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**Annex Va to EASA Opinion No 03/2023**

**COMMISSION IMPLEMENTING REGULATION (EU) .../...**

**of **XXX****

**amending Regulation (EU) No 965/2012, Regulation (EU) No 1178/2011, Implementing Regulation (EU) No 923/2012 and Implementing Regulation (EU) 2017/373 as regards the establishment of requirements for the operation of manned aircraft with a vertical take-off and landing capability**

# COMMISSION IMPLEMENTING REGULATION (EU) .../...

of **XXX**

## **amending Regulation (EU) No 965/2012, Regulation (EU) No 1178/2011, Implementing Regulation (EU) No 923/2012 and Implementing Regulation (EU) 2017/373 as regards the establishment of requirements for the operation of manned aircraft with a vertical take-off and landing capability**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to 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 <sup>(1)</sup>, and in particular Articles 23, 31 and 44 thereof,

Whereas:

- (1) New air mobility concepts based on innovative technologies, such as unmanned aircraft systems and manned aircraft with a vertical take-off and landing capability, have emerged in recent years and present different levels of maturity today. With advances in technology and changing transportation needs, it can be expected to see even more innovative concepts in the years to come.
- (2) Operations with innovative aircraft designs present unique safety challenges due to their vertical take-off and landing capability and their ability to operate in congested urban environments. A dedicated, comprehensive regulatory framework should ensure that such operations are conducted safely and that the risk posed to passengers, crew, and the public is minimised.
- (3) Manned aircraft with a vertical take-off and landing capability is a new emerging technology, and there is a need to establish clear procedures for the certification and approval of their operation to ensure they meet safety and performance standards. A dedicated, comprehensive regulatory framework should provide a clear and transparent process as regards certification and approval aspects, giving manufacturers and operators the necessary certainty and facilitating the development and commercialisation of these aircraft.
- (4) Both commercial and non-commercial operations with aircraft with a vertical take-off and landing capability entail safety hazards that must be properly mitigated to ensure the safety of passengers and crew in the air and of people on the ground. The certification of operators of those aircraft is, therefore, a measure that can help mitigate known and potential safety risks stemming from the operation of these novel technologies and build an appropriate safety culture. The Agency should collect data and gain experience from

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<sup>1</sup> OJ L 212, 22.8.2018, p. 1.

the certification of operators and the operation of those aircraft and, if necessary, propose a proportionate regulatory framework for non-commercial operators.

- (5) As operations with aircraft with a vertical take-off and landing capability become more common, there is a need to ensure that they are integrated safely and efficiently into the existing airspace system. A dedicated, comprehensive regulatory framework should establish clear rules and procedures for the integration of such operations into airspace, thus helping to minimise the risk of collision and other safety incidents.
- (6) Operations with aircraft with a vertical take-off and landing capability have the potential to significantly impact the communities in which they are conducted, particularly with regard to noise and emissions. A dedicated, comprehensive regulatory framework should ensure that such impacts are minimised and that the public is properly informed about the operation of these aircraft, helping to build public acceptance and gain public support for this new technology.
- (7) To ensure the availability of appropriately qualified pilots during the initial phase of operations with aircraft with a vertical take-off and landing capability, holders of commercial pilot licences for aeroplanes or helicopters should be given the possibility to add to their licence a type rating for manned aircraft with a vertical take-off and landing capability, including privileges to operate that aircraft under instrument flight rules, where necessary. Where such pilots also hold instructor or examiner certificates for aeroplanes or helicopters, they should also be given the possibility to obtain additional instructor or examiner privileges for that aircraft.
- (8) The development and operation of manned aircraft with a vertical take-off and landing capability has the potential to transform air transportation and respond to new transportation challenges.
- (9) The requirements for the operation of manned aircraft with a vertical take-off and landing capability have been developed in consultation with relevant stakeholders, including aircraft manufacturers, operators, and regulatory bodies, to ensure they are appropriate and effective.
- (10) The requirements for the operation of manned aircraft with a vertical take-off and landing capability take into account the latest technological developments in aircraft design and operation, as well as international best practices and standards.
- (11) Operations with aircraft with a vertical take-off and landing capability with a pilot on board should be allowed to be performed in both controlled and uncontrolled airspace located inside or outside U-space airspace.
- (12) For the future integration of manned aircraft with a vertical take-off and landing capability into the transportation systems of the EU Member States, it is appropriate to apply the same regulatory framework available today for operations with aeroplanes and helicopters, with the necessary amendments considering the new air mobility concepts of operations with manned aircraft with a vertical take-off and landing capability, performance and operating limitations, and specific risks. Therefore, Regulation (EU) No 965/2012 <sup>(2)</sup>, Regulation (EU) No 1178/2011 <sup>(3)</sup>, Implementing Regulation (EU)

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<sup>(2)</sup> 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).

