight operation.



Each of the following roles will be qualified to evaluate operational risks and take immediate decisions based on the operator's standards and procedures. When an aircraft is moving under its own power and is thus under the ultimate control of the commander/PIC, the operational control roles will support, brief or assist the commander/PIC in the safe conduct of the flight. Depending on the complexity and size of the operation, the different tasks and responsibilities specific to various roles can be performed by one or more individuals. The aircraft operator could use an OCC as an organisational structure to encompass all the operational control activities, as well as additional functions that are only tangential or not at all related to the operational control activities:

- (1) flight dispatcher (FD): provides flight planning services, dispatch release and in-flight support, flight- and area-specific operational risk analysis and area- and flight-specific problem-solving and decision-making;
 - (2) operations (and network) controller: applies operational risk management processes to the network, specific areas and flights. The operations (and network) controller is responsible for the initiation of problem-solving and decision-making processes by integrating safety, operational risks, direct operating costs and customer experience;
 - (3) operational data manager: integrates navigation and operator data and policies for the application of flight planning, performance calculations, electronic flight bag (EFB) and flight management systems.
- (c) The aircraft operator may establish other roles as well, which are not necessarily linked to operational control duties. For example, resource control for flight crews (crew control) or aircraft and maintenance resource (maintenance control) are not fully within the scope of the definition of operational control personnel.
- (d) Similarly, there may be other roles in an air operator's flight operations activities, which are tangential to the operational control system and are required to provide input on some tasks. For example, a performance engineer or an operational engineer, whose contribution to operational control activities could be the following:
- (1) performance engineer: provides technical support and calculations/evaluations in relation to aircraft performance, fuel consumption evaluations and general flight planning services; and
 - (2) operational engineer: integrates AIP, operator, airport, airspace and aircraft data into a database to be used for performance calculations, flight planning and aircraft allocation. The operational engineer is responsible for data and policies integrated in flight planning applications, EFB and flight management systems.

These are generally referred to as flight operations performance engineering functions and are not typically OCC functions. However, when these persons are partially involved in operational control tasks, it is recommended that they receive minimum awareness training and are familiarised with the concept of operational control and the functioning of an OCC structure in order to understand how their input can be maximised to contribute to the safety of flights.

- (e) Guidance on the operational control organisation and the roles of the personnel involved is provided in ICAO Doc 8335 *Manual of Procedures for Operations Inspection, Certification and Continued Surveillance*.
- (f) Detailed guidance on the authorisation, duties and responsibilities of the operational control personnel is provided in ICAO Doc 10153, *Guidance on the Preparation of an Operations Manual*.

Rationale

This proposed new GM explains the terms used by ICAO Doc 10106 for various roles with associated tasks in the operational control which should be used by an air operator when defining the different roles of its operational control personnel. This would further enable an easier identification and description of the tasks associated with each of those roles, helping the operator to establish training targets associated with each of those roles.

AMC2 ORO.GEN.110(e) Operator responsibilities

RECENCY OF OPERATIONAL CONTROL PERSONNEL

Operational control personnel should not be assigned to duty after 12 consecutive months of absence from duty in their assigned role unless their competencies have been reassessed and adequate refresher or recurrent training has been completed, as defined by the operator.

Rationale

This proposed new AMC covers ICAO Recommendation 10.5 of Annex 6 Part I.

AMC2 ORO.GEN.110(f) Operator responsibilities

INSTRUCTIONS ~~FOR ABOUT DUTIES AND RESPONSIBILITIES OF OPERATIONAL CONTROL PERSONNEL~~ — BRIEFING ~~OF FLIGHT OPERATIONS OFFICERS/FLIGHT DISPATCHERS~~ BEFORE ASSUMING DUTIES

- (a) ~~In the context of an ongoing flight following, flight monitoring, or flight watch activity, an FOO/FD, b~~ Before assuming operational control duties, the operational control personnel should be briefed, upon shift handover, on actual the elements and factors of influence related to on the safety of the operations ~~the FOO/FD will be performing as part of the operational control.~~
- (b) The relevant safety information to be included in the briefing of operational control personnel upon commencing duties should include, as a minimum:
- (1) weather charts, forecasts and reports;
 - (2) NOTAMs, AIP data and airspace capacity restrictions;
 - (3) ground handling restrictions, industrial actions, security issues;
 - (4) technical aircraft restrictions and limitations;
 - (5) crew capacity constraints, specific additional duty- and rest time requirements;
 - (6) filed, delayed, diverted, re-routed (and cancelled flights, active flights on ground and in the air;
 - (7) the forecast flight schedule and allocated resources; and



(8) other relevant safety information as listed in GM 28 Annex I Definitions.

Rationale

This AMC is proposed to change its reference to the more specific point in the implementing rule, as its content is related to the instructions given to an operational control person upon starting their duty.

Additionally, the content of GM2 ORO.GEN.110(f) is proposed to be included in this AMC as it is related to the same topic. Consequently, GM2 ORO.GEN.110(f) is proposed to be deleted. Additional relevant elements have been added to the briefing. Operational control covers all flights within the time interval of responsibility.

AMC2 ORO.GEN.110(f)(e) Operator responsibilities

GROUND OPERATIONS WITH PASSENGERS ON BOARD IN THE ABSENCE OF FLIGHT CREW

[...]

Rationale

This proposed amendment of the rule reference in the title is editorial, as the content of this AMC is related to the instructions and procedures rather than to training. The proposed amendment has no impact.

~~GM2 ORO.GEN.110(f) Operator responsibilities~~

~~ELEMENTS OF THE BRIEFING OF FLIGHT OPERATIONS OFFICERS/FLIGHT DISPATCHERS BEFORE ASSUMING DUTIES~~

~~Before commencing shift, the flight operations officer (FOO)/flight dispatcher (FD) should be briefed on the relevant safety information such as:~~

- ~~(a) — weather charts;~~
- ~~(b) — weather reports;~~
- ~~(c) — NOTAM;~~
- ~~(d) — operational restrictions in force;~~
- ~~(e) — flights in the air and flights for which operational flight plans have been issued but which have not yet started and for which the FOO/FD will be responsible;~~
- ~~(f) — the forecast flight schedule; and~~
- ~~(f) — other relevant safety information as listed in GM 28 Annex I Definitions.~~

Rationale

This GM is proposed to be deleted and its content moved to AMC2 ORO.GEN.110(f).



AMC1 ORO.AOC.135(b)(4)(i) Personnel requirements**KNOWLEDGE, SKILLS AND ATTITUDE COMPONENTS OF THE COMPETENCY-BASED TRAINING AND ASSESSMENT (CBTA) PROGRAMME FOR OPERATIONAL CONTROL PERSONNEL**

- (a) The competencies of the operational control personnel should be trained and assessed with regard to knowledge, skills and attitudes through the execution of realistic tasks based on daily operation and past situations or events.
- (b) The operator's CBTA programme should be based on Part II Section 3 of ICAO Doc 9868 PANS-TRG and on ICAO Doc 10106 *Manual on Flight Operations Officers/Flight Dispatchers Competency-based Training and Assessment*. The CBTA programme should include the following elements:
- (1) a training needs analysis process;
 - (2) defined competency targets and assessment standards for all the roles of its operational control personnel;
 - (3) a training and assessment plan;
 - (4) standards for training material, communication and progress monitoring;
 - (5) a non-punitive staff competence evaluation observing the just culture principles and a training concept based on realistic elements;
 - (6) a description of methods and intervals for the recurrent (continuing) assessment and subsequent retraining;
 - (7) instructor and assessor selection criteria, to target their competencies and qualification;
 - (8) a description of procedures for evaluation, feedback and improvement of the CBTA programme to ensure that the training meets its scope.
- (c) The training and assessment programme should be flexible enough to cater for specific needs related to delivery methods such as distant learning, online training or part-time training.

PREREQUISITE COMPONENTS OF THE CBTA PROGRAMME

- (d) The prerequisite competence knowledge component of the CBTA programme should be focused on knowledge and basic application skills. The competence component 'attitude' should be integrated as early as possible into the training process and trained along with the training and assessment of the skills and knowledge. The operator should use the prerequisite learning objectives of Appendix A to ICAO Doc 10106 to tailor the training to the specific duties assigned to each role and targeted competency:
- (1) Prerequisite learning objectives: Air Law
 - (2) Prerequisite learning objectives: Flight performance
 - (3) Prerequisite learning objectives: Navigation
 - (4) Prerequisite learning objectives: Human factors in aviation
 - (5) Prerequisite learning objectives: Aircraft general knowledge and instrumentation
 - (6) Prerequisite learning objectives: Meteorology



- (7) Prerequisite learning objectives: Mass and balance
 - (8) Prerequisite learning objectives: Operational procedures, including SMS
 - (9) Prerequisite learning objectives: Principles of flight
- (e) For the skills component, the outcome of the training should focus on developing technical skills, as well as human skills commensurate with the level of the competence they are expected to achieve:
- (1) identify and retrieve aeronautical data and other information relevant for the analysis of operational situations and risks;
 - (2) identify and evaluate the risk factors and the possible consequences for flight operations;
 - (3) identify and evaluate actions considering risk, the effect on flight safety and regularity of the operation;
 - (4) determine an appropriate course of action based on the responsibilities and policies described in the operations manual;
 - (5) apply appropriate standard and non-standard procedures from the operations manual for the initiation, planning, continuation, diversion or termination of flights in the interest of safety of the aircraft and regularity and efficiency of the operation;
 - (6) make an accurate and operationally acceptable weather analysis; provide an operationally valid briefing on weather conditions in a specific air route; forecast weather trends pertinent to air transportation with particular reference to destination and alternates;
 - (7) identify and apply operational limitations and minimums in relation to the weather, aircraft status and appropriate navigation procedures;
 - (8) determine the optimum flight path for a given segment, and create accurate manual and/or computer-generated flight plans;
 - (9) provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions, as appropriate to the duties of the holder of a FOO licence; and
 - (10) recognise and manage threats and errors.

REALISTIC TASK-ORIENTED COMPONENT OF THE CBTA PROGRAMME

- (f) The aircraft operator should provide its training provider with realistic tasks, typical for general operational control duties and relevant for the basic FOO training. As an alternative source, realistic training tasks should be derived from Appendix B to ICAO Doc 10106.

Rationale

This proposed new AMC includes the content of the previous AMC1 ORO.GEN.110(c)&(e) as well as more general elements of the structure and coverage of the CBTA programme.

The term 'prerequisite' replaces the term 'theoretical knowledge', which is no longer used in the new wording, as all FOO training components are both theoretical and practical. The term 'prerequisite', which is used in relation to the learning objectives and the knowledge training elements, describes the



aim of this component rather than the form of delivery (theoretical or practical). Example: the sinus function could be explained by practical examples during 'theoretical' lessons.

In general, 'prerequisite' replaces the former 'theoretical', and 'realistic task-oriented' replaces the former 'practical'. The whole basic FOO training could be performed in the classroom, in a partly simulated environment.

'To distinguish between prerequisite learning objectives and tasks: prerequisite learning objectives are not realistic tasks for real duties in operational control functions but are mandatory for the development of competencies (ICAO Doc 10106, Appendix A). Example: without the understanding of basic direct operating cost definitions as a prerequisite, the task: 'evaluate the specific costs of a flight delay' could not be achieved.

Point (d) with the prerequisite learning objectives covers all the ICAO Annex 1 topics included in the current AMC1 ORO.GEN.110(c)&(e). Moreover, Appendix A to Doc 10106 is even more comprehensive and easy to use as it contains many samples of learning objectives, which enable an easy customisation of the training competency targets for each role of the operational control personnel.

Point (e) on the skill component is related to point ORO.AOC.135(b)(4)(i)(B) and details the skills included in ICAO Annex I SARP 4.6.1.4.

AMC2 ORO.AOC.135(b)(4)(i) Personnel requirements

BASIC AND ADVANCED COMPETENCE LEVELS — GENERAL

The objective of the CBTA programme is to develop and maintain the necessary competencies of the operational control personnel based on actual and specific tasks according to their duties and proficiency levels, as listed in GM3 ORO.GEN.110(c).

The training of operational control personnel should cover two main levels:

Basic competence training

- (a) This training should ensure the FOO target level of competence either as described in ICAO Annex 1 and related documents (ICAO Docs 9868 and 10106) or through an equivalent training and assessment programme.
 - (1) The FOO qualification as described in ICAO Doc 10106 is considered a standard qualification, which acknowledges a minimum level of competence required to perform operational control tasks.
 - (2) The basic FOO training should be generic to ensure the understanding of the operational control context as a whole.
 - (3) As a standard, the entry and the exit competence levels should be described for each training programme. Before acceptance of students to the basic FOO training, an entry level evaluation should confirm minimum entry requirements.

Advanced competence training

- (b) Following the FOO qualification, the operator should develop training to further enhance the acquired competencies and, as necessary, add new competencies (following the same knowledge, skills and attitudes training components), according to the intended specific



function within the operator, as the FD and all other functions in operational control require a successful initial FOO qualification and an operator- and role-specific qualification.

- (c) Advanced qualification training includes operator-specific training and role-specific training. The adapted competency model developed by the operator should be the result of the following actions:
- (1) defining the competency targets as tasks and observable behaviours. This should be done by selecting the relevant competencies from the ICAO competencies list, following an analysis of the training specifications (established as per Chapter 3.4 of ICAO Doc 10106),
 - (2) defining the performance criteria by:
 - (i) establishing the final competence standard (representing the minimum qualification); and
 - (ii) describing the conditions in which the competencies will be applied. These conditions should include realistic tasks related to the selected competence criteria.
- (d) Like the basic FOO qualification training, the advanced training may be provided by the aircraft operator or outsourced to a third-party training provider that could be a suitably qualified person or a training organisation.

Rationale

This proposed new AMC intends to explain the difference between the two levels of training and qualification encoded in the terms 'flight operations officer' training and 'role-specific and operator-specific training'.

As stated also in ICAO Doc 9868 PANS-TRG, '1.1.2 The basic qualification for all functions or tasks in the system of operational control is the FOO Qualification. All functions (independent from the job title) and with the responsibility and authority for initiation, planning, continuation and diversion of each flight shall be qualified according to these requirements' (Section 3, Chapter 1).

The definition of prerequisite learning objectives, the student entry-level tests and the challenging training standards for training progress monitoring and control require a training organisation able to provide such training on a constant basis. The AOC holders that are not able to provide FOO training should outsource the training service or use external FOO-qualified personnel.

Both training programmes – basic and advanced – can be developed using the guidance provided in ICAO Doc 9868 and Doc 10106. Further examples of how a competency trained for the FOO qualification level can be further developed with advanced role-specific training are provided in GM5 ORO.AOC.135(b)(4)(i).

GM1 ORO.AOC.135(b)(4)(i) Personnel requirements

BASIC COMPETENCE TRAINING FOR FOO QUALIFICATION

- (a) The aircraft operator is not expected to cover the initial training for the FOO qualification in house, as they may not have the necessary resources or competence. This training is usually delivered by a training organisation. The training organisation also determines the minimum



criteria for student acceptance to the FOO qualification training. There are also cases when such a training organisation is an integrated part of the air operator's organisation.

- (b) The entry and the exit competence level of the basic training should be described. Before acceptance of students to the FOO basic training, the entry level evaluation before accepting a student for the basic training will become the basis to determine whether additional prerequisite learning objectives are necessary to be added to support the training process. Such additional prerequisite learning objectives could be, for example, additional English or basic mathematics. Entry-level evaluations supported by entry-level tests, to cover at least cognitive performance, mathematics, and English, will complete the objective assessment of the competence level upon entering the FOO training.

GM2 ORO.AOC.135(b)(4)(i) Personnel requirements

ICAO COMPETENCY FRAMEWORK FOR OPERATIONAL CONTROL PERSONNEL

- (a) The following competency framework of ICAO Doc 9868 can be used for developing the advanced operator- and role-specific training. The competencies and observable behaviours should be used to describe the entry and the target competencies and to develop an adequate competency model specific to each role in the operational control system. Not all of them need to be used for all the roles in the operational control.
- (b) The competence criteria could be applied during initial or advanced training. The intended competency level will be controlled by the design and the quality of exercises.

Example: The application of the observable behaviour OB 1.1 'Interprets SOPs appropriately' will be tailored by the selection of a basic/simple SOP for the basic training and a SOP with interpretations and complex variable conditions for the advanced training. In both cases the OB does not change.

Competency	Description	Observable behaviours (OB)
Application of procedures and regulations	Identifies and applies procedures in accordance with the published operating instructions and applicable regulations	OB 1.1 Interprets SOPs appropriately
		OB 1.2 Applies SOPs flexibly where necessary
		OB 1.3 Follows all procedures in a timely manner
		OB 1.4 Complies with the applicable regulations and procedures
Technical expertise	Applies and improves individual technical knowledge and skills	OB 2.1 Retrieves the applicable data and operating procedures
		OB 2.2 Explains to other stakeholders the intent of the applicable procedure for a given context when necessary
		OB 2.3 Uses appropriate operational information (meteorological, airports, crew, aircraft, network, general) to make optimum decisions
		OB 2.4 Uses standard and non-standard information distribution systems and sources
		OB 2.5 Keeps up to date with changes to operational standards
Process Improvement	Contributes to the continuous	OB 3.1 Consistently provides appropriate guidance to stakeholders and colleagues on how to implement procedures

	improvement of the system	<p>OB 3.2 Analyses evidence to identify opportunities for process improvement</p> <p>OB 3.3 Proposes process improvements for approval/adoption by management</p> <p>OB 3.4 Provide suitable justification for proposed improvements</p> <p>OB 3.5 Recognises trends in practice of one's own technical area</p>
Communication	Communicates effectively in all situations	<p>OB 4.1 Ensures the recipient is ready and able to receive the information</p> <p>OB 4.2 Selects appropriately what, when, how and with whom to communicate</p> <p>OB 4.3 Conveys messages clearly, accurately and concisely</p> <p>OB 4.4 Uses and interprets non-verbal communication appropriately</p> <p>OB 4.5 Confirms that the recipient correctly understands important information</p> <p>OB 4.6 Listens actively when receiving information</p> <p>OB 4.7 Asks relevant and effective questions</p> <p>OB 4.8 Adheres to standard radiotelephone phraseology and procedures</p> <p>OB 4.9 Accurately interprets communication in the language used in the operation manuals and in the operational environment</p>
Situational awareness	Perceives and comprehends all of the relevant information available and anticipates what could happen that may affect the operation	<p>OB 5.1 Identifies hazards and assesses risks</p> <p>OB 5.2 Adjusts the operation in response to changes in the available resources (infrastructure, IT systems, personnel)</p> <p>OB 5.3 Assesses the status of the operation (technical status of aircraft, weather conditions, NOTAMs, industrial action etc.)</p> <p>OB 5.4 Monitors current operations to identify operational risk</p> <p>OB 5.5 Develops contingency plans sufficiently in advance of an identifiable threat or risk</p>
Workload management	Manages available resources efficiently to prioritise and perform tasks in a timely manner under all circumstances	<p>OB 6.1 Plans, prioritises and schedules tasks effectively</p> <p>OB 6.2 Manages time efficiently when carrying out tasks</p> <p>OB 6.3 Maintains self-control in all situations</p> <p>OB 6.4 Collaborates to balance workload</p> <p>OB 6.5 Delegates tasks when necessary</p> <p>OB 6.6 Recognises overload and asks for help early</p> <p>OB 6.7 Monitors and cross-checks actions</p> <p>OB 6.8 Verifies that tasks are completed with the expected outcome</p> <p>OB 6.9 Manages interruptions, distractions and failures</p>

		OB 6.10 Evaluates individual capacity to perform work and takes appropriate action
Problem-solving and decision-making	Accurately identifies risks and resolves problems. Uses appropriate decision-making techniques	OB 7.1 Identifies relevant information required for the analysis of operational situations
		OB 7.2 Develops and applies an appropriate model for the situation (relations, coefficients, etc.)
		OB 7.3 Makes appropriate decisions when confronted with conflicting, unexpected or incomplete information
		OB 7.4 Adapts decision-making process to available time
		OB 7.5 Evaluates options in view of safety, costs and operational stability
		OB 7.6 Define the deadlines that limit the available options
		OB 7.7 Uses appropriate decision-making processes and tools
		OB 7.8 Evaluates own decision-making to improve performance
Leadership and teamwork	Collaborates up, down and across the organisation to foster and promote a clear vision and common goals. Energises others to achieve the operational goals	OB 8.1 Manages professional relationships with appropriate role boundaries
		OB 8.2 Gains the trust and confidence of others
		OB 8.3 Inspires others to collaborate and strive towards excellence
		OB 8.4 Resolves conflicts and disagreements in a constructive manner
		OB 8.5 Takes responsibility for mistakes
		OB 8.6 Provides relevant information and solutions to others
		OB 8.7 Provides and seeks effective and constructive feedback

Rationale

This GM contains the ICAO list of competencies and observable behaviours for the operational control personnel included in ICAO Doc 9868 PANS-TRG. The list of competencies is a basic list, which can be used for any function within an air operator's organisation. That is why for each of those competencies, the operator has to develop specific tasks, in order for those competencies to be attained by the person(s) having a specific role(s) within the OCC.

It is recommended that the operator uses all competencies listed above in the ICAO competency framework when developing a competency model adapted to its specific operation, but the depth of each competency should be varied depending on the level of qualification that an operator requires for a specific role in the operational control. The operator does not need to use all the observable behaviours, but only those that it considers to be most relevant to develop a competency framework and an assessment programme.



GM3 ORO.AOC.135(b)(4)(i) Personnel requirements

HOW TO ESTABLISH A CBTA PROGRAMME FOR OPERATOR-SPECIFIC AND ROLE-SPECIFIC TRAINING

(a) To establish a CBTA programme for its operational control personnel after they have successfully obtained the initial FOO qualification, the aircraft operator should implement the following steps:

- (1) Identify and list the operational control tasks that have to be accomplished in the organisation — use ICAO Doc 10106 to select the applicable tasks and subtasks. Appendix B to ICAO Doc 10106 provides detailed subtasks. Each subtask could be used as a blueprint for exercises. An exercise applies detailed information to a subtask, e.g. flight and situational information, data, rules, tools and references relevant to execute the exercise or assessment.
- (2) Allocate roles related to the system of operational control. Such roles should automatically enable grouping of those tasks (use ICAO Doc 10106 to name those roles). These roles are usually the job titles that are published in a recruitment note.
- (3) Perform a training needs analysis according to the qualification level of the trainee based on the intended entry competence level at the beginning of the advanced training. This analysis should be developed considering the guidelines provided in ICAO Doc 10106, Chapter 3.
- (4) To simplify the hiring and training process, it is recommended to select personnel that holds the basic FOO qualification as per ICAO Doc 9868 and Doc 10106.

(b) For the operator-specific and role-specific training phase:

- (1) Following the basic FOO qualification, develop additional competencies (developed through knowledge, skills and attitudes) according to the intended specific role within the operator. Such operator-specific roles or functions may include, for example (Doc 9868):
 - flight dispatch (flight planning)
 - operations control
 - flight control (in-flight control or mission support).
- (2) Describe, for each relevant role, realistic training objectives, based on actual and relevant operational risks, as well as other criteria observed during the operation of aircraft. Use safety events and data from daily operation and from public accident reports.
- (3) Develop a competency framework. Use ICAO Doc 9868 to select the competencies required for each role. Define the competency targets as tasks and observable behaviours. Those tasks should be further deepened and adjusted to fit the needs of the operator as described in the job descriptions of each of its operational control roles.
- (4) Determine the conditions under which the competencies must be demonstrated. These represent the operational and environmental context in which the operations take place and the tools used for the operational control (equipment, systems, etc.).



- (5) Define gaps in the prerequisite learning objectives and select the appropriate tasks for each target competency.

The CBTA elements defined for the basic FOO training cover up to 80 % of the tasks accomplished by the FD role. These elements can be used during the development of the recurrent training programme.

- (6) Determine subtasks and knowledge, skills and attitudes from the task list from ICAO Doc 10106 to develop more complex and detailed exercises, adequate to the role. Use the learning objectives for FOO from ICAO Doc 10106 and enhance the different competencies through tasks and exercises.

The following steps could be taken to develop additional, more complex tasks for the operator- and role-specific training, as well as for the recurrent assessment and retraining:

- (i) use the operations manual, operational procedures, and data from safety reports;
- (ii) identify and transfer actual operational risks, incidents and accidents into realistic training- and assessment-tasks;
- (iii) use the operator's specific operational systems, tools, and equipment used in its operational control system to develop realistic exercises and assessments;
- (iv) integrate elements from the applicable regulations;
- (v) integrate the operator's lessons learned from consequences of difficult operational situations.

- (7) For each exercise or assessment, select observable competency behaviour markers and performance criteria.

- (8) Establish the assessment process and identify the adequate assessment tools.

- (9) Design the training plan on the basis of given training standards.

(c) Further guidance for an effective CBTA programme:

- (1) The instructor or assessor should integrate multiple tasks in one exercise or assessment scenario.

- (2) The training or evaluation of skills and attitudes during group instructions or assessments could be based on tasks allowing interaction during communication, workload management, problem-solving and decision-making, leadership and teamwork.

- (3) To avoid a subjective assessment, the assessment phase should be also performed in pairs or groups, to allow trainees to assess themselves by comparing themselves to the others.



Rationale

This GM is intended to help operators to establish the CBTA programme for their operational control personnel.

The target for the role-specific training should be built on the learning objectives for the FOO qualification level provided in ICAO Doc 10106 because these cover up to 80 % of the tasks specific to an FD role. An example is provided in GM5 ORO.AOC.135(b)(4)(i).

GM4 ORO.AOC.135(b)(4)(i) Personnel requirements

HUMAN PERFORMANCE AND ATTITUDE COMPONENTS OF THE TRAINING OF OPERATIONAL CONTROL PERSONNEL

Guidance material to design training programmes to develop knowledge and skills in relation to human performance can be found in ICAO Docs 9868 and 10106 and in ICAO Doc 9683 (Human Factors Training Manual).

The human factors training is intended to enhance attitudes conducive to safe and efficient flight operations. The development of soft skills such as:

- interpersonal and communication skills,
- team player skills,
- ability to work well under pressure and manage stressful situations, and
- capacity to focus and avoid distractions,

increases in turn the likelihood of the candidate successfully completing the operator- and role-specific training programmes.

The individual's attitude will be trained and monitored along with the knowledge and skills components. The attitude is closely linked to the student's motivation. It can be assessed from the quality of their preparation during the training or by designing exercises that require them to use attitude-related competencies, such as communication, situational awareness, problem-solving and decision-making.

AMC3 ORO.AOC.135(b)(4)(i) Personnel requirements

ADVANCED OPERATOR-SPECIFIC AND ROLE-RELATED TRAINING – GENERAL

- (a) The operational control personnel who have successfully demonstrated competencies equivalent to the FOO qualification should receive advanced training to enhance their competencies before being allowed to perform specific tasks related to the operational control system without supervision.
- (b) The advanced operator-specific and role-related training programme should be based, as a minimum, on the knowledge, skills and attitudes for the initial FOO qualification level as specified in ICAO Doc 10106 and should aim at enhancing the competencies through a combination of more complex tasks and exercises introduced in the training programme.



- (c) The operator-specific training tasks and targets should cover the specific context of the air operator, as well as the components of its system of operational control. It should include at least the following elements:
- (1) type of operation;
 - (2) the operational context of the air operator, its business model;
 - (3) the operational control system of the air operator;
 - (4) operational standards and procedures, policies and data and any other relevant information from the operations manual;
 - (5) any tool or application in use by the air operator in relation to its system of operational control.
- (d) The role-specific training should establish and train the additional competencies necessary for each role in the operator's system of operational control. The training tasks and targets should be based on the tasks and duties assigned to each role, which should also be identified and described in its operational manual or procedures as per ORO.GEN.110(c).
- (e) The operator should ensure the provision of any other training required for its operational control personnel to complete their tasks in a competent manner, as required by the assigned role. Such other training includes, but is not limited to, dangerous goods, SMS, security, MEL, FTL, emergency response.

Rationale

The purpose of this proposed new AMC is to facilitate the implementation of the advanced training requirements that are within the responsibility of the air operator under point b(4)(i) of the implementing rule. The operator-specific training is intended to enhance the competencies of personnel after they have already attained the basic FOO qualification and are prepared for the advanced training specific to the job function.

The text in point (e) regarding different types of training transposes elements from BR Annex V Article 1.1. and point 8.1(b).

GM5 ORO.AOC.135(b)(4)(i) Personnel requirements

EXAMPLE OF A TASK-BASED EXERCISE FOR ENHANCED COMPETENCE TRAINING

This GM provides an example of the same task-based exercise used for entry-level training of competencies, which is adjusted to further enhance those competencies required to be achieved through an advanced training.

Regardless of whether an exercise is designed for the basic FOO or the advanced FD training, the set-up and the described operational problem have to be as realistic as possible.

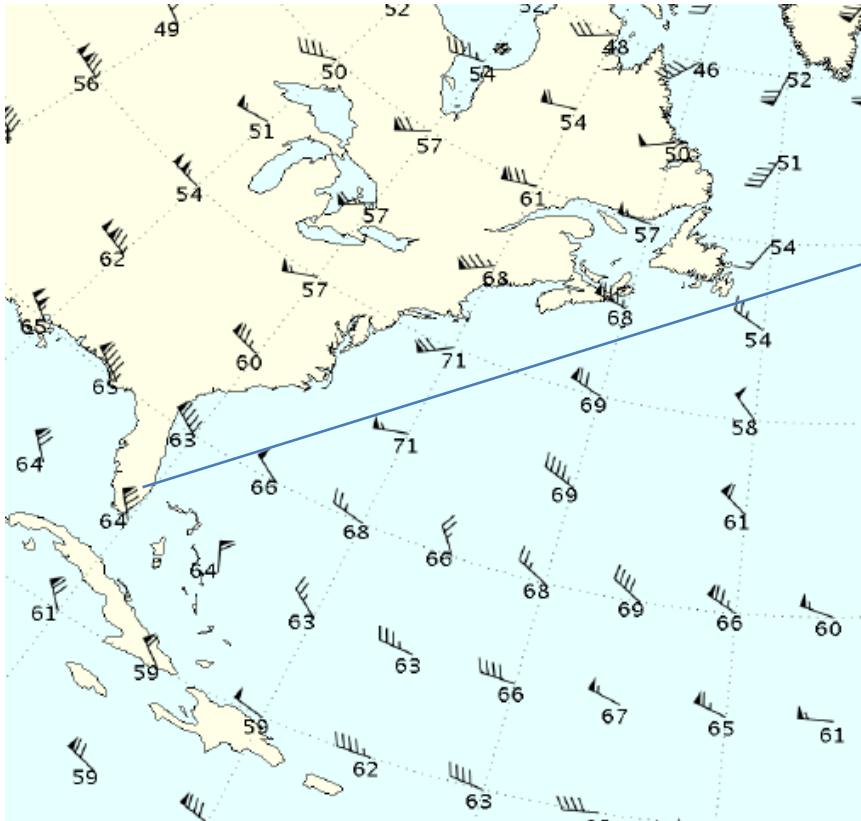
Example of a task-based exercise — basic training, FOO

ICAO Doc 10106 Chapter 5, points 5.5.9 to 5.5.12 provide a sample framework and the transfer of several tasks into one exercise. An example is provided in this GM as well.



Task ref.	Task family	Task category	Task: analyse, explain, evaluate, decide	Subtasks	Training modules
97	Flight planning and flight monitoring	Route selection	Fuel freeze assessment	Identify whether the flight is subject to fuel freeze based on stage length and static air temperature (SAT)/total air temperature (TAT)	FPL&FM*

* FPL&FM = flight planning and flight monitoring



FCOM A333:

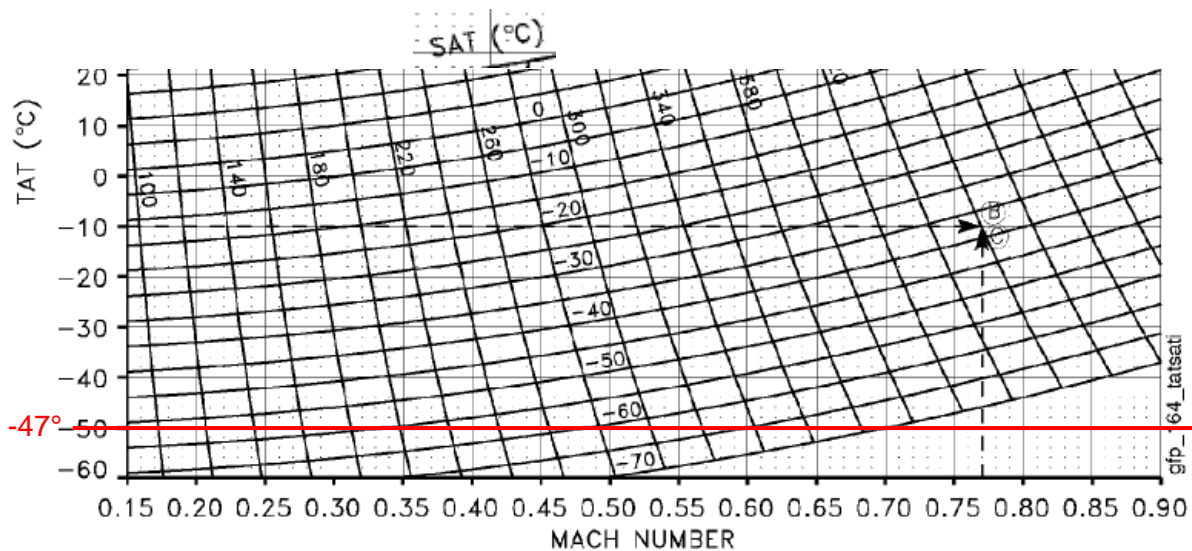
Wax build up in Jet A1 if fuel temperature is below -47°C

- Cooling rate -3°C/h realistic, max -12°C/h
- Not lower than TAT
- Up to 1 hour to stabilise

- Jet A-1
- Flame point: +38 °C
- Freezing point: -47 °C

- Jet A (US only)
- Flame point: +38 °C
- Freezing point: -40 °C

- Jet B
- Flame point +20 °C
- Freezing point -60 °C



In view of forecasted OAT -71°C abeam the US East Coast, the risk of fuel freeze should be evaluated in advance. The FCOM provides general information about the development of fuel temperature during flight. The fuel temperature follows the TAT with a change rate between 3 and 12°C per hour.

It could be assumed that the rapid temperature drop during climb would provide the highest cooling rate. After reaching cruise flight level the fuel temperature should slowly decrease further.

To forecast the fuel temperature development, the TAT-development should be evaluated at least in the flight segment from a waypoint with a forecasted OAT around -70°C until the top of descent.

1. State the root cause of an untypical low supply fuel temperature if this fuel would have been provided from a storage place located above ground level.
2. Assume a fuel temperature at the top of climb, after $30'$ climb, based on an initial fuel temperature -10°C on ground and a $-12^{\circ}\text{C}/\text{h}$ cooling rate.
3. Extract the expected total air temperature at the top of climb based on M.80 and OAT/SAT -57°C . Apply the table provided for the completion of this exercise, enter at M.80, upwards until the curved line on -57°SAT , then straight left and read the related TAT. The red line shows the minimum fuel temperature (TAT).
4. Assume the fuel temperature after 7h cruise, cooling rate of $-3^{\circ}\text{C}/\text{h}$.
5. Describe the further temperature development after step climb to FL410 and until the top of descent to MIA and state whether the fuel temperature could be lower than -47°C .
6. If not, after how many flight hours in -71°C OAT could the fuel temperature be lower than -47°C ?
7. Evaluate the lowest permissible OAT in such a flight segment if the supplied fuel would be Jet A (e.g. MIA-LEJ) instead of Jet A1.
8. Describe adequate countermeasures in relation to speed and altitude to avoid fuel freeze.

Comment section

The primary property of a **basic** FOO task-based exercise is the generic set of data, conditions and tools. The data and the conditions should not indicate operator-specific data or procedures. The data and SOPs should be generated from a sample FCOM, MMEL/MCDL and a generic sample OM-A. The instructor could build up a simulated environment through an integration of additional students covering specific roles, e.g. ground handling, MRO or the flight crew.

The primary property of the **advanced** FD task-based exercise is the set of data, conditions and tools as used by a specific operator. Instead of a manufacturer FCOM, the operator's OM-B should be used, even if the same FCOM could be an integrated element here. Instead of a given flight plan or a given set of information, the student has to apply operator procedures and tools, e.g. the more sophisticated applications for flight planning and information exchange. The FD student must identify and extract the required information independently, may initiate communication, coordination and decision-making in a realistic or partly simulated environment.



Example of a task-based exercise — advanced training, flight dispatch

Task ref.	Task family	Task category	Task: analyse, explain, evaluate, decide	Subtasks
97.1	Flight planning and flight monitoring	Route selection	Fuel freeze assessment	Identify whether the flight is subject to fuel freeze, evaluate countermeasures according to the operator's OM-A/B/C, electronic flight planning application and GHIS (ground handling information system).
64.3	Risk assessment	Company resources	OCC responsibility, set-up and capacity	Describe the OCC areas of responsibility in this case, describe an adequate procedure for communication with operator's load control, MRO, OPS control and an adequate method of problem-solving and decision-making.

Identify whether the flight XX1234 LEJ-MIA A332F is subject to fuel freeze and decide about adequate countermeasures during flight planning. Communicate with the operator's departments involved and exercise appropriate problem-solving and decision-making.

The situation:

XX1234 LEJ 14/2345 15/0955 MIA A332F.

Supply fuel from fuel trucks, supply fuel temperature -10°C, OAT -13°C.

MEL item: Tank #2 fuel temp sensor inop.

Abeam St. Johns CYYT climb to FL410, see map for OAT in FL410 for the remaining flight.

Extract the standard temperature elapse rates and standard fuel specifications from the operator's OM-B.

In view of forecasted OAT -71°C abeam the US East Coast, the risk of fuel freeze should be evaluated in advance. The OM-B (FCOM) provides general information about the development of fuel temperature during flight. Extract the standard fuel temperature change rate.

To forecast the fuel temperature development, the TAT-development should be evaluated at least in the flight segment from a waypoint with a forecasted OAT around -70°C until the top of descent.

1. State the root cause of an untypical low supply fuel temperature if this fuel would have been provided from a storage place located above ground level. Apply the operator's ground handling standard procedures and information and extract the required data.
2. Calculate the expected total air temperature at the top of climb according to the operator's electronic flight plan and forecasted OAT.
3. Assume the fuel temperature after 7h cruise, use the operator's actual flight planning data.
4. Describe the temperature development between step climb FL410 until the top of descent and state whether the fuel temperature could be lower than -47°C. Describe the influence and the consequences caused by the MEL item.
5. After how many flight hours in -71°C OAT could the fuel temperature be lower than -47°C?



6. Evaluate the lowest permissible OAT in such a flight segment if the supplied fuel would be Jet A (e.g. MIA-LEJ) instead of Jet A1. Extract the fuel standard information from the operator's OM-B.
7. Apply the standard procedure on the basis of the flight planning application and compare the results from the manual evaluation with the automated fuel temperature warning function provided in the application.
8. Describe adequate countermeasures in relation to fuel supply, speed and altitude to avoid fuel freeze, coordinate with other stakeholders and demonstrate problem-solving and decision-making.