<sup>(3)</sup> Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1).

No 923/2012 <sup>(4)</sup> and Implementing Regulation (EU) 2017/373 <sup>(5)</sup> should be amended accordingly.

- (13) In order to provide stakeholders with sufficient time to ensure compliance with the new regulatory framework, this Regulation should apply 12 months after its entry into force.
- (14) The regulations referred to in recital (12) should be regularly reviewed and updated to reflect technological advancements, changing operational needs, and new safety and environmental concerns.
- (15) The measures provided for in this Regulation are in accordance with the opinion of the committee established by Article 127(1) of Regulation (EU) 2018/1139,

HAS ADOPTED THIS REGULATION:

### *Article 1*

#### **Amendments to Regulation (EU) No 965/2012**

1. Regulation (EU) No 965/2012 is amended as follows:
  - (a) in Article 1, the following paragraph 8 is added:

‘8. This Regulation lays down detailed rules for innovative air mobility operations in accordance with visual flight rules by day with manned aircraft with a vertical take-off and landing capability referred to in points (b)(i) and (ii) of Article 2(1) of Regulation (EU) 2018/1139.’;
  - (b) in Article 2, point (1a) is replaced by the following:

‘(1a) “rotorcraft” means a power-driven, heavier-than-air aircraft that depends principally for its support in flight on the lift generated by up to two rotors;’;
  - (c) in Article 2, the following point [1aa] is inserted:

‘(1aa) “helicopter” means a type of rotorcraft supported in flight chiefly by the reactions of the air on up to two power-driven rotors on substantially vertical axes;’;
  - (d) in Article 2, the following point [12] is inserted:

‘(12) “innovative air mobility (IAM) operations” means commercial and non-commercial air transport operations with manned aircraft with a vertical take-off and landing capability in congested (urban) and non-congested areas;’;
  - (e) in Article 2, the following point [13] is inserted:

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<sup>(4)</sup> Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 (OJ L 281, 13.10.2012, p. 1).

<sup>(5)</sup> Commission Implementing Regulation (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 (OJ L 62, 8.3.2017, p. 1).

- ‘(13) “VTOL-capable aircraft” (VCA) means a power-driven, heavier-than-air aircraft other than aeroplane or rotorcraft, capable of performing vertical take-off and landing by means of lift and thrust units used to provide lift during the take-off and landing.’;
- (f) in Article 2, the following point [14] is inserted:
- ‘(14) “VEMS flight” means a flight with a VCA that operates under a VEMS approval, where immediate and rapid transportation is essential and the purpose of which is either to:
- (a) facilitate emergency medical assistance by carrying one or more of the following:
    - (i) medical personnel;
    - (ii) medical supplies (equipment, blood, organs, drugs);
    - (iii) ill or injured persons and other persons directly involved,or
  - (b) perform any operation where a person is at imminent or anticipated health risk from the environment and either:
    - (i) needs to be rescued or provided with supplies; or
    - (ii) persons, animals or equipment need to be transported to/from the VEMS operating site.’;
- (g) in Article 5, the following paragraph [1b] is inserted:
- ‘1b. Operators shall only operate VCA in the context of IAM operations as specified in Annexes III and IX to this Regulation.’;
- (h) in Article 5(2), the following point (h) is added:
- ‘(h) VCA used for:
- (i) the transport of dangerous goods (DGs);
  - (ii) emergency medical service operations (VEMS).’;
- (i) in Article 5(5), the following point (c) is added:
- ‘(c) VCA in accordance with the requirements specified in Annex IX.
- In the case of (a), (b) and (c), the training organisations shall not be required to comply with Annex III (Part-ORO).’;
- (j) in Article 8, paragraph 1 is replaced by the following:
- ‘1. CAT operations with aeroplanes and helicopters shall be subject to the requirements of Subpart FTL of Annex III.’;
- (k) in Article 8, the following paragraph [5] is added:

- ‘5. Any operation with VCA shall, as regards flight time limitations, comply with the requirements specified in the national law of the Member State in which the operator has its principal place of business, or, where the operator has no principal place of business, the place where the operator is established or resides.’.
2. Annex I ‘Definitions’ to Regulation (EU) No 965/2012 is amended in accordance with Annex I to this Regulation.
3. Annex II (Part-ARO) to Regulation (EU) No 965/2012 is amended in accordance with Annex II to this Regulation.
4. Annex III (Part-ORO) to Regulation (EU) No 965/2012 is amended in accordance with Annex III to this Regulation.
5. Annex V (Part-SPA) to Regulation (EU) No 965/2012 is amended in accordance with Annex IV to this Regulation.
6. Annex IX (Part-IAM) to Regulation (EU) No 965/2012 is added as laid down in Annex V to this Regulation.