Comment section

The primary property of a **basic** FOO task-based exercise is the generic set of data, conditions and tools. The data and the conditions should not indicate operator-specific data or procedures. The data and SOPs should be generated from a sample FCOM, MMEL/MCDL and a generic sample OM-A. The instructor could build up a simulated environment through an integration of additional students covering specific roles, e.g. ground handling, MRO or the flight crew.

The primary property of the **advanced** FD task-based exercise is the set of data, conditions and tools as used by a specific operator. Instead of a manufacturer FCOM, the operator's OM-B including MEL/CDL should be used, even if the FCOM would be the same. Instead of a given flight plan or a given set of information, the student must apply operator procedures and tools, e.g. the more sophisticated applications for flight planning and information exchange. The FD student must identify and extract the required information independently, and is expected to initiate communication, coordination and decision-making in a realistic or partly simulated environment.

AMC4 ORO.AOC.135(b)(4)(i) Personnel requirements

ASSESSMENT PHASE

- (a) The operator should define and develop an assessment method that allows a realistic presentation and assessment of competencies. It should be based on the operational standards established by the aircraft operator for its operational control system and included in its operations manual.
- (b) Each assessment, either performed in groups or individually, should assess knowledge, skills and attitudes simultaneously and should provide the result at least as pass/fail and a recommendation of corrective measures.
- (c) The assessment should include a task-related component of on-the-job competency assessment.
- (d) The assessment should collect evidence that the competency standards are appropriate to the duties and consistently achieved.
- (e) The assessment should consist of a simple CBTA level reached indicator (yes/no) combined with comments on the execution of each task and a decision to pass or not pass. The comments



should include recommended tasks, exercises and training methods as individual recommendations on how to continue the training. The assessor should consider the feedback through the assessment reporting to improve the training processes, methods and material used.

- (f) The assessment reporting may contain, in addition, information in percentages or points such as a simple grading scale to support statistical reporting of training results, without replacing comments on specific and individual competency gaps.
- (g) If the candidate fails an assessment, an analysis of the failure should be performed in order to identify the causes and, if necessary, provide further training to enable another assessment.

Rationale

This proposed new AMC related to the assessment phase of the training process creates the link with ORO.GEN.110 and point ORO.AOC.135(b)(4)(i)(B).

Point (c) reflects point (b)(4)(i)(C) of ORO.AOC.135 and also Chapter 1.2 of ICAO Doc 9868 PANS-TRG in the FOO/FD section.

Assessment is a fully integrated part of the CBTA process. The assessor is the same with the instructor, unlike in traditional training, where the two roles are separated. This integration provides continuity and efficiency to the entire training process. The assessor observes the trainee during the training phase and has more data to assess the performance of a trainee during the assessment phase. Recommendations provided with the assessment are an accelerator for the next step.

The assessor's role is even more important in developing the attitude dimension of the training programme. The development of right attitudes depends very much on the assessor's comments and feedback to the trainee's performance.

GM6 ORO.AOC.135(b)(4)(i) Personnel requirements

ASSESSMENT OF OPERATIONAL CONTROL PERSONNEL

Table 1: Sample grading system

Grading	Meaning
5	The trainee demonstrates all the competencies to a level that significantly enhances safety, effectiveness and efficiency.
4	The trainee demonstrates all the competencies to a highly effective standard.
3	The trainee demonstrates most of the competencies to an effective standard.
2	The trainee demonstrates some of the competencies to a minimum standard.
1	The trainee demonstrates one or more competencies below the minimum standard.

A sample competency checklist is provided in ICAO Doc 10106, Table 5-2. Further guidelines on the assessment phase are contained in Chapter 5.



Rationale

The grading system provided as a sample follows the grading used by ATOs, where 5 is the highest grade and 1 is the lowest.

AMC5 ORO.AOC.135(b)(4)(i) Personnel requirements

CONTINUING ASSESSMENT AND SUBSEQUENT RETRAINING FOR CONTINUED COMPETENCE

- (a) To ensure the continued competence of the operational control personnel in performing their tasks as per the operational standards established by the operator, the operator should develop and implement a method to perform continuing non-punitive assessments and a subsequent retraining, as necessary, of the operational control personnel.
- (b) The non-punitive assessment should be performed during real-time activities (on-the-job performance) and should be based on realistic tasks specific to the role.
- (c) The continuing assessment should check knowledge, skills and attitudes simultaneously and should provide the anonymous and confidential results as pass or fail and a recommendation of corrective measures.
- (d) The individual(s) under assessment should be informed in advance of the date and the expected assessment conditions. The individuals should be confident that this evaluation supports the identification of competency gaps of a group, rather than individual competency gaps.
- (e) The resulting retraining based on the gap analysis should be applied to the intended target group. Individual post-training assessments could then support individual competence developments.
- (f) The interval for the continuing assessment and retraining should be driven by realistic scenarios, safety/incident/accident reports and results from regular non-punitive competence evaluations. The evaluation and retraining interval should not exceed 36 months in each task category.
- (g) If the continuing assessment shows a level of performance below the required standard, the operator should adjust the retraining session to the needs identified after the continuing assessment, to address the gaps in performance.
- (h) The results and recommendations should support the gap analysis to adjust tasks and the respective training to the role-related target group. The continuing assessment and retraining should be documented for recording and inspection purposes.

ASSESSORS FOR RECURRENT ASSESSMENT

- (i) The operator may appoint, as assessors for recurrent assessment, individuals that have similar tasks and responsibilities in its system of operational control.
- (j) Additionally, these assessors should receive further training in the human performance and limitations, as well as minimum elements of training for instructors and assessors.



Rationale

This phase of assessment is conceived as a continuous part of the monitoring of performance. This assessment is done during the performance of real-time tasks and is considered a process different from that of the assessment upon completion of the CBTA programme.

Two assessment methods are described in this AMC, non-punitive with confidential results to identify hidden competency gaps. As a result, all individuals of the same OCC-role will get the same retraining.

GM7 ORO.AOC.135(b)(4)(i) Personnel requirements

CONTINUING ASSESSMENT AND RECURRENT TRAINING FOR CONTINUED COMPETENCE

- (a) The concept of continuing assessment reflects the integration of the assessment phase in the training programme as a whole and is viewed as a continuous process rather than a separate step. Evidence-based training methodologies are prerequisites for effective competence development and maintenance. Without evident criteria and without a focus on relevant and actual competence requirements, training becomes ineffective.
- (b) It is recommended that the aircraft operator applies continuing assessment at shorter intervals than every 36 months, depending on analysis of competency gaps that have an impact on the personnel's performance to execute their defined tasks to the required standards. Additional gap analysis and the adjustment of tasks could become required in the case of changed scope or factors of the operation. Such factors could be any of the following:
- (1) changes to the operational system;
 - (2) changes to the type of operations;
 - (3) changes to the fleet;
 - (4) changes to the routes;
 - (5) any significant changes that may alter the data processed during their daily tasks;
 - (6) results from reported operational risks, occurrences, incidents and accidents;
 - (7) results from past assessments.
- (c) The assessment can be performed using a checklist that contains the tasks associated with the role under assessment and the expected level of performance. Observable behaviours can be included in the description of the tasks. Such a checklist can be used as a proof of assessment for recording or inspection purposes.
- (d) The corrective measures recommended upon the completion of an assessment could indicate various items. For example:
- (1) the need for retraining either in full or in particular areas of performance;
 - (2) the need to improve certain knowledge or skills;
 - (3) closer monitoring of activities requiring particular knowledge or skills;
 - (4) the need to improve the attitude;
 - (5) the need to expose the individual to particular tasks.



Depending on the recommended corrective measure, the operator can decide how retraining should be done.

GM8 ORO.AOC.135(b)(4)(i) Personnel requirements

ON-THE-JOB TRAINING — EXAMPLES OF EXCEPTIONS FROM A FAMILIARISATION FLIGHT

The operator may encounter situations in which the observation of one familiarisation flight cannot be performed as part of the on-the-job training. Such exceptional cases need to be included in the training programme for FOOs and FDs.

Such situations could be, for example, cases when the individual undergoing training for an FD function or other complex operational control function is pregnant and cannot fly. Another example is the exceptional circumstance in which a pandemic, such as COVID-19, reduces drastically the possibility to conduct any flights.

These can be considered extraordinary circumstances that may need an exception from the familiarisation flight.

AMC1 ORO.AOC.135(b)(4) Personnel requirements

EVALUATION OF THE EFFECTIVENESS OF THE CBTA PROGRAMME FOR OPERATIONAL CONTROL PERSONNEL

The operator should develop a process for ongoing evaluation of the CBTA programme for operational control personnel. The evaluation should ensure that:

- (a) the training and assessment plans are relevant to the work in the specific context and environment to which they may be assigned after training;
- (b) the programme enables the trainees to achieve the interim and final competency standards; and
- (c) remedial actions are taken if in-training and post-training evaluation indicates evident criteria to do so.

Rationale

Source: ICAO Doc 10106

Establishing realistic tasks, used as a blueprint for the development of adequate and realistic exercises, is the driver of relevant and efficient training and assessment. Any operational event should be analysed if such criteria are covered by existing tasks and exercises. Identified gaps should be closed by additional exercise developments, including a description of standard or exercise-specific procedures for training or assessment.

The analysis of actual competencies of personnel in operational control duties could support the identification of potential threats to the system of operational control. Non-punitive assessments could discover the level of average competencies in relation to tasks or task families and areas of competencies. Based on this assessment, the gaps could be closed with the selection and development of exercises on the basis of identified tasks to be executed during training and re-assessment. During the execution of tasks by exercises, the competence criteria should be selected as appropriate and



applied during training and assessment. The exercises and the application should be adjusted to allow for an assessment of specifically selected competence criteria. During those quality assurance campaigns in operational control, it is important to use competence criteria allowing an assessment of skills and attitude based on realistic tasks. The simple assessment of knowledge only should not replace the more challenging additional assessment of skills and attitude. The control of operational risks and the success of the system of operational control depends more on attitude and skills than on knowledge. High-attitude personnel are able to identify and close knowledge gaps fast and effective even during normal operational control duties.

AMC2 ORO.AOC.135(b)(4) Personnel requirements

THIRD-PARTY TRAINING PROVIDERS

The training and assessment may be performed either internally by the aircraft operator's qualified instructors or externally by a third-party training provider. If the delivery of the training and assessment programme is contracted to a third-party training provider, the responsibility for the compliance of the training and assessment programme with the applicable requirements of this Regulation remains with the aircraft operator, as a contracted activity under ORO.GEN.205. If advanced training is provided by a third-party training provider, the aircraft operator should provide role-specific competency targets and training tasks reflecting its specific operational procedures and operational control tasks.

Rationale

This proposed new AMC clarifies the responsibility of the training compliance with the rules. Training provided by a training organisation to the operational control personnel of an aircraft operator (either employed or outsourced) is a contracted service that is covered under the management system of the aircraft operator.

This AMC also establishes that the air operator needs to support the training organisation with actual realistic tasks and competence criteria for the basic FOO competence level. The AOC holder is still responsible to ensure that there is a standardised set of competencies available before the beginning of operator and role-specific trainings. A close cooperation with the training organisation providing basic FOO training, whether internal or external, reduces the potential effort caused by unexpected and additional training and assessment requirements. This cooperation could include regular audits of the basic FOO training and assessment standards by the AOC holder or by other accepted competent units or authorities. A regional or state-wide FOO-basic standard supports the standardisation of competencies available in a wider pool of pre-qualified labour.

With the minimum competencies and other prerequisites required upon entry, the intention is to ensure that the operator needs to define and be in control of the entry level, because if the entry level is not defined, the training may fail to achieve its purpose.



AMC1 ORO.AOC.135(b)(4)(ii) Personnel requirements**QUALIFICATION AND TRAINING OF INSTRUCTORS AND ASSESSORS OF OPERATIONAL CONTROL PERSONNEL**

- (a) The operator should describe, in its CBTA programme for operational control personnel, the process and criteria for the selection and qualification of instructors and assessors, including the required knowledge, skills and attitudes.
- (b) The operator should identify a person responsible for the evaluation, coordination, and standardisation of the training activities of the instructors and assessors of the operational control personnel. This person may be an appointed chief instructor or the one responsible for the management of the operational control personnel.
- (c) The operator should ensure that the instructors and assessors of operational control personnel are competent in operational control activities according to the competency framework. These should reflect the training standards described in the operations manual and should include the following components for the selection, qualification and training:
- (1) Evaluation of the curriculum vitae,
 - (2) Interview,
 - (3) Simulated training and assessment demonstration on the basis of a task-based exercise developed by the candidate,
 - (4) The successful candidate receives a basic initial training and according to the operator's training manual and on the basis of a gap analysis from the training and assessment demonstration.
- (d) The operator should ensure that the instructors have received appropriate training in the CBTA concept, covering at least teaching and learning methods, learning objectives and the applicable competencies, facilitation and motivation techniques, threat and error management, identification of adequate competency behaviour markers, and the content of the subject(s) and exercises that they are to deliver.
- (e) The operator should ensure that the assessors, in addition to point (d), have received appropriate training regarding the assessment(s) that they are to conduct, covering at least familiarisation with the performance indicators, the operator's grading methodology and assessment tool, and the debriefing techniques.
- (f) The operator should ensure that the recurrent evaluation of instructors and assessors is conducted every 24 months. If more than 24 months have passed since the delivery of the last training, they should attend recurrent instructor training before delivering the next course.



GM1 ORO.AOC.135(b)(4)(ii) Personnel requirements

SELECTION PROCESS FOR INSTRUCTORS AND ASSESSORS OF OPERATIONAL CONTROL PERSONNEL

- (a) The process for the instructor and assessor selection could include an interview with the candidate, a training scenario and a simulated instruction developed and demonstrated by the candidate.
- (b) A training scenario would require the candidate to prepare and deliver a brief training presentation covering motivation of the students, an explanation of the lesson target, the engagement of the students, and a competency assessment. The operator is expected to establish the conditions for the proposed task, as required, including the material, the media, the time frame, the duration, and the assumed competence status of the target group ('students').
- (c) By conducting a short, simulated instruction/lecture, the candidate is expected to demonstrate to the evaluator a task in the form of an exercise (e.g. destination alternate selection by assessing the need for a destination alternate based on regulations and OPS specs). This exercise could include the general lesson target, a briefing of the situation, a description of the problem, a question or objective, the provision of data and the SOPs and policies required to handle this task.
- (d) The evaluator, taking the role of a trainee, will evaluate the effect of the selected training method used, the communication, the level of interaction, the ability to motivate the student, and the flexibility.
- (e) The candidate is expected to demonstrate the following aspects: ability to motivate the student, time management, competency targets, structured process, individual interaction with the students, response to questions, remaining focused after disruptions.

Rationale

The new GM1 and the GM2 below are proposed to support aircraft operators and training organisations in the selection the instructors and assessors of the operational control personnel.

GM2 ORO.AOC.135(b)(4)(ii) Personnel requirements

CRITERIA FOR INSTRUCTORS AND ASSESSORS OF OPERATIONAL CONTROL PERSONNEL

It is recommended to consider the following criteria during the selection process of instructors and assessors of operational control personnel:

- (a) General traits and abilities
 - (1) Strong knowledge, skills and attitudes in relation to operational control tasks
 - (2) Ability to transpose operational situations and experiences into tasks and exercises
 - (3) Combination of tasks and prerequisite learning objectives to learning concepts
 - (4) Combination of tasks and subtasks in a wider context, i.e. as a case study
 - (5) Definition of targets of case studies and of the priority and sequence of tasks and subtasks



- (6) Design of the material for tasks and case studies using different tools (digital platform, software, regulations, SOPs, data)
 - (7) Identification of the right approach for individual students
 - (8) Assessment of the result of trainees' performance
 - (9) Identification of the right training method for individual trainees based on competency gaps
 - (10) Ability to provide an adequate form of feedback
 - (11) Ability for self-assessment during training
 - (12) Attitude and motivation to develop own knowledge and skills
 - (13) Identification and understanding of the role and responsibility of the instructor, trainee and other stakeholders
 - (14) Ability to manage conflicts between instructors and trainees and within the group of trainees
 - (15) Experience in prioritising operational tasks, time management, problem-solving and decision-making
 - (16) Application of different training methods based on different operator-specific standards and regulations
- (b) Specific abilities related to human performance and limitations and/or advanced dispatch resource management (HPL/DRM):
- (1) Ability to create communication standards
 - (2) Ability to manage conflicts
 - (3) Ability to apply HPL/DRM concepts
 - (4) Use of team synergy
 - (5) Leading the training focusing on error management and prioritisation
 - (6) Leading the training focusing on problem-solving and decision-making
 - (7) Ability to specify requirements for HPL/DRM concepts
 - (8) Identification and application of the theory of human factors
 - (9) Demonstration of training need analysis in relation to human factors
 - (10) Identification of adequate observable behaviour markers for the development of human-factor related competencies
 - (11) Creation of exercises to meet the training requirements related to human factors
 - (12) Transfer and explanation of the concept to DRM instructor
 - (13) Handling of intercultural issues
- (c) To cope with the intercultural issues, a CBTA instructor/assessor should be aware of relevant risk driver in the training process:



- (1) Understand cultural factors and background of potential conflicts
 - (2) Verify conflicts through adequate communication
 - (3) Identify the right level of information flow and the complexity level of exercises
 - (4) Transfer the verified conflicts into solution
 - (5) Apply an adequate behavioural action
- (d) Content of the initial training, as described in the training manual:
- (1) Introduction to the training process, responsibilities, standard procedures and tools
 - (2) Basics of CBTA and evidence-based training, target competencies as prerequisite learning objectives, tasks and competency-related observable behaviours
 - (3) Instructor and assessor tasks, methods and tools
 - (4) Basics of teaching and learning and student coaching/motivation
 - (5) Development of exercises for instructions or assessments from standard tasks or prerequisite learning objectives
 - (6) Transfer of evident and realistic operational criteria into a training process
 - (7) Basics of continuous improvement
 - (8) The role, tasks and methods as instructor or assessor
 - (9) Selection criteria for training or assessment methods, training material, infrastructure and tools
 - (10) Assessment grading and debriefing, including identification of adequate competency behaviour markers
 - (11) Communication and conflict management
- (e) It is recommended that the regular instructor/assessor competency evaluation and recurrent training be based on CBTA principles per ICAO Doc 9868 and Doc 10106, where regular standard training intervals and content could be replaced by individual competency gap analysis and specific re-qualifications. The principles and procedures as described in the training manual should include:
- (1) the method of a regular instructor/assessor competence evaluation and gap analysis during instructions, assessments, development of instruction or assessment units or training or assessment material;
 - (2) the maximum time interval for instructor/assessor competence evaluation and gap analysis, depending on delivered training or assessment activities;
 - (3) the selection criteria for an individual recurrent assessment and training or standard training interval and content;
 - (4) the role, the tasks and the responsibility within the organisation for instructor/assessor competence monitoring and control;

- (5) training management standards, quality management, compliance monitoring and safety management relevant for instructors/assessors;
- (6) the standard procedure for instructor/assessor checks, communication and documentation.

3.2.1.1 Subpart ORO.FC

The following proposed amendments are not related to the FOO and FD topic. Please see the clarification in Section 2.3.

AMC1 ORO.FC.105(b)(2);(c) Designation as pilot-in-command / commander

[...]

ROUTE, AREA AND AERODROME KNOWLEDGE FOR COMMERCIAL OPERATIONS

(...)

(b) Aerodrome knowledge

[...]

(3) All aerodromes to which an operator operates should be categorised in one of these three categories:

(i) category A — an aerodrome that meets all the following conditions:

[..]

(B) at least one runway with no performance-limited procedure for take-off ~~and~~/or landing, such as no requirement to follow a **complex** contingency procedure for obstacle clearance in the event of an engine failure on take-off ~~from any runway expected to be used for departure~~; and

Rationale

Point (b)(3)(i)(B) of AMC1 ORO.FC.105(b)(2);(c) is proposed to be amended for editorial reasons and to ensure clarity. The word 'complex' is proposed to be added as all or almost all runways have a contingency procedure in case of an engine failure on take-off. Even the simplest runway (e.g. runway with a take-off path to the sea) has a contingency procedure in case of engine failure on take-off (e.g. climb straight ahead to 2 000 ft and then turn back to the VOR of the airport).

The phrase 'from any runway expected to be used for departure' is proposed to be deleted as it duplicates the first sentence ('one runway'). The text that is proposed to be deleted (containing 'any runway') does not bring any additional value and can create confusion between the first sentence ('one runway') and this one ('any runway').

The proposed amendments are expected to increase clarity with no negative safety or economic impacts.



3.2.2 Draft AMC & GM to Part-CAT

AMC1 CAT.GEN.MPA.180(a)(18) Documents, manuals and information to be carried

APPROPRIATE METEOROLOGICAL INFORMATION

The appropriate meteorological information should be relevant to the planned operation, as specified in point (a) of point MET.TR.215 of Annex V (Part-MET) to Regulation (EU) 2017/373, and comprise ~~the following:~~

~~(a)~~ — the meteorological information that is specified in point (e) of point MET.TR.215 of Part-MET; ~~and~~ When this information is not available, complete or sufficient, it should be complemented by supplemental meteorological information, including:

~~(1a)~~ information other than that specified in point ~~(a)~~ (e) of point MET.TR.215 of Part-MET, which should be based on data from certified meteorological service providers; or

~~(2b)~~ information from other reliable sources of meteorological information that should be evaluated by the operator.

Rationale

The proposed amendments increase flexibility for operators, and apply a more performance-based approach. The meteorological information specified in point (e) of point MET.TR.215 might not be available or appropriate in all aerodromes (i.e. small airfields, non-certified aerodromes, private aerodromes for ATOs, etc.) or for all operations, or it may not be adequate for the intended operation. The AMC allows the use of supplemental meteorological information, adding a more technology-neutral approach as modern aircraft use software providing meteorological information, which, when certified, can provide accurate information.

Supplemental meteorological information from reliable sources can be, for example, real-time observations from trained personnel at the aerodrome. The operator has an essential role in evaluating the quality of that information and ensuring a robust process to retrieve and use it.

The proposed amendment is not expected to have any negative impacts on safety.

Similar amendments are proposed to AMC1 NCC.GEN.140(a)(17) and AMC1 SPO.GEN.140(a)(18).

GM1 CAT.GEN.MPA.180(a)(18) Documents, manuals and information to be carried

DATA FROM CERTIFIED METEOROLOGICAL SERVICE PROVIDERS

In the context of point ~~(b)(1)~~ (a) of AMC1 CAT.GEN.MPA.180(a)(18), [...]



GM2 CAT.GEN.MPA.180(a)(18) Documents, manuals and information to be carried

INFORMATION FROM OTHER RELIABLE SOURCES OF METEOROLOGICAL INFORMATION

In the context of point (b)~~(2)~~ of AMC1 CAT.GEN.MPA.180(a)(18), [...]

GM3 CAT.GEN.MPA.180(a)(18) Documents, manuals and information to be carried

SUPPLEMENTAL METEOROLOGICAL INFORMATION AND SUPPLEMENTARY INFORMATION

Supplemental meteorological information: when operating under specific provisions and without the meteorological information from a certified service provider, the operator should use 'supplemental meteorological information', such as digital imagery. Related information can be found in point (e)(4) of AMC1 CAT.OP.MPA.192.

Supplementary information: ~~it is included in point (a) of AMC1 CAT.GEN.MPA.180(a)(18) and~~ refers to meteorological information to be reported in specific cases such as freezing precipitation, blowing snow, thunderstorm, etc.

Rationale

The proposed amendments in GM1, GM2 and GM3 to CAT.GEN.MPA.180(a)(18) are merely editorial, and they reflect the proposed changes to AMC1 CAT.GEN.MPA.180(a)(18). They are expected to have no impact.

AMC1 CAT.OP.MPA.175(a) Flight preparation

OPERATIONAL FLIGHT PLAN — COMPLEX MOTOR-POWERED AIRCRAFT

- (a) The operational flight plan used and the entries made during flight should contain the following items:
- [...]
- (22) meteorological information, as specified in point (a)**(18)** of point **CAT.GEN.MPA.180** ~~MET.TR.215 of Part-MET.~~
- [...]

Rationale

It is proposed to update this reference to the relevant point in the rules, following the proposed changes to AMC1 CAT.GEN.MPA.180.

This proposed amendment is editorial and is expected to have no impact.



3.2.3 Draft AMC & GM to Part-SPA

AMC4 SPA.LVO.100(c) Low-visibility operations and operations with operational credits

OPERATIONS WITH OPERATIONAL CREDITS — HELICOPTER SPECIAL AUTHORISATION CATEGORY I (HELI SA CAT I) OPERATIONS

[...]

Table 11

HELI SA CAT I operation minima

RVR versus approach lighting system				
DH (ft)	Class of light facility			
	FALS	IALS	BALS	NALS
221-250	450	750	1 000	1 200
201-220 250	450 350	650	750 800	1 000
181-200	300	450	650	900
151-180	300	350	550	750
130-150	300	300	400	600

[...]

Rationale

The proposed amendment is expected to improve the minima for HELI SA CAT I published with the ED Decision 2022/012/R on AWOs. The published minima for HELI SA CAT I are not adequate and unsafe for a decision height (DH) in the range of 201-250 ft and in the case that the approach light system (ALS) is of the following category: IALS, BALS, or NALS.

Geometrically, if the helicopter is on a glideslope of 3 deg = 5.2 %, then at 250 ft the helicopter is 1 468m away from the expected touchdown point and 1 168m away from the runway threshold. In the case of an ALS of category IALS, BALS or NALS, which ALS is the shortest of its category, and with a decision height (DH) of 250 ft:

- The horizontal distance from the helicopter to the closest ALS light is greater than the minima.
- If the weather conditions are at minima, the pilot will not be able to see the ALS (or any other relevant light) and a go-around will be necessary.
- The risk is that the pilot runs out of safe landing options.

The following factors should only contribute to margins and should never contribute to lower minima:

- The glideslope may be greater than 5.2 %, which may bring the helicopter closer to the closest available lights at a given DH.
- The ALS may be longer than the shortest of its category, but experience shows that this is not very often the case.

In order to make available the lowest possible minima, the DH range of 201-250 ft is proposed to be split in 2 categories: 201-220 ft and 221-250 ft.

The proposal prevents IFR flights from taking place with operating minima that are unsafe in the case of DH in the range of 201-250 ft and with an ALS of category IALS, BALS, or NALS. The proposal also

reduces minima in the case of DH in the range of 201-220 ft with an ALS of category FALS, with safety and economic benefits of further enabling helicopter IFR. The overall economic and safety benefits are positive.

AMC1 SPA.LVO.105(g) Specific approval criteria

SAFETY ASSESSMENT — MONITORING, DATA COLLECTION AND PERFORMANCE INDICATORS FOR APPROACH OPERATIONS

(...)

Rationale

It is proposed to amend the subtitle of the AMC to improve clarity in relation to its content.

This proposed amendment is editorial and is expected to have a neutral impact.

AMC3 SPA.LVO.105(g) Specific approval criteria

SAFETY ASSESSMENT — MONITORING, DATA COLLECTION AND PERFORMANCE INDICATORS FOR LVTOs BELOW 125 M

The operator should monitor LVOs and operations with operational credits to validate the effectiveness of the applicable aircraft flight guidance systems, training, flight crew procedures, and aircraft maintenance programme and to identify hazards.

Rationale

This new AMC is proposed to complement AMC1 SPA.LVO.105(g) and AM2 SPA.LVO.105(g). Although the rule covers all LVOs (approach and take-off), the existing AMC focus mainly on approach operations. This proposed new AMC intends to provide means of compliance and scope to monitor low-visibility take-offs.

This proposed amendment increases clarity for operators on what is expected to comply with the rule and is therefore expected to have a positive impact on safety.

GM2 SPA.LVO.105(g) Specific approval criteria

SAFETY PERFORMANCE MONITORING

- (a) Data gathering for safety performance monitoring of LVOs and operations with operational credits will need to include sufficient information for the operator to identify hazards and assess the risks associated with LVOs and operations with operational credits. Data may be gathered through a flight data monitoring programme, flight crew reports, or other suitable means.

(...)

Rationale

The proposed addition to GM2 SPA.LVO.105(g) intends to provide a non-exhaustive list of means to gather LVO information.



The proposed list intends to clarify that flight crew reports are a possible source of data, which was not clear to some stakeholders, which interpreted point (c) of this GM (which refers to the operator's flight data monitoring programme) as excluding those reports, which was not the original intention.

This proposed amendment is expected to have a positive impact, as it increases clarity as well as available data sources.

GM1 SPA.LVO.120(b) Flight crew competence

FLIGHT CREW TRAINING

(...)

- (d) Flight crew members are required to complete initial ~~and recurrent~~ FSTD training **and maintain recency** for each operating capacity for which they will be authorised (e.g. as pilot flying and/or pilot monitoring). A pilot who will be authorised to operate in either capacity will need to complete the minimum number of approaches in each capacity.

(...)

Rationale

The new proposal is a first step to clarify the required training for trainers and other personnel that have achieved either seat qualification. Through this amendment, EASA proposes to remove the repetition of the recurrent training in each operating capacity, i.e. one in their original capacity as a commander and the same training again in the other seat (F/O). However, EASA introduces the need to ensure recency in each operating capacity. For example, if the trainer has operated CATIII in the captain seat during normal line operations, he or she will only need to perform training exercises to revalidate the recency in the other seat. This would normally be done during the recurrent training simulator session. EASA will continue to monitor the issue and perform further regulatory amendments if necessary to improve this point while ensuring a high level of safety.

3.2.4 Draft AMC & GM to Part-NCC

AMC1 NCC.GEN.140(a)(17) Documents, manuals and information to be carried

APPROPRIATE METEOROLOGICAL INFORMATION

The appropriate meteorological information should be relevant to the planned operation, as specified in point (a) of point MET.TR.215 of Annex V (Part-MET) to Regulation (EU) 2017/373, and comprise ~~the following:~~

- ~~(a)~~ — the meteorological information that is specified in point (e) of point MET.TR.215 of Part-MET; ~~;~~
and When this information is not available, complete or sufficient it should be complemented by
- ~~(b)~~ — supplemental meteorological information, **including:**
- ~~(1a)~~ information other than that specified in point ~~(a)~~ **(e)** of point MET.TR.215, which should be based on data from certified meteorological service providers; or
- ~~(2b)~~ information from other reliable sources of meteorological information that should be evaluated by the operator.



Rationale

Please see the rationale behind the proposed change to AMC1 CAT.GEN.MPA.180(a)(18).

GM1 NCC.GEN.140(a)(17) Documents, manuals, and information to be carried

DATA FROM CERTIFIED METEOROLOGICAL SERVICE PROVIDERS

In the context of point ~~(b)(1)~~ (a) of AMC1 NCC.GEN.140(a)(17), [...]

GM2 NCC.GEN.140(a)(17) Documents, manuals, and information to be carried

INFORMATION FROM OTHER RELIABLE SOURCES OF METEOROLOGICAL INFORMATION

In the context of point (b)~~(2)~~ of AMC1 NCC.GEN.140(a)(17), [...]

GM3 NCC.GEN.140(a)(17) Documents, manuals, and information to be carried

SUPPLEMENTAL METEOROLOGICAL INFORMATION AND SUPPLEMENTARY INFORMATION

Supplemental meteorological information: when operating under specific provisions and without the meteorological information from a certified service provider, the operator should use 'supplemental meteorological information', such as digital imagery. Related information can be found in point (e)(4) of AMC1 CAT.OP.MPA.192.

Supplementary information: ~~it is included in point (a) of AMC1 CAT.GEN.MPA.180(a)(18) and~~ refers to meteorological information to be reported in specific cases such as freezing precipitation, blowing snow, thunderstorm, etc.

Rationale

It is proposed to update the references to the relevant points in GM1, GM2 and GM3 to NCC.GEN.140(a)(17), following the proposed changes to AMC1 NCC.GEN.140(a)(17).

The proposed amendments are editorial and are expected to have no impact.

3.2.5 Draft AMC & GM to Part-NCO

AMC1 NCO.OP.142(b)(5) Destination alternate aerodromes — instrument approach operations

APPROPRIATE CONTINGENCY ACTION

[...]

~~— descent over water or very flat terrain to levels with reduced (but reasonable) obstacle clearance; and~~

[...]



Rationale

This deletion is proposed to prevent a possible misinterpretation between AMC1 NCO.OP.142(b)(5) and point (c)(5) of SERA.5005 and point (b) of SERA.5015 of Commission Implementing Regulation (EU) No 923/2012. The text proposed to be deleted may be interpreted as a clearance to descend below minimum levels (altitude), which would be against SERA.5005 and SERA.5015, and is not the intention of the AMC.

3.2.6 Draft AMC & GM to Part-SPO

AMC1 SPO.GEN.140(a)(18) Documents, manuals and information to be carried

APPROPRIATE METEOROLOGICAL INFORMATION

The appropriate meteorological information should be relevant to the planned operation, as specified in point (a) of point MET.TR.215 of Annex V (Part-MET) to Regulation (EU) 2017/373, and comprise ~~the following:~~

- ~~(a)~~ the meteorological information that is specified in point (e) of point MET.TR.215 of Part-MET; ~~and~~ When this information is not available, complete or sufficient it should be complemented by
- ~~(b)~~ supplemental meteorological information, including:
 - ~~(1)~~ information other than that specified in point ~~(a)~~ (e) of point MET.TR.215, which should be based on data from certified meteorological service providers; or
 - ~~(2)~~ information from other reliable sources of meteorological information that should be evaluated by the operator.

Rationale

Please see the rationale behind the proposed change to AMC1 CAT.GEN.MPA.180(a)(18).

GM1 SPO.GEN.140(a)(18) Documents, manuals, and information to be carried

DATA FROM CERTIFIED METEOROLOGICAL SERVICE PROVIDERS

~~In addition to GM1 SPO.GEN.140(a)(18) and~~ In the context of point ~~(b)(1)~~(a) of AMC1 SPO.GEN.140(a)(18), [...]

GM2 SPO.GEN.140(a)(18) Documents, manuals, and information to be carried

INFORMATION FROM OTHER RELIABLE SOURCES OF METEOROLOGICAL INFORMATION

In the context of point (b)~~(2)~~ of AMC1 SPO.GEN.140(a)(18), [...]

GM3 SPO.GEN.140(a)(18) Documents, manuals, and information to be carried

SUPPLEMENTAL METEOROLOGICAL INFORMATION AND SUPPLEMENTARY INFORMATION

Supplemental meteorological information: when operating under specific provisions and without the meteorological information from a certified service provider, the operator should use 'supplemental meteorological information', such as digital imagery. Related information can be found in point (e)(4) of AMC1 CAT.OP.MPA.192.

Supplementary information: ~~it is included in point (a) of AMC1 CAT.GEN.MPA.180(a)(18) and~~ refers to meteorological information to be reported in specific cases such as freezing precipitation, blowing snow, thunderstorm, etc.

Rationale

It is proposed to update the references to the relevant points in GM1, GM2 and GM3 to SPO.GEN.140(a)(18), following the proposed changes to AMC1 SPO.GEN.140(a)(18).

The proposed amendments are editorial and are expected to have no impact.



4. Impact assessment (IA)

4.1. What is the issue?

The issues that this NPA intends to address are identified in [Section 2.1](#). This section contains further information to enable the understanding of the various aspects underlying the compliance issue, the level playing field issue, and the potential safety issues.

4.1.1. ICAO alignment

During the audits performed in 2017 to the EU Member States and EASA, ICAO raised a finding for the fact that the Air OPS Regulation has not transposed the ICAO Standards to ensure that the operational control personnel employed by CAT operators are properly trained and have adequate experience and that the instructors providing this training are qualified. A new candidate issue for EPAS was submitted to EASA by Member States to address this non-compliance through an amendment to the EU rules. Although this issue in the past affected the competent authorities of the Member States, it now also affects EASA directly, in its role as the competent authority for those EU operators that choose to apply Article 65 of the Basic Regulation.

ICAO Annex 6 (Parts I and III) contains a single definition for the terms ‘flights operations officer/flight dispatcher’. The definition is presented as if the two terms were interchangeable, when in fact they are not; the difference between the two concepts is further explained in ICAO Doc 10106. The FOO qualification should be understood as a standard for the minimum qualification that a person should have before being assigned a role in an air operator’s system of operational control. It is expected that a person having the FOO qualification undergoes further training — operator-specific and role-specific training before she or he is assigned complex operational control tasks that are specific to the operator’s operational control system and operational context. For the time being, the ICAO documentation is inconsistent in the use of the two terms by providing a single definition for both of them in ICAO Annex 6 and at the same time providing a clear explanation of the difference between FOO and FD in ICAO Doc 10106.

Annex 6 Part I (*CAT operations with aeroplanes*) contains SARPs on the training and qualification standards for such personnel (Chapter 10).

Doc 8335 *Manual of Procedures for Operations Inspection, Certification and Continued Surveillance* clarifies that a system of operational control requiring the services of an FOO/FD should be considered, due to the nature and extent of the duties and responsibilities involved in the supervision of flights.

ICAO does not make it mandatory that operational control personnel are licensed; this is for the state of the operator to decide (Standard 10.1). The standards, however, establish the minimum training and qualifications that the FOO and FD must have to perform operational control duties. The training standards specify that those persons who exercise duties in relation to a method of operational control are properly trained and maintain their competence. Those training standards refer to ICAO Annex 1 and several other ICAO documents.

ICAO Annex 1 refers to ICAO Doc 9868 *Training (PANS-TRG)* and ICAO Doc 10106 *Manual on Flight Operations Officers/Flight Dispatchers Competency-based Training and Assessment*. ICAO Doc 9868 provides general elements for the CBTA for FOO/FD and lists the competencies; it also specifies that



the CBTA process addresses, besides the necessary knowledge, also the development of skills and attitudes.

ICAO Annex 6 Part III (*Commercial and non-commercial operations with helicopters*) includes SARPs similar to those in Part I.

4.1.2. Duties and responsibilities of FOO and FD

The preparation of a flight includes, among others, the following elements, which the air operator must ensure, and which are usually performed by persons having functions and tasks related to a method of operational control (Basic Regulation, Annex V 'Essential requirements for air operations, pt. 2):

'A flight must not be commenced unless it has been ascertained by reasonable means available that all the following conditions are complied with: (...)

- (d) information regarding meteorological conditions for departure, destination and, where applicable, alternate aerodromes, as well as en-route conditions, must be available to the flight crew. Special attention must be given to potentially hazardous atmospheric conditions;***
- (e) appropriate mitigation measures or contingency plans must be in place to deal with potentially hazardous atmospheric conditions expected to be encountered in flight;***
- (f) for a flight based on visual flight rules, meteorological conditions along the route to be flown must be such as to render compliance with those flight rules possible. For a flight based on instrument flight rules a destination and where applicable alternate aerodrome(s) where the aircraft can land must be selected, taking into account in particular the forecasted meteorological conditions, the availability of air navigation services, the availability of ground facilities and the instrument flight procedures approved by the State in which the destination and/or alternate aerodrome is located;***
- (g) the amount of fuel/energy for propulsion and consumables on board must be sufficient to ensure that the intended flight can be completed safely, taking into account the meteorological conditions, any element affecting the performance of the aircraft and any delays that are expected in flight. In addition, a fuel/energy reserve must be carried to provide for contingencies. Procedures for in-flight fuel/energy management must be established when relevant.'***

In the dynamic environment of daily operation, all such safety-related aspects must be integrated in a continuous risk management process, whether before flight (flight planning) or during flight (in-flight monitoring). The final in-flight decision rests with the commander, who nevertheless relies on the support from the OCC. Moreover, most operational control tasks must be completed before a flight, when there is no flight crew available yet – otherwise a proactive and precautionary decision-making in operational control would be unrealistic.