## *Article 2*

### **Amendments to Regulation (EU) No 1178/2011**

1. Regulation (EU) No 1178/2011 is amended as follows:
  - (a) in Article 2, the following points (8a) and (8b) are inserted:
    - ‘(8a) “rotorcraft” means a power-driven, heavier-than-air aircraft that depends principally for its support in flight on the lift generated by up to two rotors;
    - (8b) “VTOL-capable aircraft (VCA)” means a power-driven, heavier-than-air aircraft, other than aeroplane or rotorcraft, capable of performing vertical take-off and landing by means of lift and thrust units used to provide lift during take-off and landing;’;
  - (b) after Article 4e, the following [Article 4f] is inserted:

#### *Article 4f*

### **Type ratings for VCA**

1. Applicants that hold a commercial pilot licence for aeroplanes (CPL(A)) or helicopters (CPL(H)) in accordance with Annex I (Part-FCL) shall be entitled to be issued with a type rating for a VCA and shall exercise the privileges of such a type rating, provided they comply with all the following:
  - (a) the prerequisites specified in the operational suitability data established in accordance with Annex I (Part 21) to Commission Regulation (EU) No 748/2012;

- (b) Section 1 of Subpart H of Annex I (Part-FCL) and the provisions of this Article.
- 2. The theoretical knowledge examination shall be written, and the number of multiple-choice questions shall depend on the complexity of the aircraft.
- 3. Type rating training, skill tests and proficiency checks for aircraft specified in paragraph 1 shall:
  - (a) comply with the following requirements of Appendix 9 to Annex I (Part-FCL):
    - (i) Section A;
    - (ii) Sections B, C or D, as determined and unless otherwise specified in the operational suitability data established in accordance with Annex I (Part 21) to Commission Regulation (EU) No 748/2012; and
  - (b) under the conditions and to the extent specified in the operational suitability data established in accordance with Annex I (Part 21) to Commission Regulation (EU) No 748/2012, include additional training and testing to allow applicants to obtain the competence to operate the relevant VCA.
- 4. By way of derogation from the paragraphs above, applicants that hold a CPL(A) or a CPL(H) and that were involved in test flights for a particular type of VCA shall be issued with a type rating for that aircraft, provided they comply with all the following:
  - (a) they comply with the flight conditions for acting as test pilot in the relevant VCA type, as established in accordance with Annex I (Part 21) to Commission Regulation (EU) No 748/2012;
  - (b) they have completed either 50 hours of total flight time or 10 hours of flight time as pilot-in-command on test flights in the relevant VCA type;
  - (c) they comply with the prerequisites referred to in paragraph 1(a).
- 5. The validity period of type ratings issued in accordance with this Article shall be 1 year. Holders shall do all the following:
  - (a) in order to revalidate the type rating:
    - (i) within the validity period of the rating, complete at least 2 hours of flight time as pilot of the relevant VCA type;
    - (ii) within the 3 months immediately preceding the expiry date of the rating and in the relevant VCA type or an FSTD representing that aircraft, pass a proficiency check in accordance with paragraph 3, the duration of which may be counted towards the flight time specified in paragraph (a)(i). If applicants choose to pass the proficiency check earlier than within these 3 months, the new

validity period shall commence from the date of the proficiency check;

- (b) in order to renew the type rating, comply with point FCL.740(b) of Annex I (Part-FCL).
6. Holders of a licence and a type rating as specified in paragraph 1 shall be entitled to operate the relevant VCA under instrument flight rules, provided they comply with all the following:
- (a) they hold an IR(A) or an IR(H), as applicable;
  - (b) they have, in the relevant VCA type, completed the skill test or the proficiency check, as applicable, in accordance with paragraph 3 including the content relevant for instrument flight.
7. Notwithstanding point FCL.900(b) of Annex I (Part-FCL), applicants that hold an instructor certificate in accordance with Annex I (Part-FCL) with privileges to provide training for aeroplane or helicopter type ratings shall be issued with privileges to provide training for type ratings specified in paragraph 1, provided they:
- (a) hold a type rating as per paragraph 1 for the relevant VCA type;
  - (b) unless otherwise specified in the operational suitability data established in accordance with Annex I (Part 21) to Commission Regulation (EU) No 748/2012, have, within the 12 months preceding the application, completed at least 30 route sectors, including take-offs and landings, as pilot-in-command in the relevant VCA type, of which 15 route sectors may be completed in an FSTD representing that VCA type; and
  - (c) have completed, at an ATO, theoretical and practical training for extending instructor privileges to that VCA type, including mandatory training elements as specified in the operational suitability data established in accordance with Annex I (Part 21) to Commission Regulation (EU) No 748/2012;
  - (d) pass the relevant sections of the assessment of competence in accordance with point FCL.935 of Annex I (Part-FCL).