ICAO Annex 6 Part I (*CAT operations with aeroplanes*) contains SARPs on the duties and responsibilities of an FOO/FD employed in conjunction with a method of operational control — if the air operator uses such a method (Chapter 4.6).

An analysis of ICAO Annex 6 and further documents, such as Doc 8168 PANS-OPS, Doc 9868 PANS-TRG, Doc 9976 Flight Planning and Fuel Management Manual, Doc 10085 EDTO Manual, and Doc 10106 Manual on FOO/FD CBTA shows the following list of factors affecting flight operations that are



under the responsibility of operational control personnel and require adequately trained and qualified personnel:

- Evaluation of all safety-related information, including NOTAMS,
- Preparing the operational flight plan and the ATS flight plans, assistance in flight plan filing,
- Communication of safety-relevant information to the pilots while in flight, which is necessary for the safe conduct of the flight,
- Monitoring of all flights in real time,
- Analysis of weather forecasts and trends,
- Evaluation of wide area weather conditions and their specific operational risks (tropical storm, blizzard, volcanic ash),
- Identification of available and acceptable approach procedure/categories in use at all destination and alternate aerodromes within the network, including the respective operating minima,
- Assessment of the technical information related to the aircraft operated, which could have an impact on the aircraft's performance and planned operations,
- Flight and duty time limitations related to the aircrews,
- The operator's fuel policy when determining the minimum fuel needed for the planned operations,
- Ground handling procedures,
- Mass & balance limitations,
- ATC flight plan and slot management process,
- Notifying the appropriate ATS unit when the position of the aeroplane cannot be determined by an aircraft tracking capability,
- Initiating the emergency response procedures in the event of an emergency.

The tasks above are not clearly identified in the Air OPS Regulation or in the related AMC and GM. Moreover, there is no distinction between the level of qualification or the tasks of the FOO and those of the FD.

4.1.3. Level playing field

4.1.3.1 Licences

When preparing the draft proposal for new requirements to establish operational control standards and training standards for operational control personnel, EASA analysed the issue of licences for this category of personnel in the EASA Member States.

The investigation carried out revealed significant variations in relation to the licensing requirements in the different Member States. Some Member States require the FOO, FD and/or other roles related to operational control (e.g. operations controller) to have a licence, others do not. Across Member States, licences are issued for different levels of qualification and training.



There are Member States which:

- issue a licence upon completion of an initial training (the equivalent of the FOO qualification training) as per ICAO Annex 1 and Doc 7192 Part D-3;
- require additional on-the-job training with an air operator or operator-conversion training and role-specific training plus a minimum number of hours working for an air operator before issuing a licence;
- issue a licence only for specific roles, such as FDs or operations controllers;
- issue licences with different ratings (e.g. mass & balance; navigation);
- require additional certificates (medical, radiotelephony) besides passing the theoretical knowledge examination.

However, not all Member States that require operational control personnel to be licensed have developed also training requirements for these personnel.

Acceptance of licences issued by other Member States is diverse as well: most Member States that require a licence would accept licences issued by other Member States, but the conditions vary by and large. Some by and large apply additional conditions related to differences training, such as training on the Air OPS Regulation while others require a comparison of syllabi, to ensure that the requirements for issuing the licence by the other State is equally prescriptive.

It is not always the case that the Member States which accept FAA licences (issued upon completion of an entry-level initial training) approve or oversee the additional operator training programme. Thus, there is no guarantee that a person holding an FAA licence receives adequate training and is adequately qualified to perform the assigned operational control tasks in compliance with the EU rules.

In short, the FOO/FD licensing regime established through national legislations in some FAA establishes additional conditions to the Basic Regulation, thus hindering the free movement of persons and services across the EU and a level playing field for all actors in the internal aviation market (Article 1). Those licences do not acknowledge a standard qualification of FOOs or FDs at EU level, only at national level.

See Sections 4.5.3 and 4.5.4 for the social and economic impacts.

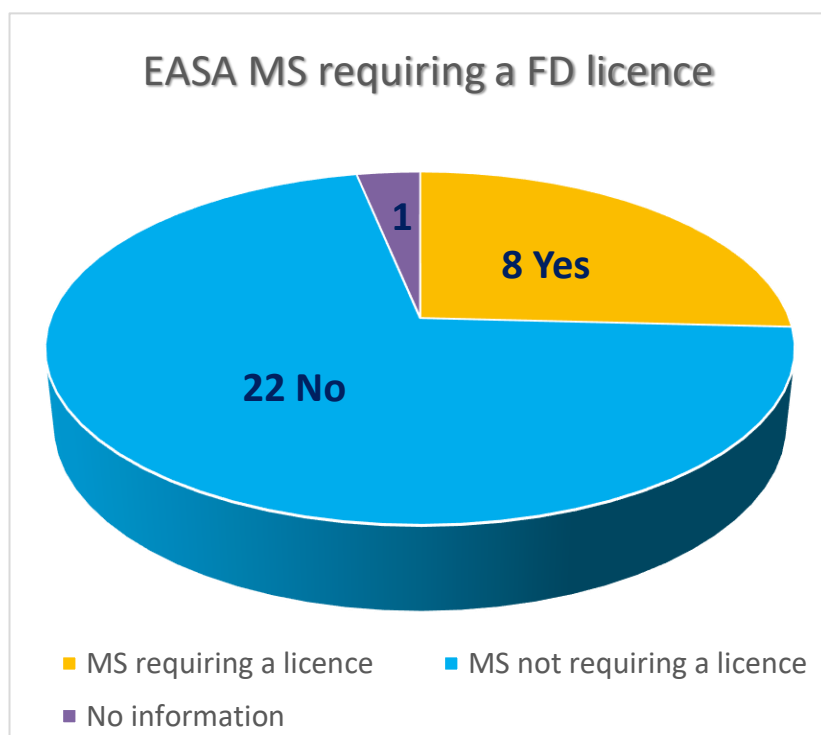
The details below have been extracted from the survey sent to the competent authorities of the EASA Member States and further enquiries and discussions with several competent authorities. Information from 31 EASA Member States was collected and analysed:

- 8 Member States require a licence for operational control personnel: Bulgaria, Croatia, Greece, Hungary, Iceland, Portugal, Romania, Slovakia; however, the qualification level varies from one Member State to another. Most Member States issue licences upon completion of an initial training compliant with ICAO Annex 1 and Doc 7192-D. Some Member States require also additional on-the-job training with an air operator and/or operator-conversion training and role-specific training before issuing a licence. This represents approximately 2 225 licences valid in March 2022.
- 4 of the 8 Member States above recognise licences issued by another State, be it FAA or another ICAO State or other EASA Member States, under certain conditions: Bulgaria, Croatia, Iceland,



Romania (the latter does not accept FAA licences). One MS (Portugal) does not recognise any licence issued by another Member States.

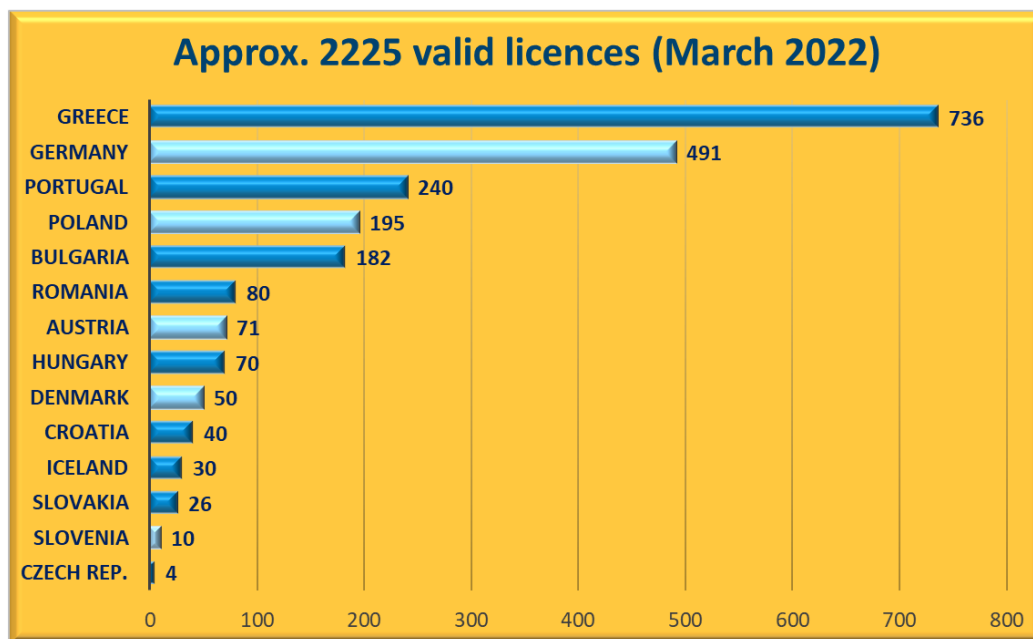
- 2 Member States (Czech Republic and Slovenia) have ceased issuing licences to operational control personnel in the past 2 years.
- 22 Member States do not require a licence: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Italy, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Slovenia, Spain, Sweden, Switzerland.
- 5 Member States (Austria, Denmark, Germany, Poland, Slovenia) issue licences at the request of air operators for some roles related to their operational control personnel, but do not require that operational control personnel in their State be licensed.



In this very diverse context, where the training standards and eligibility criteria for issuing a licence are not the same, it is questionable whether those licences acknowledge any standard level of qualification, whether they are relevant, in which context they might be relevant, or whether they support free movement of persons and services across the EU Member States.

On the other hand, sometimes it is the aircraft operators themselves that require licensed personnel for some operational control functions, although this is not a requirement under a national law of the state of the operator. For example, air operators working in a single aircraft operator business grouping (performing group operations) may employ the same operational control personnel among themselves; or some air operators provide operational control services to other operators. In both these cases, licensed personnel are preferred, as the licence offers the necessary guarantee of a higher level of qualification and training of FDs in the context where there are significant differences of qualification among FDs within the EU. Such air operators consider licences a necessity.

From the data made available to EASA for the purpose of this impact assessment, there are approximately 2 225 persons in the EU today that would be affected by the phasing out of licences.



Notes on the chart:

1. Licences are not required in the 5 Member States in light blue, but those Member States issue licences at the request of air operators.
2. Data from Hungary not confirmed by the competent authority until the time of publication.

4.1.3.2 Training — regulatory compliance

The Basic Regulation

Article 31(1)(a) of the Basic Regulation empowers the Commission to adopt implementing acts related to the operation of aircraft in compliance with the Essential Requirements for air operations established in Annex V.

Annex V to the Basic Regulation includes the following provisions in relation to the necessary training of the personnel for the preparation and safe execution of a flight:

‘A flight must not be performed if the crew members and, as appropriate, all other operations personnel involved in its preparation and execution are not familiar with applicable laws, regulations and procedures, pertinent to the performance of their duties, prescribed for the areas to be traversed, the aerodromes planned to be used and the air navigation facilities relating thereto.’
(point 1.1)

‘The operation must not be undertaken unless the following conditions are met: (...)

- (b) ***the aircraft operator must use only suitably qualified and trained personnel and implement and maintain training and checking programmes for the crew members and other relevant personnel that are necessary to ensure the currency of their certificates, ratings and qualifications;*** (point 8.1)

EU regulation and national requirements in the EASA Member States

The Air OPS Regulation includes a definition of the FOO/FD, which is identical to the ICAO definition (Annex 6). The status of this category of personnel is not further clarified.

The Air OPS Regulation also requires air operators to 'establish and maintain a system for exercising operational control' (ORO.GEN.110(c)), which defines the responsibilities and procedures for the initiation, continuation, termination or diversion of a flight in the interest of safety. To meet this requirement, air operators have the possibility to employ persons who will be assigned tasks in their system of operational control. These are FDs or operational control data managers, or operations controllers; different names could be used to identify those roles. When doing that, air operators must ensure that such personnel 'are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole' (ORO.GEN.110(e)).

The relevant ICAO standard in Annex 6 Part I Chapter 10 also states that personnel having tasks in an operational control system must have qualifications and training in accordance with Annex 1 to exercise those functions.

AMC1 ORO.GEN.100(c)&(e)¹¹ partially transposes the training standards of ICAO Chapter 10. The AMC contains the theoretical-knowledge syllabus necessary for FOO qualification and minimum elements for recurrent training and qualifications of ground instructors. It was developed in the context of the activities of an RMT on a different topic (RMT.0573 'Fuel planning and management'), as a temporary measure to cover some of the most critical tasks in relation to fuel/energy planning and management, until such time as a dedicated RMT would address the issue of training of operational control personnel.

The regulatory situation in Europe varies significantly. Several EASA Member States¹² apply national requirements for FOO/FD training, to compensate for the lack of training requirements at EU level.

The training programme of the air operators for operational control personnel is inconsistently overseen by competent authorities. In those Member States where a training programme exists or is required, some competent authorities approve it either individually or as part of the OM-D; some Member States do not approve it but include it in the oversight programme. For some Member States there is not enough data to clarify the status.

The picture becomes confusing when trying to identify the level of transposition of each SARP of Annex 6 Chapter 10 by each EASA Member State. The survey sent to the EASA Advisory Bodies in April 2021 confirmed that the ICAO SARPs on FOO/FD training are applied unevenly across the EU. It can be generally stated that more than half of the Member States have not transposed the SARPs of Annex 6, Chapter 10 in their national legislation, either partially or entirely¹³.

Several EASA Member States have notified differences to ICAO on the transposition of the training standards, awaiting an update of the EU legislation.

¹¹ Introduced by [ED Decision 2022/005/R](#) related to Regulation (EU) 2021/1296 on fuel/energy planning and management.

¹² The analysis included, besides the EU Member States, Iceland, Norway, Liechtenstein, Switzerland where data from these countries was available, as these countries are EASA Member States and apply the EU rules in this respect.

¹³ Source of information for this analysis: ICAO USOAP database on Compliance Checklists.



As a general observation, the 26 valid responses provided by the EU **air operators** indicate that industry is self-regulating, including in those States where there are no national requirements for FOO/FD training. Air operator associations and air operators define their own standards based on ICAO standards and industry best practices.

The unclear regulatory regime in some Member States is also highlighted by an interesting observation: the answer provided by some air operators to the question whether a licence for the operational control personnel is required in their state was different from the answer provided by the national competent authority of the same state. The confusion was probably generated because that Member State issues licences as a service to air operators, but their national legislation does not require a licence for the FOO qualification or for any FD tasks.

This was the status in the EASA Member States in April 2021, when the survey to collect this data was conducted. 16 valid responses from Member States were received.

Transposition of Annex 1 standards on the CBTA approved programme for FOO/FD:

- 13 out of 16 Member States applied the ICAO Annex 1 provisions regarding the CBTA-approved training conducted within ATOs, but only 4 of those 13 Member States had already transposed Amendment 176 to Annex 1 into their national legislation¹⁴. 6 Member States indicated the intention to transpose Amendment 176 in relation to the FOO/FD training into their national legislation. The majority of MS still applied ICAO Doc 7192 Part D-3, which is obsolete but the reference to the applicable documents (ICAO Doc 9868 and Doc 10106) is not yet updated in Annex 6.
- In 5 of 16 Member States, the national legislation was very similar to the training programme established through a recognised industry audit programme (IOSA = the IATA Operational Safety Audit); all those 5 Member States also reported that their national legislation followed the ICAO Annex 1 requirements.
- 6 Member States indicated they had no intention to transpose the provisions of Amendment 176 related to the CBTA-approved FOO/FD training into their national legislation.
- The 3 Member States that did not transpose the ICAO Annex 1 provisions for FOO/FD training in their national legislation applied instead either the provisions of the Air OPS Regulation, particularly ORO.GEN.110 and related AMC & GM, or their national legislation, or no requirement at all.

Types of training for operational control personnel:

- Initial training is required by 13 of the 16 Member States that responded to the survey.
- Company conversion (operator-specific) training is required by 11 Member States.
- Advanced training is required by 5 Member States.
- Recurrent training is required by 12 Member States.
- No FOO/FD training requirement exists in the national legislation of two Member States.

¹⁴ Amendment 176 to ICAO Annex 1 introduces the requirement that the FOO/FD training shall be approved and shall be conducted within an approved training organisations.



- On-the-job experience was required for the extension of licence in one Member States.
- Additional training for new aircraft type and operator authorisation for renewal training in one Member States.

Instructor qualification and experience:

- 5 Member States out of the 16 that responded to the survey had requirements for the qualification and experience of FOO/FD instructors.
- The variety of answers spans from no requirements to minimum 5 years of experience as FOOs/FDs and no interruption longer than 3 months in exercising the FOO/FD duties in the past 12 months.

From the 26 answers provided by the AOC holders, 19 indicated the application of minimum requirements for the FOO/FD instructors, but they vary by and large. For example:

- a valid FOO licence and minimum 1 year of experience in the field,
- minimum age and minimum experience,
- recency training and human-factors training,
- train-the-trainer course and course on the Air OPS Regulation,
- internal training and exams for ground/FD instructor,
- pilots with a commercial pilot licence (CPL) or an airline transport pilot licence (ATPL),
- at least 5 years of experience and internal assessment, nomination by the crew training postholder.

Most air operators (21 out of 26) indicated compliance of their FOO/FD training programme with the SARPs of ICAO Annex 1 and related ICAO Doc 9868 and Doc 10106.

17 of 26 air operators applied the CBTA programme as per ICAO Annex 1 and related documents (ICAO Docs 9868 and 10106). Other training programmes used were 'tailored in-house in line with specific needs', 'knowledge-based training', or ICAO Doc 7192.

18 out of 26 answers indicated that the training syllabus was based on the IOSA audit programme developed by IATA. Other references indicated for the training syllabus were the Air OPS Regulation, in-house training modules, FAA dispatcher training, or national legislation.

Third countries

At the time of the research (Q2 2021), some non-EU Member States following the EU regulatory system did not have training requirements for FOO. In the UK the FOOs/FDs had no formal status, and the ICAO standards were reportedly not implemented. Other European states had reported full compliance with the ICAO standards through national legislation.

Countries worldwide reportedly apply national legislation that has been aligned with the ICAO standards.

A number of ICAO States from Asia and the American continents declared that they applied an FOO training system aligned with the ICAO standards with very slight reported differences. So did the states



in the Middle East. The vast majority of the African states also reported alignment with the standards of Chapter 10 Annex 6 Part I.

The Australian legislation did not specify qualification or training requirements, licensing or duties for FOOs/FDs; a new legislation would put air operators in charge of the continued competence of any persons having functions of flight planning and flight dispatch.

The following table summarises the compliance situation (the references are dynamic, i.e. to the latest issues and amendments of those documents):

ICAO Annex 6 Part I (CAT operations with aeroplanes)	Air OPS Regulation and related AMC and GM	Member State national legislations
1. Duties and responsibilities of FOOs and FDs		
Chapter 4.6 SARPs	No specific requirements or AMC & GM for operational control personnel	Not enough data
2. Training of FOOs and FDs		
<p>Chapter 10 SARPs referring to:</p> <ul style="list-style-type: none"> - knowledge and skills of FOOs/FDs, - Annex 1 training of FOOs/FDs; - Doc 7192, Part D (obsolete); - Operator-specific training; - At least a one-way qualification flight in the flight crew compartment <p>Minimum qualification for FOOs/FDs, with or without a licence, must be compliant with the training specified in Annex 1.</p> <p>Annex 1 refers to ICAO Doc 9868 PANS-TRG.</p> <p>Additionally, the more recent ICAO Doc 10106 contains instructions for the development and implementation of a CBTA programme for FOOs.</p>	<p>AMC1 ORO.GEN.110(c)&€ partially covers the scope: applies to CAT operators using flight monitoring and flight watch functions in their operational control system for fuel planning and management purposes.</p> <ul style="list-style-type: none"> - Theoretical knowledge syllabus per ICAO Annex 1 and industry best practices, but no details to address skills and attitudes; - Operator-specific training and recurrent training; - Knowledge, skills and qualifications for instructors; - Reference to ICAO Doc 10106 and Doc 9868; - Not specifying the entry-level qualifications; - Not adjusted to different levels of competence and reflecting the specific tasks and duties in the OCC of an air operator 	<p>National legislations covering the same scope do not apply anymore.</p> <p>National legislations, where they exist, covering the remaining open issues, are not harmonised.</p>
3. Licences		
SARPs 10.1-10.2	A licence is not required by the Basic Regulation or by the Air OPS Regulation.	13 EASA Member States issue a licence for FOOs or FDs, under



<p>Requiring a licence is at the discretion of each ICAO State (i.e. it is optional).</p>		<p>different conditions and for different roles or tasks.</p> <p>The minimum qualification level for a licence is not harmonised across those EASA Member States.</p> <p>Of those 13 EASA Member States, 8 require a licence, and 5 do not require a licence under national legislations, but they do issue licences as a service to the operators.</p>
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4.1.4. Training and qualification levels

The OCC tasks require competent staff to focus on and select the data relevant for each decision. Thus, control of data becomes crucial, and the availability of adequate qualification standards for the OCC personnel fundamental. A training process resulting in flexible and adaptable OCC personnel that are capable of coping with daily challenges, unexpected events, and long-term changes is becoming more urgent.

(FOO initial qualification and advanced qualifications (FD, operations controller or other)

To understand the risk of allowing inadequately trained persons to take over tasks related to operational control, a clarification about the FOO qualification is needed.

The FOO qualification rather indicates the minimum level of competence required to execute basic, entry-level tasks related to operational control. The competencies needed to execute more complex tasks specific to various roles are developed with additional operator-specific training and role-specific training. A person that has only the FOO qualification should not be allowed to perform complex operational control tasks without supervision.

The roles in operational control are tailored to respond to various factors that influence the operational control: regulations, operational and commercial targets, or standards. Each of those roles requires further qualifications, either specific to that role or specific to the operator. An operator's OCC can be so complex that it requires several persons with different roles, each of them having a different set of tasks. It can also be the case that some of these roles provide input to the operational control activities from outside the OCC structure. For example:

- One person could be responsible for integrating various data into the programme used for managing operational control data: data from the AIP, fuel calculations, alternate aerodromes, weather data, performance calculations, aircraft allocation. This person's function could be named 'operational engineer', or 'OCC flight operations officer', etc.
- Another person could be tasked with flight planning, dispatch release, and in-flight support; this person's job title ('role') could be generically called 'flight dispatcher'.
- Another person could be in charge of the management of data coming to the OCC from various sources, either internal (e.g. the operator's aircraft maintenance information, load control data, etc.) or external (e.g. weather forecast, aerodrome restrictions, etc.); navigation data and



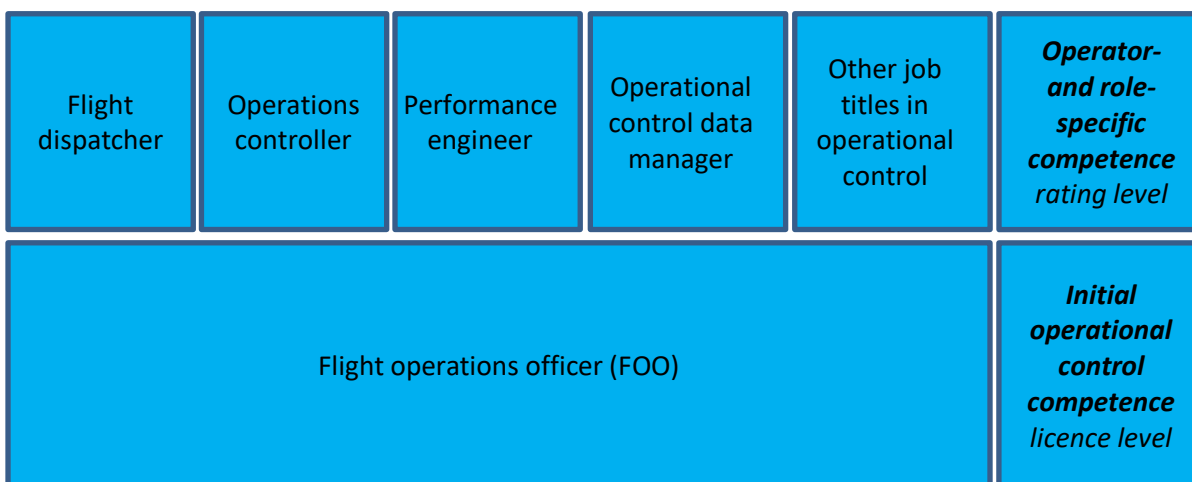
operator data need to be integrated for the application of flight planning, electronic flight bag or flight management system; this person’s job could be called ‘operational control data manager’.

- Another person could manage the commercial risk and take decisions on the network operation, operations in certain regions, or specific flights. This could be called ‘network controller’.
- Another person could be tasked to provide technical support related to the aircraft performance and provide data on aircraft performance and flight planning services. This job title could be ‘performance engineer’. With many air operators, this role could provide input to the operational control activities from outside the OCC structure.

In smaller organisations, with an OCC composed of a reduced number of people, the same person can have more than one role, which means that she or he is assigned to execute more than one set of tasks.

Roles that require additional qualifications after attaining the initial FOO qualification are exemplified in ICAO Doc 10106 in the following table:

Figure 1: Operator- and role-specific qualifications (copy of Figure 2-1. of ICAO Doc 10106)



This allocation of tasks to different roles needs to rely on adequate training and people’s competencies, otherwise the entire operation is exposed to higher risks. The FOO initial qualification focuses on general factors related to the risk management, while the operator ‘conversion’ training should be based on elements specific to the roles existing in its system of operational control. The FOO qualification alone is insufficient to ensure full competence of the persons executing tasks in the operational control system. That is why a person that only has an FOO qualification should not be allowed or authorised to perform, for example, FD functions without the additional operator- and role-specific training. As stated in Doc 10106, ‘without an understanding of the essential tasks in operational control, the quality of the operator problem-solving and decision-making process would be limited. This may consequently endanger flight safety due to low quality risk-management processes.’

Whether or not the state of the operator applies a licensing system, the training and qualifications of these personnel should be the same — as per ICAO Annex 6¹⁵ and Annex 1.

Currently the recently introduced AMC1 ORO.GEN.110(c)&(e) does not go any further than the theoretical knowledge content for the initial FOO qualification, nor does it clarify any duties or functions specific to the operational control tasks. Furthermore, AMC1 ORO.GEN.100(c)&(e) does not address the competence of FDs and their ability to cope with a complex operational environment or an unexpected situation that they have not encountered before.

CAT operators should describe in their operations manual (OM-D ‘Training’) the training and checking programmes for operations personnel: ‘Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight.’ (AMC3 ORO.MLR.100). This includes FDs and any other roles assigned within the operator’s system of operational control. Nevertheless, most European aircraft operators do not document the training programme for their operational control personnel in their OM since there are no specific requirements for this category of personnel in the Air OPS Regulation, although there is a requirement that the aircraft operator must include the training programmes of its ground personnel in its operations manual (Part-D). This is a regulatory compliance issue.

NCC operators

NCC operations also present a significant safety risk exposure as, for example, business aviation has a more dynamic type of operations than CAT, with frequent changes of the operational flight plan and short-term decision-making. Thus, the workload in the OCC of an NCC operator, although not having to deal with an equally high number of flights to those of a CAT operator at the same time, is challenging in its own way and significantly raises the pressure on the FD.

ICAO Annex 6 Part II (general aviation operations with aeroplanes, which are the equivalent to the NCC and NCO operations as per the Air OPS Regulation) includes only a recommendation about proper training and maintaining of competence of the FOO/FD (Chapter 3.10 of Section III – Large and turbojet aeroplanes). For this reason, the scope of this RMT does not include any rulemaking proposal regarding training of operational control personnel for NCC operations.

4.1.5. Different meaning of the term ‘flight dispatcher’ used in air operations and ground handling

In air operations domain, the FD function is inherently linked to the operational control system used by an aircraft operator, even when this is an outsourced service. The term ‘flight dispatcher’ is defined in ICAO Annex 6 and in the Air OPS Regulation, being interchangeable with ‘flight operations officer’, as ‘a person designated by the operator to engage in the control and supervision of flight operations, who is suitably qualified, who supports, briefs or assists, or both, the pilot-in-command in the safe conduct of the flight’. It is considered a typical ‘flight ops’ function, with little to no connection to any ground handling activities.

¹⁵ Excerpt from ICAO Annex 6 Part I:

‘10.1 When the State of the Operator requires that a flight operations officer/flight dispatcher, employed in conjunction with an approved method of control and supervision of flight operations, be licensed, that flight operations officer/flight dispatcher shall be licensed in accordance with the provisions of Annex 1.

10.2 In accepting proof of qualifications other than the option of holding of a flight operations officer/flight dispatcher licence, the State of the Operator, in accordance with the approved method of control and supervision of flight operations, shall require that, as a minimum, such persons meet the requirements specified in Annex 1 for the flight operations officer/flight dispatcher licence.’

Differently from the air operations domain, in ground handling, a ‘flight dispatcher’ is a person that ‘dispatches a flight’. Flight dispatch is the confirmation that all ground handling activities preparing an aircraft for departure have been completed (baggage and cargo loaded, refuelling done, passengers boarded, all aircraft doors closed, all ground support equipment and vehicles cleared from the aircraft safety zone, chocks off, cones removed, etc.), and, from the ground handling point of view, the aircraft is prepared for the next flight. Industry uses also other terms for this typical ground handling function: ‘red cape’, ‘turnaround coordinator’, ‘ramp coordinator’, ‘ramp supervision’, or simply ‘dispatcher’.

The Air OPS Regulation and the related AMC and GM do not identify the tasks of the FD function in relation to the operational control system of an air operator. Even aviation people could be confused by this different meaning of the term, as one may associate it only with tasks in the domain with which they are more familiarised or where they work — which is *either* air operations *or* ground operations, rarely both; sometimes one may forget or may not even be aware of the *other* meaning or the tasks associated with it.

To clear up this confusion until RMT.0728, developing ground handling requirements, proposes a complementary solution, this NPA is advancing minimum requirements and more comprehensive AMC and GM identifying tasks and responsibilities of FDs and FOOs in relation to the operational control system used by air operators, a definition and explanation of the term ‘flight dispatcher’, and training standards for this category of personnel.

4.1.6. Safety risk assessment

In terms of safety occurrences, it is difficult to find reports of events that could be directly linked to the inadequate training or even lack of training for the operational control personnel, since this is rarely identified as a clear cause of an accident or incident. When such accidents do occur, the main cause is expressed as ‘fuel miscalculation’ or the like, sometimes with inadequate training of the operational control personnel as a systemic contributing factor.

Another reason why it is difficult to obtain safety data for the lack of training standards for operational control personnel is because it is easier to identify issues related to task performance after an accident or a serious incident [45 %] than the factors that cause them, such as physiological events [11 %] or events related to experience and knowledge [11 %] (EASA Annual Safety Review 2021)¹⁶. Human factors (HF) and human performance (HP) issues are often not recorded within accident and serious incident reports until after the publication of the final reports.

The EASA Annual Safety Review 2021 (page 55, Figure 25) ranks ‘flight planning and preparation’, which is an exclusive operational control task, 7th in a list of 41 safety issues from accidents and serious incidents involving CAT and air-taxi operations. The risk for this safety issue is indicated as low; there were 20 events in which this issue was reported.

It should be noticed that several accidents and serious incidents reported in connection with fuel starvation (see also the impact assessment of [RMT.0573 Fuel planning and management in NPA 2016-06\(A\)](#)) can be analysed under the topic of this RMT and are related to the improper training of operational control personnel.

¹⁶ [EASA Annual Safety Review 2021](#), ISBN 978-92-9210-224-1. These figures refer to accidents and serious incidents in CAT and air-taxi operations with aeroplanes, page 48.

The events described below point at the lack of qualification of the persons involved in the operational control system as a factor that could have helped avoiding the incidents or the accident:

1. Hapag-Lloyd, Vienna, Austria (July 2000)

On 12 July 2000, a Hapag-Lloyd Airbus A310-304 experienced a retraction problem with the right main landing gear remaining partly extended after take-off at Heraklion/Greece. After consulting with the OCC, the flight crew decided to continue to Munich/Germany for operational reasons, at a lower altitude and airspeed, with the landing gear extended. They relied on incorrect fuel data of the flight monitoring system, disregarding the fact that the system was calculating the fuel data based on the unclean configuration of the aircraft.

With the actual fuel on board rapidly decreasing, the flight deck crew decided to land at Vienna/Austria. The aircraft encountered engine failure on both engines running out of fuel during final approach and crashed close to the runway, collapsing the main landing gear and seriously damaging the left wing and engine. None of the 150 persons on board were seriously injured.

During this event, the flight data was not assessed by the OCC team responsible for operational control. Analysing the raw data fuel remaining, flow, flight level and speed, cleared routing and the aerodynamic configuration and SOPs from the OM, the risk could have been identified independently from the flight crew. The OCC team on duty was not qualified to identify the potential operational risk, ask for the data required, and apply the standard procedures.

Besides the main factors leading to this accident, the accident investigation report of the Austrian Civil Aviation Authority referred also to the inadequate qualification level of the staff responsible for the in-flight planning and monitoring, data analysis and decision-making processes.

Source: Accident investigation report GZ.85.007/0001-FUS/2006 by the Austrian accident investigation body (UUB-LF).

2. Swiss International, Werneuchen, Germany (July 2002)

On 10 July 2002, a SAAB 2000 was operating from Basel/Switzerland to Hamburg. The flight crew were aware of the respective TAF stating temporary thunderstorms in northern Germany for the time period of their standard time arrival at destination. Because of this information, the commander decided to tanker additional 600 kg extra fuel for possible holding.

During flight, the forecasted thunderstorms rapidly developed into a massive squall line over northern Europe extending from the Danish/German border SE in the NE direction. The rapid deterioration of weather caused the closure of the airports where the flight was redirected two times — first Hamburg, then Berlin-Tegel, then diverted by ATC under the mayday code of 'fuel emergency' to the former airbase of Werneuchen, where the crew performed a landing that ended in a crash due to unknown obstacles on the runway pavement. There were no fatalities.

The accident investigation report of the German investigation body stated that insufficient information on the weather condition and its development both prior and during the flight was one of the systemic causes that led to the crash.

(Source: Investigation report AX002-0/02 of the German Federal Bureau of Aircraft Accident Investigation (BFU)).

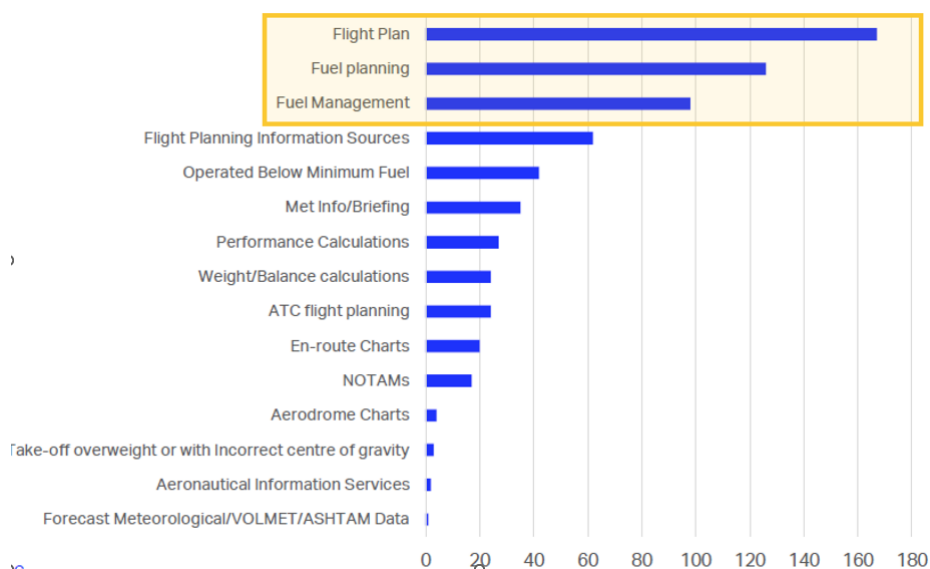


3. Perhaps the most relevant accident related to this topic — although occurring outside Europe and involving a non-EU air operator — is the LaMia Flight 2933 that crashed near Medellin, Colombia in 2016 due to fuel exhaustion: the flight plan provided a wrong calculation of the amount of fuel necessary for the flight. The aeroplane crashed because of insufficient fuel on board.

4. Another incident worth mentioning as being related to improper flight planning — a typical task for FOOs and FDs — occurred in 2003 at Manchester, where 3 arriving aircraft could not land and had to perform a go-around as they were not aware of a runway shortening — information that had been published in the AIP. (Source: A. Cordes; see Section 6.3 Other references)

The risks incurred with the lack of proper training for operational control personnel are reflected also in the occurrence reports collected and provided by IATA through the IDX¹⁷. The occurrences span over a 3-year period (January 2018 – February 2021) and were extracted from 326 distinct reports by 7 more than 100 air operators. The OCC-related issues were found in reports by 14 air operators. In the top OCC safety issues, the most common reports were related to ‘flight plan’ (167), ‘fuel planning’ (126) and ‘fuel management’ (98):

Figure 2: Incident categories associated with OCC safety issues between 2018 and 2021 as extracted from IATA IDX



In the graph above, ‘fuel management’ was understood as ‘error in fuel management performance calculations’. The other entries should be understood as ‘errors’ or ‘discrepancies’ or ‘inaccuracy’ found in the activity listed in the graph. The most common OCC safety issues reflected in the report were:

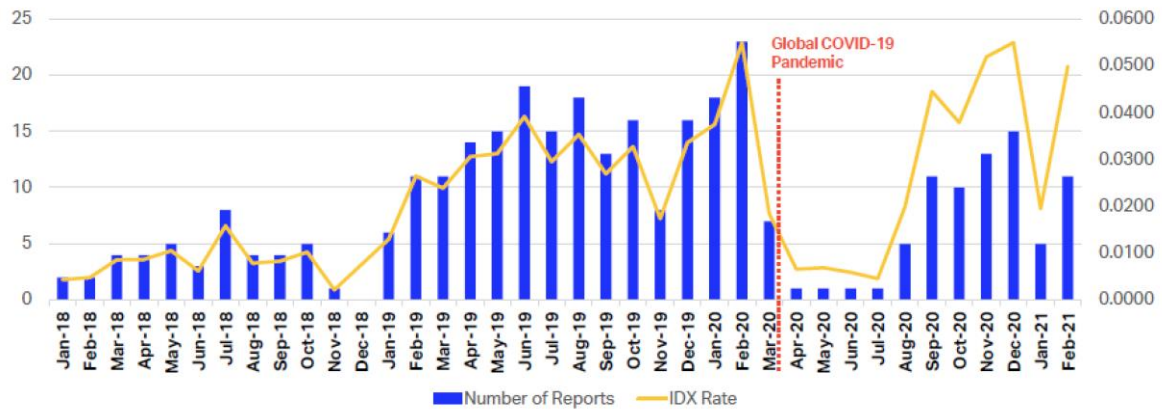
1. Flight planning (167)
2. Fuel planning (126), and
3. Fuel management issues (98)

Such data is usually not captured in the occurrence reporting database, as these are not reportable events under the applicable requirements; however, they are relevant for this topic.