By way of derogation from paragraphs (b) to (d), applicants that hold a TRI(A) or a TRI(H) certificate and that were issued with a type rating for a VCA in accordance with paragraph (4), shall receive an extension of their TRI privileges to that VCA type.

8. Holders of instructor privileges as per paragraph 7 shall receive revalidation or renewal, as applicable, of these privileges when they comply with the relevant revalidation or renewal requirements of Subpart J of Annex I (Part-FCL), as applicable for the instructor certificate held, and additionally do either of the following:

- (a) complete, at an ATO, instructor refresher training that focuses on the privileges as per paragraph 7; or
    - (b) pass the relevant sections of the assessment of competence in accordance with point FCL.935 of Annex I (Part-FCL) in the relevant VCA type specified in paragraph 1 or an FSTD representing that type.
  - 9. Notwithstanding point FCL.1000(b) of Annex I (Part-FCL), applicants that hold an examiner certificate in accordance with Annex I (Part-FCL) with privileges to act as an examiner for aeroplane or helicopter type ratings shall be issued with privileges to conduct skill tests and proficiency checks for an VCA type specified in paragraph 1, provided they hold instructor privileges as per paragraph 7 for the relevant VCA type and comply with all the following in the relevant VCA type or an FSTD representing that type:
    - (a) complete examiner standardisation in accordance with point FCL.1015 of Annex I (Part-FCL), including the conduct of at least one skill test or proficiency check;
    - (b) pass the relevant sections of the assessment of competence in accordance with point FCL.1020 of Annex I (Part-FCL).
  - 10. Holders of examiner privileges as per paragraph 9 shall receive revalidation or renewal, as applicable, of these privileges when they comply with the relevant parts of point FCL.1025 of Annex I (Part-FCL) and additionally do either of the following:
    - (a) complete an examiner refresher course in accordance with point FCL.1025(b)(2) of Annex I (Part-FCL) that focuses on the privileges as per paragraph 9; or
    - (b) pass the relevant sections of the assessment of competence in accordance with point FCL.1020 of Annex I (Part-FCL) in the relevant VCA type or an FSTD representing that type.’;
2. Annex I (Part-FCL) to Regulation (EU) No 1178/2011 is amended in accordance with Annex VI to this Regulation.

### *Article 3*

#### **Amendments to Implementing Regulation (EU) No 923/2012**

- 1. Implementing Regulation (EU) No 923/2012 is amended as follows:
  - (a) in Article 2, point (85) is amended as follows:
    - ‘(85) “rotorcraft” means a power-driven, heavier-than-air aircraft that depends principally for its support in flight on the lift generated by up to two rotors;’;
  - (b) in Article 2, the following points (85a) and (85b) are inserted:

‘(85a)“helicopter” means a type of rotorcraft supported in flight chiefly by the reactions of the air on up to two power-driven rotors on substantially vertical axes;’;

(85b) “VTOL-capable aircraft (VCA)” means a power-driven, heavier-than-air aircraft, other than aeroplane or rotorcraft, capable of performing vertical take-off and landing by means of lift and thrust units used to provide lift during take-off and landing;’;

(c) in Article 2, point (94a) is inserted as follows:

‘(94a) “minimum fuel” means a term used to describe a situation in which an aircraft’s fuel/energy supply has reached a state where the flight is committed to land at a specific aerodrome and no additional delay can be accepted;’.

2. The Annex (Rules of the Air) to Implementing Regulation (EU) No 923/2012 is amended in accordance with Annex VII to this Regulation.

#### *Article 4*

#### **Amendments to Implementing Regulation (EU) 2017/373**

Annex IV (Part-ATS) to Implementing Regulation (EU) 2017/373 is amended in accordance with Annex VIII to this Regulation.

#### *Article 5*

#### **Entry into force and applicability**

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from [*12 months after the date of entry into force*].

However, Member States may decide to use the form established in Appendix 1 to Annex II to Regulation (EU) No 965/2012 as amended by point (5) of Annex II to this Regulation only when issuing new air operator certificates, or when introducing changes to existing certificates, in accordance with point ARO.GEN.310 or point ARO.GEN.330 of Annex II to Regulation (EU) No 965/2012.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

*For the Commission*  
*The President*  
*Ursula VON DER LEYEN*