¹⁷ IATA’s Global Aviation Data Management Program’s Incident Data Exchange

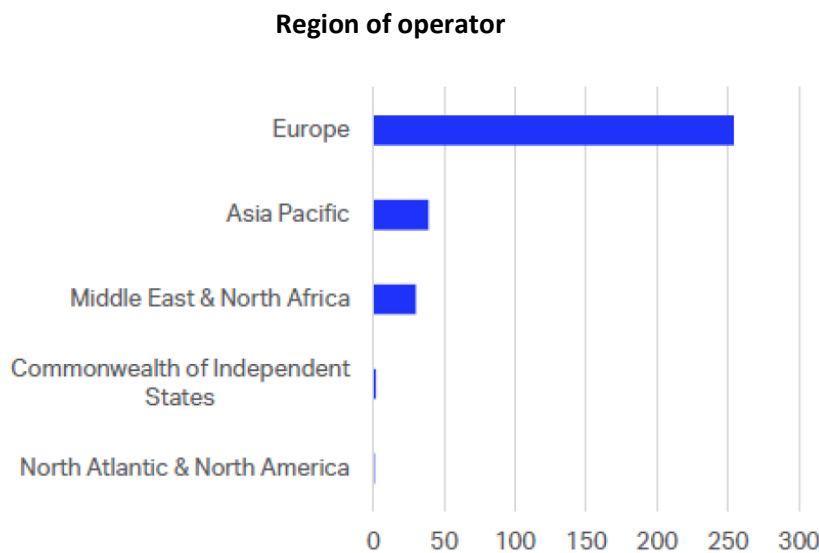
The situation during 2020, when the COVID-19 pandemic was in full development, indicates an incident rate raising to the pre-pandemic figures in the last quarter of 2020; however, more data is required to assess the upward trend:

Figure 3: OCC safety issues reported between Jan 2018 and Feb 2021



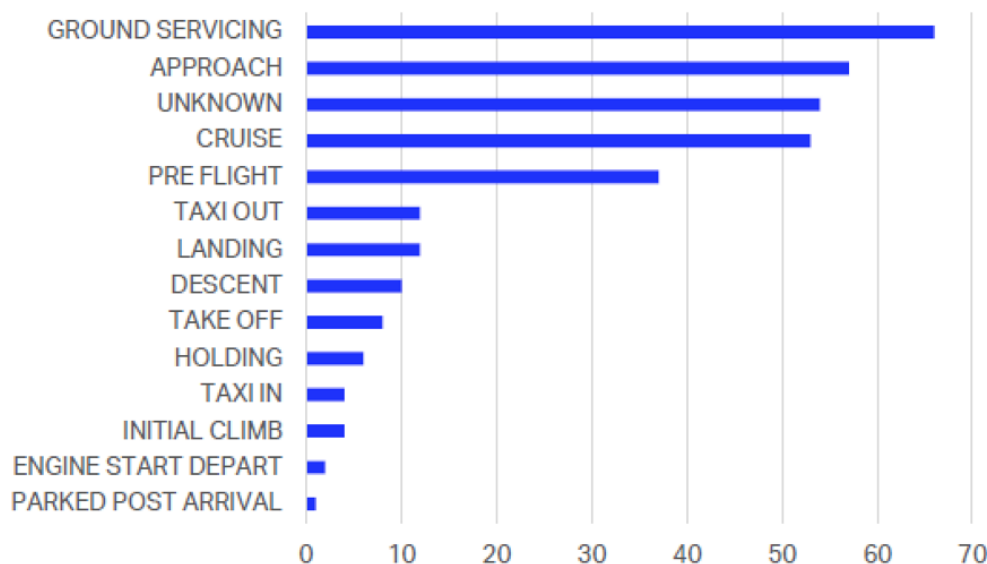
The geographic representation of these reports is the following – with Europe being the region with the most reported events; possibly due to the occurrence reporting legislation:

Figure 4: Geographic representation of the IATA IDX reports



In 38 % of the cases (i.e. 125 reports), the events occurred before departure (ground servicing, pre-flight, engine start depart and taxi-out):

Figure 5: Flight phase during which the reported events occurred



A potential safety threat is generated by the lack of certainty that the personnel performing operational control tasks to various degrees of complexity do not receive adequate training to allow them to perform their tasks safely as required by the operational situations.

The group of experts that provided support to this RMT identified and discussed another aspect of this potential safety issue. Some EU operators employ operational control personnel with an FAA licence. According to the FAA requirements, the FOO training programme consists of an introductory part of approximately 200 hours (maximum 5 weeks) for the initial qualification¹⁸. This training is then followed by a longer and more complex training under the responsibility of the Part-121 operator, all performed under FAA supervision. The candidate obtains a licence after passing a multiple-choice examination¹⁹.

The safety risk appears when EU air operators employ FAA-licensed persons having only the initial FAA training and assign to them operational control tasks without assessing first their training needs, or performing a gap analysis, or ensuring that they receive the necessary EU-law and operator-specific training.

Moreover, not all Member States approve or even oversee consistently the operator's training programme for operational control personnel. Approval of such training programme is not a requirement per the Air OPS Regulation; the oversight requirements are generic and do not refer specifically to this training. The training programme for operational control personnel may not even be covered in the operator's operations manual (OM-D). This way, the minimum qualification level of this category of personnel, the differences training to cover the EU regulatory system, and the operator conversion elements are not always completed. Consequently, there is uncertainty as to the competence of those persons to perform the assigned tasks to ensure flight safety. The purpose of the FAA initial training could be easily distorted and misused when accepted as such by an EU air

¹⁸ This includes the following areas of study: aerodynamics, aeronautical decision-making, air navigation during instrument meteorological conditions (IMC) and the national airspace system, ATC procedures, aircraft performance mass and balance calculations, CRM, human factors, interpreting weather charts and forecasts, meteorology, US regulations and laws, weather and NOTAM collection, interpretation and usage, wind shear and microburst awareness and avoidance.

¹⁹ The test consists of 80 questions and the minimum passing rate is 70 %.

operator without a clear entry level, training needs analysis and proper operator-conversion and role-specific training under consistent oversight by a competent authority.

This potential safety issue could be addressed by the solution proposed in this NPA.

4.1.7. Who is affected?

EU aircraft operators (AOC holders) performing CAT operations with aeroplanes are affected by this proposal. Their operations manual (Part-D) would have to be updated with the new CBTA programme. If not already done, the specific tasks for the operational control roles would have to be identified, and adequate training targets for each specific role would have to be defined. If this training is performed by the aircraft operator itself, training of trainers would be required.

Personnel performing tasks in relation to the aircraft operator's system of operational control (having a generic function called 'flight operations officer' (FOO) or specific ones like 'flight dispatchers' (FDs), 'operations control centre personnel' or similar). As 'end users' of the new requirements, they would undergo a CBTA programme or complete differences training to ensure that the required level of competence is achieved.

Operational control personnel holding a licence for performing various operational control functions.

EU competent authorities. Competent authorities would have to monitor, evaluate and mentor the CBTA programme. Inspectors who have already received qualification and training in EBT principles, application and continuing oversight as per Regulation (EU) 2020/2036²⁰ on evidence-based training for flight crew could be considered qualified also for performing these activities for operational control personnel CBTA.

EU training organisations. Those training organisations that wish to provide training for operational control personnel would have to develop a CBTA programme, with appropriate methods and tools, adaptable to the aircraft operator's target competencies.

4.1.8. How could the issue evolve?

4.1.8.1 The potential safety issue

With no training requirements for operational control personnel in some Member States, there is no certainty that the minimum entry level for the operational control tasks is achieved through a standardised training; there is no certainty that the FOOs or FDs have the necessary competencies to respond adequately to an increasingly complex operational control system. The support provided to pilots for the execution of safe flights would continue to be delivered without the guarantee that the person performing operational control tasks understands the inherent risk and addresses it by providing the expected support. Their problem-solving abilities and the decision-making process would not be developed to their full potential, which would eventually result in an operator's low-quality risk management process.

²⁰ Commission Implementing Regulation (EU) 2020/2036 of 9 December 2020 amending Regulation (EU) No 965/2012 as regards the requirements for flight crew competence and training methods and postponing dates of application of certain measures in the context of the COVID-19 pandemic (OJ L 416, 11.12.2020, p. 24) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R2036&qid=1680624205064>).

The contribution to accidents and serious incidents of secondary factors such as human performance or human factors related to the lack of adequate training would continue to be disregarded or diminished in significance.

In the future, the significance of an operational control function in the context of single-pilot operations and operations with extended minimum crew may increase even more. In situations when, for instance, the operating pilot is incapacitated during flight and the aircraft must perform an emergency landing operated in autopilot mode, such a decision may still require human intervention from the ground. It is likely that more responsibility will be transferred to the operational control personnel in the future. Alternatively, the operator might, of course, decide to have another pilot always available in the operations control centre to take operational control decisions. Nevertheless, it is likely that in an operational context where a higher level of responsibility for decisions related to operational control is foreseen, the aspect of licensing of operational control personnel might have to be reconsidered.

On the wrong use of the FAA-licensed personnel employed by an EU air operator for its operational control activities, without a proper training programme following a training needs analysis, relevant EU rules and operator- and role-specific training, the performance of such personnel would be flawed and might constitute an inherent systemic safety threat. The absence of competent authority oversight does not help minimising this risk; on the contrary, the lack of consistent oversight by a competent authority might encourage some operators to adopt an unsafe behaviour by reducing the differences training to an inadequate, non-standardised on-the-job training.

4.1.8.2 The level playing field issue

For air operators applying the business model of group operations, the absence of common rules for the operational control personnel training makes them comply with different sets of requirements from each Member State where their group operators are registered. The training needs analysis will look different for each air operator, which means that no common procedures in this area could be developed for the entire group, and also the training content might have variations.

Moreover, the lack of level playing field is maintained not only by the training of the operational control personnel but also by the licensing regime. Some Member States require FD licences, others do not. Some Member State do not recognise licences issued by other Member States. The criteria for issuing a licence and the tasks for which a licence is issued are uneven across these Member States. This diversity in regimes creates internal market distortions and is an obstacle for the free movement of persons and services within the EU.

Some Member States restrict the permission to perform certain operational control tasks to licensed personnel only. 13 Member States issue FOO or FD licences, however, the operational control tasks for which these licences are issued differ from one Member State to another. The levels of qualification acknowledged through a licence also differ from one Member States to the another. Of those 13 Member States that issue a licence, 5 Member States issue licences upon request, as a service provided to their air operators, although a licence is not required to perform certain operational control functions. The licences issued today do not acknowledge a standard qualification at EU level, only at national level. This is identified as a level playing field issue, resulting in free movement of persons and services in the EU Member States being hindered.



It could be argued that the licensing system applied by some Member States originates from the ICAO standards of Annex 6 that allow sharing of responsibility for the operational control of a flight between the commander/pilot-in-command and the FD. A licence issued for the FD function might stand for the recognition of an individual's adequate training and qualification. However, looking at the different scheme of the FOOs and FDs in Europe there is no evidence that a licence would bring safety benefits.

Section 4.5.3 'Social impact' contains more information on the licensing systems in some Member States.

4.1.8.3 The compliance issue

On the regulatory compliance side, the lack of training standards for operational control personnel, as well as the non-compliance of some air operators with the requirement to develop a training programme for these personnel would continue to be a source of findings in the ICAO audits to the EU Member States and EASA and, respectively, the EU competent authority audits to operators.

4.2. What we want to achieve — objectives

The objectives of this NPA are described in Section 2.2 above.

4.3. How to achieve the objectives — options

Two options were identified and compared to determine the best way forward for achieving the objectives of this task.

Option 0 'Do nothing' is considered the baseline for comparison.

With Option 0, there are no training requirements for operational control personnel except for those related to flight monitoring and flight watch functions published with the ED Decision 2022/005/R related to fuel planning and management. This ensures only partial alignment with ICAO Annex 6 Part I, and the EU rules will continue to be considered less protective than the ICAO SARPs. Member States would have to continue to notify differences to ICAO on the respective SARPs. Consequently, findings to Member States and EASA on alignment with the ICAO SARPs will continue to be raised, depending on the applicable national legislation on the matter.

The level playing field will still not be ensured in the EU, as AMC1 ORO.GEN.110(c)&(e) provides only the content of the theoretical knowledge of the initial training programme and minimum requirements for trainers.

The rules do not distinguish between the FOO and FD or between different roles that may exist in an operator's system of operational control, and therefore the training programme cannot be adapted to the specific tasks.

The current AMC1 ORO.GEN.110(c)&(e) has no predefined training targets, which makes the training effectiveness difficult to assess.

There is no process for training needs analysis, development and standardisation of training.

There are no specific authority requirements for oversight of operational control personnel training programmes, which means that without national legislation to cover the lack of EU legislation, the adequacy of the training programme cannot be assessed, and the training cannot be standardised.



The licensing regime in the EU remains unclear.

The confusion of using the same term ('flight dispatcher') with a different meaning in flight operations and ground handling operations is not addressed.

Option 1: Competency-based training and assessment (CBTA) programme

Option 1 proposes to develop a CBTA programme for personnel having tasks related to the operational control system of an AOC holder for CAT operations with aeroplanes.

Option 1 would ensure full alignment with the relevant training SARPs in ICAO Annex 6 Part I.

This option allows for the application of the CBTA processes for a generic FOO basic training as well as for operator and role-specific advanced training, as about 80-85 % of the initial FOO training tasks are valid also for intermediary-level training for the FD role.

Standardisation of training would be achieved up to a standard-intermediate FOO qualification level.

With a CBTA programme, competency targets can be defined by the air operator, so they can be made realistic and relevant for the specificities of their operation, which would increase the training efficiency.

As a part of the CBTA, the analysis of training needs is included in this option.

The competent authority would mentor and oversee the training programme. Mentoring means that the competent authority participates in periodical meetings with the FOO/FD training experts of the industry to assess the effectiveness of the training programme, provide input on it and on the competencies, on the training methods, on the need to change the training targets, etc.

Table 1: Selected policy options

Option No	Short title	Description
0	Do nothing	No change to the rules. Partial alignment with ICAO Annex 6 Part I.
1	CBTA programme	Develop training requirements for operational control personnel of AOC holders performing CAT operations with aeroplanes. The CBTA programme is based on adequate competencies, to include initial, operator-specific, and recurrent training. Training needs assessment is included in the process. Full alignment with ICAO Annex 6 Part I.

In parallel with Option 1, a safety promotion package similar to the CBTA programme for operational control personnel employed by AOC holders would be provided for non-commercial (NCC) operators. The advantage is that the CBTA programme allows for adjustments of training to fit the needs of the air operator, and it would improve the safety risk management within the operational control system of an NCC operator. This additional proposal is coming as a response to a comment from the business aviation operators highlighting that such a training programme would benefit also NCC operators. Since, however, ICAO Annex 6 Part II contains only recommendations in this regard, EASA is proposing the safety promotion as a way to reap the safety benefits, without adding the regulatory burden on NCC operators.

4.4. Methodology and data

4.4.1. Methodology applied

The multi-criteria analysis method was applied to this impact assessment. The options were compared by scoring them against a set of criteria.

The following scoring convention has been used for the assessment of impacts:

Table 2: Scoring convention

<i>Score</i>	<i>Positive impact</i>	<i>Score</i>	<i>Negative impact</i>
+10	Very high positive impact	-10	Very high negative impact
+7	High positive impact	-7	High negative impact
+5	Medium positive impact	-5	Medium negative impact
+3	Low positive impact	-3	Low negative impact
+1	Very low positive impact	-1	Very low negative impact
0	Neutral/insignificant	0	Neutral/insignificant

4.4.2. Data collection

The data for the impact assessment in this Section was obtained from three sources:

- the ICAO USOAP database on the compliance checklists for Annex 6 Part I (the so-called ‘EFOD tables’ containing the electronic filing of differences submitted by the ICAO States) as consulted on 17 August 2021;
- a survey conducted in April 2021, sent to the EASA Advisory Bodies (competent authorities of the Member States and aircraft operators of CAT operations with aeroplanes) with the purpose of obtaining a clear picture of the current situation of operational control personnel training in Europe, and also to anticipate the impact of new rules in this domain. The survey results, which indicate the variety of cases existing today in the EU, are described in various sections of Chapter 4; and
- feedback from the group of experts who provided support to EASA on this topic.

4.5. What are the impacts

4.5.1. Safety impact

While safety is not the main driver of this task, the establishment of training standards and the adoption of a modern and efficient training process (CBTA) will contribute to the safety of operations in general. The positive safety impact is considered low, as the effect of this modernised training process cannot be easily measurable, and the ultimate responsibility for the operational control of a flight remains with the commander and is not shared with the operational control person.

The low positive score in Option 1 is due to the fact that the focus in a CBTA method is on developing competencies to help the FOOs and FDs to understand the risk and the consequences of their actions, and to take better decisions for a safe operation.

Table 3: Safety impact

	<i>Option 0 'Do nothing'</i>	<i>Option 1 'CBTA programme'</i>
Safety impact	No impact	Improved safety risk management
	0	+3

4.5.2. Environmental impact

No impact.

4.5.3. Social impact

Option 0 would have no social impact.

Option 1:

A CBTA programme compliant with ICAO, implemented to comply with the implementing rules of the Air OPS Regulation, would ensure a standardised initial to intermediary level of training for operational control personnel. Additionally, if the air operator is required to define and describe the standards for the operational control duties and tasks associated with its system of operational control, this would lead to a targeted training programme for the operational control personnel. The training programme must be included in the air operator's operations manual, which ensures a higher degree of standardisation than today, through the oversight activities of the competent authority. A more standardised training, easy to be recognised across the Member States, enables an easier mobility of labour force within the EU. Therefore, it is considered that Option 1 would have a low positive impact.

The matter of licences issued today for operational control personnel needs to be addressed in relation to the training.

It must be highlighted that once the operational control duties and responsibilities of operational control personnel and their training standards are fully defined through the Air OPS Regulation and related AMC & GM, any national law requiring the issue of a licence to operational control personnel or any other additional requirements to access such activities will be considered contrary to the principles established by the Basic Regulation and therefore needs to be discontinued.

This could have a low negative social impact on the personnel that currently hold a licence for operational control tasks.

The proposals in this NPA will ensure harmonisation of the training requirements from initial up to an intermediary qualification level to achieve the appropriate level of competence.

Standardisation of the initial qualification training would also ensure easy mobility of personnel having the same qualification between different air operators located in different Member States. Considering the diversity in licensing regimes applicable today, where licences are issued based on different training standards, it is considered that the proposed amendment will bring an improvement in the free movement of persons and services within the EU.

In the long run, it is estimated that the quality and effectiveness of the CBTA system will improve the general level of training received, which could also be considered to have a slight positive impact.

The different levels of qualification could continue to be remunerated differently by the air operator, similar to the current situation, with or without the existence of a licence.

Member States and aircraft operators would have to consider different compensation methods to ensure social protection to the affected persons and minimise the negative impact of phasing out the licences for operational control personnel (by their expiry date).

Additionally, the proposed amendment introduces a clear distinction between the two different terms – flight operations officer and flight dispatcher. The role of an FD will be clearly defined, based on ICAO Doc 10106. Consequently, it is possible that some of the current licences issued for the FD function or for specific ratings equivalent to various operational control roles may no longer correspond to the initial scope, if at all, of the FD role.

Table 4: Social impact

	Option 0 'Do nothing'	Option 1 'CBTA programme'
Social impact	No impact	<p>Medium positive: Removal of obstruction to free movement of persons and services in the EU Member States by phasing out the national licences</p> <p>Low positive: Improvement of the staff competence thanks to a higher quality and effective training through the CBTA programme in the long run</p> <p>Medium negative impact on persons holding valid licences which are phased out</p>
	0	Overall: between +2

4.5.4. Economic impact

Option 0:

With Option 0, there would be no economic impact.

Option 1:

4.5.4.1 Air operators

The following data indicates the different types of training and duration applied by aircraft operators under the current requirements (with the caveat that the information was obtained before the publication of ED Decision 2022/005/R which contained the new AMC1 ORO.GEN.110(c)&(e) with the training syllabus for FOO and FD of AOC holders using flight monitoring and flight watch). The data was collected in April 2021 from the EU AOC holders that have participated in the EASA survey.

On the rough estimation of resources to implement the training system already in use by their organisation, the responses varied widely, reflecting the same diverse situation of training programmes applied across the EU. Some respondents provided only data regarding the trainers, while others also provided an estimation of the time required for the training. This table summarises the answers provided by the air operators:



Table 5: Summary of responses provided by air operators on training types and allocated resources

Initial training	Recurrent training	On-the-job training (OJT)	Instructors
Approx. 15 weeks (3-4 months)		90 days within the FD department and under supervision	
12 weeks+	1 day on a topic, every second year		
12-15 weeks (approx. 3 months);		Included within the 12-15 weeks	1 training manager; 9 instructors working 50 % as instructors and 50% as FDs
12 weeks			6 instructors
10 weeks	4 weeks yearly		2 instructors
At least 8-9 weeks			3 instructors
6 weeks (trainees without previous aviation experience) Approx. 3 weeks transition training (trainees with previous aviation experience) 1-week route familiarisation (trainees without previous aviation experience) Two sectors on both aircraft types (trainees with previous aviation experience) 32 hours — conversion training	Approx. 20 hours /year in a 3-year cycle	13 weeks (trainees without previous aviation experience). 4 weeks (trainees with previous aviation experience)	
5 weeks (50 days)			8 instructors
4-7 weeks classroom training, depending on previous experience. Maximum 880 hours in total (including OJT)		Approx. 40-50 hours in shifts over 4-6 months	
4 weeks	Approx. 2 hours/week yearly (unclear how many weeks or hours in total)		4 internal instructors and external instructors for initial training

3 weeks	3 working days, yearly	3 months under supervision	
20-30 hours in-house training; 8-10 hours computer-based training			
1 week+ (44 hours)	8 hours every 3 years; Flight deck experience and route familiarisation and route segment – yearly. Competence check: yearly		
1 week			1, or 2, or 3 instructors
8-10 days			
4 days			10 % FTE as training coordinator; 160 coordination hours in total
	IOSA recurrent training: 12-14 hours yearly. In-house training: 7-14 hours yearly		3 instructors
8 hours of computer-based training			

The implementation costs for the CBTA programme may be higher at the beginning considering the necessary time for preparing the new training programme and decide on the most appropriate training methods. AOC holders would have to adjust their training documentation and processes to match the ICAO SARPs in accordance with ICAO Doc 9868 and Doc 10106.

The target descriptions of the basic-level FOO competencies should be updated on a regular basis. The AOC holders within the same region could develop their own initial FOO competency-based training, to be provided internally by themselves, where they have this capability, or externally by suitably qualified training providers. This effort could be avoided if the predefined ICAO competency standards from ICAO Doc 9868 and Doc 10106 are applied.

The maintenance costs and the efficiency of the training in the long run would prove a return on investment in a relatively short time.



Considering that with Option 1 operational control personnel will be able to manage the available data, assessing the safety risks more efficiently and taking better decisions, these operational efficiency gains will counterbalance the implementation cost impact.

Overall, the impact is expected to be low positive for air operators with the implementation of the CBTA programme.

4.5.4.2 Training organisations

The implementation costs for training organisations are estimated to be very low to none, considering that operational control personnel training will not necessarily be performed within training organisations, and there will be no requirement for an approval of the training delivered by training organisations. The Basic Regulation provides no requirement in this respect. However, this does not prevent training organisations from providing CBTA for operational control personnel. In any case, the responsibility and the control for the training programme would be incumbent upon the AOC holders requesting such training programme.

Training organisations already having an approved training programme for flight crew licences could develop a training structure and plan for a CBTA for operational control personnel. They could also use the descriptions provided in ICAO Docs 9868 and 10106 as a reference model.

For training organisations, the development and integration of FOO-competent instructor and assessor capacities are expected to be more difficult at the beginning, with the risk of creating a bottleneck in the capacity to deliver continuous training. However, the costs of implementation are not expected to increase, as existing capacities would just be replaced to address the new CBTA needs.

Moreover, Option 1 would allow European providers of this training to extend their offer in compliance with the new EU rules and remove incentives for European trainees to follow the FAA training programme to obtain their FAA certificate which is not tailored to the EU regulatory environment. This is expected to have a medium positive impact.

4.5.4.3 Competent authorities

A negligible economic impact on national competent authorities (NCAs) is expected with the implementation of the CBTA programme in their role of oversight and mentorship. The oversight and mentoring/support functions for the target group of operational control staff are similar to the ones required for the development of evidence-based training and CBT standards for MRO personnel, air traffic safety electronic personnel (ATSEP), air traffic controllers (ATCOs), and pilots. The target group of operational control personnel would be a group of experts who would monitor and improve the CBTA programme on a regular basis, every few years. It should be made of experts from several AOC holders, competent authorities and FDs.

On the resources needed for the transposition of ICAO Annex 1 provisions on the CBTA programme for operational control personnel, the survey conducted by EASA provided the following information:

On the estimated number of qualified inspectors needed, the answers received from the 16 Member States that participated in the survey vary significantly, from minimum 1 to maximum 23 inspectors, depending on the number of AOC holders under oversight in each Member State and the number of OPS inspectors being responsible for the oversight of the new training elements.



On the estimated cost for inspector qualification to oversee the operational control personnel's training, the Member States provided different answers as well: where this training is included in the initial training provided to inspectors, there is no price available for the FOO/FD training; other estimations range from € 500/year to €3 500/person.

In CBTA, assessments are defined as an integrated element of the training process. With this option, competent authorities should not perform an assessment of each individual competency, but of the process and documentation at the AOC-holder level, and exercise their functions in training oversight and support.

Some sample elements relevant for supervision and assessment could be as follows:

- Description of entry competence level as well as the exit (target) competence level of each training phase and for each relevant role or job title in operational control are described by the AOC holder;
- Training and assessment standards and service level agreements are in place;
- Responsible persons are nominated and competent.

Table 6: Economic impact

	<i>Option 0 'Do nothing'</i>	<i>Option 1 'CBTA programme'</i>
Economic impact	No policy change, no impact	<p>AOC holders: higher initial training costs to be compensated by efficiency gains in operational control functioning, thanks to the better content of the training of the operational control personnel and clarification of their respective role (low positive)</p> <p>Operational control personnel: harmonisation of training and qualifications through compliance with the Air OPS rules and ICAO CBTA (low positive)</p> <p>Training organisations: a level playing field will be ensured for EU ATOs (medium positive)</p> <p>NCA's: initial cost to be compensated by more efficient oversight (negligible)</p>
	0	+3

4.5.4.4 Economic impact of phasing out the national FOO/FD licences

National competent authorities: 8 Member States that require a licence will be affected by this change. The impact is expected to be negligible. Where licence issuance is a service offered by the competent authority against payment, once licences are no longer required, those authorities will be able to allocate their resources otherwise spent on the examination process in other areas where those resources are needed.

Air operators: Operational control personnel may be licensed or not. The operational control personnel will in any case have to undergo the required training to ensure the appropriate level of competence. This will be either only initial training (which all operational control personnel must undergo) or advanced training (which only some of the operational control personnel will undergo) —

those that are required to take on higher responsibilities related to operational control). This second category is the one that has valid licences in the interval from the publication of the proposed future amendment until its date of applicability. Once the training standards for initial qualification and for advanced qualifications are settled, the need for a licence becomes redundant. The additional costs incurred on air operators to pay for licence issuance will disappear, while the current costs for training will remain unchanged.

Training organisations providing the training for the initial qualification and advanced qualification: the training organisations will continue to provide training, regardless of the licensing regime. No economic impact is foreseen for them. In terms of level playing field, with the development of harmonised EU requirements on the training standards, this would increase the possibility for training providers to enlarge the training offer to a wider market than the national ones.

Individuals/aircraft operator costs: A negative economic impact will be generated by the phasing out of licences in some Member States due to the advanced investment in the training for obtaining a licence (ranging from € 2 300 to €15 000 per training, depending on the entry level). However, with adequate solutions to enable recognition of the training already undergone, this impact could be neutralised.

Since Option 1 ensures alignment with the ICAO SARPs, which is considered a step forward for the training organisations and the aircraft operators towards alignment with the requirements applied beyond the EU, to the other ICAO Contracting States. Increased competitiveness for training organisations is also expected to occur.

Question to stakeholders on the economic impact

Stakeholders are invited to provide quantified justification elements on the possible economic impacts of the option proposed, or alternatively propose other solutions to the issue.

4.5.4.5 ICAO and third-country references relevant to this RMT

As stated in the description of the issue, the SARPs on training and qualification of operational control personnel in ICAO Annex 6 Part I Chapter 10 are partially transposed in the Air OPS Regulation. As described in Section 4.1.1 above, the European rules and some of the national rules are less prescriptive than ICAO. Therefore, since Option 0 would not ensure alignment with ICAO, the situation will remain as it is today and the findings raised to several Member States and EASA will continue.

An alignment of the EU requirements for operational control personnel qualification and training and their trainers with the ICAO SARPs would be ensured with Option 1. However, for the time being, only the SARPs of Annex 6 Part I would be addressed; therefore, the EU rules will continue to be less prescriptive than the relevant SARPs of Annex 6 Part III.

Overall, the relation between ICAO and EU rules is proposed to be as follows:

ICAO Annex 6	EU framework further to the EASA proposal
Part I	CBTA programme
Part II	Safety promotion
Part III	Not addressed for the time being in this proposal as the approach on the FD function for helicopter operations could differ significantly and the



	<p>rulemaking group did not have the adequate expertise for a proposal in this regard.</p> <p>A difference to ICAO would have to be filed unless the helicopter community considers the implementing rules to be valid also for their needs.</p>
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As indicated by the EASA survey, the FAA FD licences are recognised by some Member States. Option 1 would also allow avoiding that some trainees, who hold an FAA licence after having undergone the FAA training programme for initial qualification, act as FDs or operations controllers without any further assurance that their training is adapted to their role in operational control and that it results in them being competent to perform their duties as per the established operational control standards. Indeed, the FAA training programme is composed of two different parts (an initial training at introductory level provided by ground schools and a higher-level training provided by the specific operator) and a certificate/licence is issued to trainees after the completion of the first part, which could be wrongly considered as the completion of the full training for operational control personnel. Unless the FAA training is adapted to the ICAO Annex 1 and ICAO Docs 9868 and 10106, the FAA licences will not be considered sufficient to prove compliance with the EU training requirements for the minimum FOO qualification.

The EU regulatory framework will continue to differ from the FAA system, where the responsibility for the operational control is split between the pilot-in-command and the FD, and the latter is issued with a FD licence. In the EU, the commander/pilot-in-command is the only one responsible for the operational control of a flight. This RMT does not intend to propose an EU licence for operational control personnel.

4.5.5. General aviation and proportionality issues

The general aviation (GA) community — the equivalent in the EU air operations rules mainly to non-commercial operators with complex and non-complex aircraft (NCC and NCO) — is not affected by this proposal, as the proposal is addressed only to CAT operators.

With the current situation (Option 0), NCC operations are not addressed at all.

With Option 1, the CBT programme would also not address the NCC operators. Therefore, there is no impact to both options.

However, in parallel with Option 1, a safety promotion package similar to the CBTA for operational control personnel employed by AOC holders would be developed for the use of NCC operators. Since there is no regulatory package proposed for NCC, only safety promotion, this is reflected in the table below as ‘no impact’. The application of a CBTA programme will, indeed, increase the safety of operations in general — difficult to estimate at this moment due to lack of any data.

Table 7: GA and proportionality impact

	<i>Option 0 ‘Do nothing’</i>	<i>Option 1 ‘CBTA programme’</i>
GA and proportionality impact	No policy change, no impact	No impact
	0	0



4.6. Conclusion

4.6.1. Comparison of the options

Table 8: Comparison of options

Criteria	Option 0 'Do nothing'	Option 1 'CBTA programme'
Safety	0 No policy change, no impact	+3 Slightly improved safety risk management
Social	0 No policy change, no impact	+2 Positive: Removal of obstruction to free movement of persons and services in the EU Member States by phasing out the national licences Positive: Improvement of the quality and effectiveness of training through the CBTA programme in the long run Negative impact on persons holding valid licences which are phased out
Economic (including the level playing field)	0 No policy change, no impact	+3 AOC holders: higher initial training costs to be compensated by efficiency gains in operational control functioning, thanks to the better content of the training of the operational control personnel and clarification of their respective role (low positive) Operational control personnel: harmonisation of training and qualifications through compliance with the Air OPS rules and ICAO CBTA (low positive) Training organisations: a level playing field will be ensured for EU ATOs (medium positive) Competent authorities: initial cost to be compensated by more efficient oversight (negligible) Legal certainty of the new system as it will be aligned with the principles of the Basic Regulation and the Treaties of the EU
Total	0	8

Option 1, CBTA programme, aligning the EU Air OPS rules with ICAO Annex 6 Part I, in combination with safety promotion to address ICAO Annex 6 Part II, is the preferred option.

This will provide a harmonised framework for training and qualification of operational control personnel at European level and would facilitate the oversight performed by competent authorities when assessing operators' training programmes for this category of personnel.

The obstacles during the CBTA implementation are expected to be as follows:



- Most of traditional training syllabi are more a list of headlines and durations rather than descriptions of competency targets, training/assessment methods and standards. Effort for re-definition is expected.
- Traditional trainings are often fixed to a certain schedule and duration target rather than competency targets. It is easier to follow a fixed timeline instead of matching competency targets.
- Traditional training and assessment is based often on simple knowledge transfer and assessment, which could be conducted even by (FOO-related) incompetent instructors/assessors. A training organisation providing a CBTA programme for operational control personnel needs to improve or develop FOO competencies before conducting the training and assessment.
- Training organisations providing this training, which are normally not familiarised with the operational control duties, need to initiate networking and qualification concepts to obtain the FOO competencies.

The CBTA requires clear and straightforward training and assessment standards, which could be less important in traditional training. The acceptance and monitoring of standards become more crucial.

- After introduction of the CBTA, the competency targets, training and assessment standards and methods for oversight and mentorship should be checked and adjusted on a regular basis.
- Independent from traditional training or CBTA, outdated or irrelevant training targets and bad management standards would reduce training efficiency. The CBTA programme helps avoiding this problem since the training targets are based on real-situation tasks and current operational procedures.

Solution/support: To reduce the implementation effort of the CBTA for operational control personnel, at least two solutions are envisaged for the moment:

1. Propose a transition period for the application of the new requirements, sufficiently long to allow for the industry to prepare their training departments, trainers, training documentation and programme, as well as for the competent authorities to ensure the adequate preparation of their inspectors for the review and oversight of the new training system.
2. Member States are encouraged to act as mentors and invite the affected stakeholders in their state (training organisations, independent instructors, and air operators of all sizes) to create a task force that would have regular meetings or workshops, where they can share proposals for implementation and lessons learned to help smaller air operators, who may have less resources and expertise available to develop and gradually implement a CBTA programme for operational control personnel in their organisation.

Question to stakeholders

Stakeholders are invited to provide any other quantitative information they find necessary to bring to the attention of EASA.

As a result, the relevant parts of the IA may be adjusted on a case-by-case basis.



4.7. Monitoring and evaluation

Considering today's current situation, in which few EASA Member States oversee the training programme of operational control personnel of aircraft operators (also due to the lack of training standards or defined duties and tasks of this category of personnel in the rules), it is important to monitor that the oversight of the CBTA programme for FOOs and FDs will be done consistently. This action is valid also for the EASA standardisation activities in the air operations domain.

With the introduction of new training standards, this action is particularly important and necessary to ensure the implementation of an effective CBTA process in the future.

ICAO Doc 9868 (Section 3 Chapter 1) stipulates an even stronger role of the competent authorities in relation to this training programme:

'1.1.4 (...) The adapted competency model and associated competency-based training and assessment programme shall be approved by the appropriate authority'.

This is not transposed in these draft rules. However, competent authorities are encouraged to meet regularly with the training organisations providing FOO training and aircraft operators to ensure sharing of best practices, establishing consistent training targets and application of lessons learned from the implementation of CBTA programmes in the aviation industry so far.

Further actions to monitor and evaluate the implementation of the proposed rules will be assessed at the Opinion stage, taking into account the stakeholders' comments on this NPA.



5. Proposed actions to support implementation

- Focused communication for Advisory Body meeting(s) (TeB/TEC/COM)
- Safety promotion package with guidelines on a method of operational control for NCC operators employing operational control

(Primarily targeted audience: non-commercial operators of complex aeroplanes — NCC)



6. References

6.1. Related EU regulations

Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1)

6.2. Related EASA decisions

- Decision 2014/017/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ORO of Regulation (EU) No 965/2012 and repealing Decision 2012/017/R of the Executive Director of the Agency of 24 October 2012 — ‘AMC and GM to Part-ORO — Issue 2’
- Decision 2014/015/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-CAT of Regulation (EU) No 965/2012 and repealing Decision 2012/018/R of the Executive Director of the Agency of 24 October 2012 — ‘AMC and GM to Part-CAT — Issue 2’
- Decision No 2012/019/R of the Executive Director of the Agency of 24th October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council— ‘Acceptable Means of Compliance and Guidance Material to Part-SPA’
- Decision No 2013/021/R of the Executive Director of the Agency of 23 August 2013 on adopting Acceptable Means of Compliance and Guidance Material for Non-commercial operations with complex motor-powered aircraft (Part-NCC)
- Decision 2014/016/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-NCO of Regulation (EU) No 965/2012 and repealing Decision 2013/022/R of the Executive Director of the Agency of 23 August 2013 — ‘AMC and GM to Part-NCO — Issue 2’
- Decision 2014/018/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-SPO of Regulation (EU) No 965/2012 — ‘AMC and GM to Part-SPO’

6.3. Other references

- ICAO Annex 6 to the Chicago Convention on International Civil Aviation, Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, 11th Edition, July 2018
- ICAO Annex 6 to the Chicago Convention on International Civil Aviation, Operation of Aircraft, Part III — International Operations — Helicopters, 9th Edition, July 2018
- ICAO Annex 1 to the Chicago Convention on International Civil Aviation, Personnel Licensing, 13th Edition, July 2020
- ICAO Doc 9868 Procedures for Air Navigation Services — Training (PANS-TRG), Third Edition, 2020



- ICAO Doc 10106 Manual on Flight Operations Officers/Flight Dispatchers Competency-based Training and Assessment, First Edition (Revised), 2021
- ICAO Doc 8335 Manual of Procedures for Operations Inspection, Certification and Continued Surveillance, 2010
- ICAO Doc 10153, Guidance on the preparation of an operations manual, First Edition, 2021
- ICAO Doc 6983, Human Factors Training Manual, First Edition, 1998
- Andreas Cordes, A study on 'Job profile and training requirements for European Flight Dispatchers', submitted as part of the requirements for the award of MSc in Air Transport Management at City University London. January 2007: <http://eufalda.org/wp-content/uploads/2016/11/Dispatch-Study.pdf>



7. Quality of the NPA

To continuously improve the quality of its documents, EASA welcomes your feedback on the quality of this NPA with regard to the following aspects:

7.1. The regulatory proposal is of technically good/high quality

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7.2. The text is clear, readable and understandable

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7.3. The regulatory proposal is well substantiated

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7.4. The regulatory proposal is fit for purpose (capable of achieving the objectives set)

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7.5. The impact assessment (IA), as well as its qualitative and quantitative data, is of high quality

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7.6. The regulatory proposal applies the 'better regulation' principles^[1]

Please choose one of the options below and place it as a comment in CRT; if you disagree or strongly disagree, please provide a brief justification.

Fully agree / Agree / Neutral / Disagree / Strongly disagree

7.7. Any other comments on the quality of this NPA (please specify)

Note: Your comments on Chapter 7 will be considered for internal quality assurance and management purposes only and will not be published in the related CRD.

^[1] For information and guidance, see:

- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en
- https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox/better-regulation-toolbox_en