



Terms of Reference

for rulemaking task RMT.0194

Modernisation and simplification of the European pilot licensing and training system and improvement of the supply of competent flight instructors

ISSUE 1

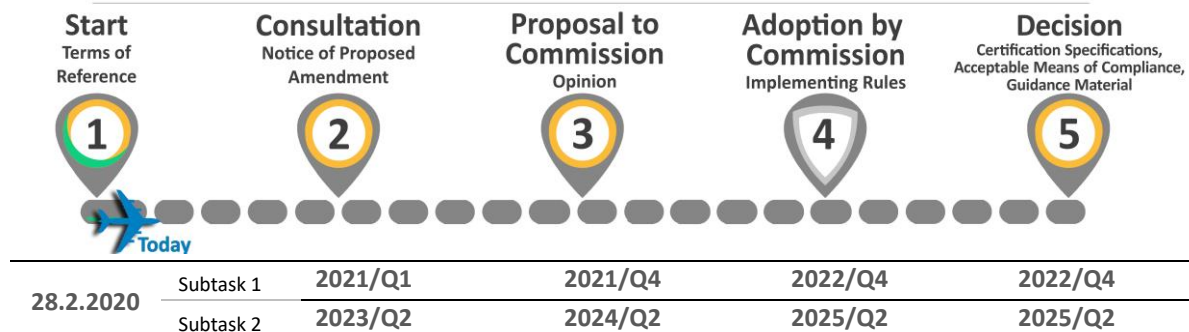
Issue/rationale

The objectives of this rulemaking task are to:

- (a) modernise and simplify the pilot licensing and training system by:
 - considering the recommendations from the ex post evaluation process under EVT.0006 (concerning the reassessment of the provisions for flight crew licences laid down in the Commission Regulation (EU) No 1178/2011 with regard to pilot training, testing and periodic checking for performance-based regulation, for which a report is expected in the first quarter of 2020) and subsequent best intervention strategy (BIS);
 - incorporate the latest ICAO Annex 1 and associated ICAO documents in the competency-based training and assessment (CBTA) concept for the appropriate licences and ratings; and
 - extending the principles of threat and error management (TEM) to all licences and ratings, as applicable; and
- (b) improve the supply of competent flight instructors

Action area:	Systemic safety and competence of personnel		
Affected rules:	Annex I (Part-FCL) and related AMC & GM to Commission Regulation (EU) No 1178/2011		
Affected stakeholders:	Pilots; flight instructors (FIs); flight examiners (FEs); approved training organisations (ATOs); declared training organisations (DTOs)		
Driver:	Safety	Rulemaking group:	Yes
Impact assessment:	Full	Rulemaking Procedure:	Standard

EASA rulemaking process milestones



1. Why we need to change the rules — issue/rationale

This rulemaking task (RMT) is the result of the combination of two subtasks that complement each other. These two subtasks will contribute towards:

- the revision of the regulatory framework concerning instructor certification with the aim of increasing the availability of flight instructors and improve their competence; and
- the modernisation of the process of pilot training, first and foremost by making increasing use of the concept of the CBTA system.

These ToR are developed on the basis of the Best Intervention Strategy ‘Flight instructors’ which is a sub-task of the Best Intervention Strategy (BIS) ‘Flight Crew Licences’.

Note that the terms of reference (ToR) for RMT.0596 ‘Review of provisions for examiners and instructors (Subparts J and K of Part-FCL)’¹ and these ToR are combined.

EASA believes that in order to modernise the training required to obtain licences, ratings, and certificates, and to base it more on competence rather than purely on classical theoretical knowledge class-room and flight-hour experience, it is necessary to first reconsider and reassess the process for the certification of instructors. Instructors are key players in the pilot training process and raising the quality of the training will depend on the availability of highly competent instructors. This will enable the transition to a CBTA system with more effective training.

ICAO Doc 9868 ‘Procedures For Air Navigation Services — Training’ strengthens the competency-based training (CBT) concept, and makes it very clear by complementing ICAO standards for the issuance of the flight instructor rating and for granting authorisations to flight instructors and flight simulation training device (FSTD) instructors with:

- qualifications to be held; and
- competence to be demonstrated by the instructors employed in a CBT programme.

In competency-based programmes, instructor competencies are made explicit, and instructors have to demonstrate these competencies throughout the training process and in their knowledge of the subject-matter and training-course content.

Moreover, since the entry into force of Commission Regulation (EU) No 1178/2011² (the Aircrew Regulation), Member States (MSs) and industry have identified several issues concerning the provisions for instructors laid down in Subpart J of Annex I (Part-FCL) to that Regulation. These issues have been identified and brought to the attention of EASA through the FCL ex post evaluation process, standardisation activities, other rulemaking activities, Advisory Body (AB) meetings, and stakeholders’ queries. Consequently, EASA has received a request from MSs and industry to initiate an RMT regarding the review of said Subpart in order to introduce more adequate and proportionate provisions, i.e. to review the prerequisites and revalidation requirements, as appropriate.

¹ <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0596>

² 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) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1574260313148&uri=CELEX:32011R1178>).



RMT.0596 'Review of provisions for examiners and instructors (Subparts J and K of Part-FCL)' was launched on 18 July 2016 with the aim of reviewing the existing regulatory framework for instructors and examiners. This RMT was divided to separately evaluate and revise Subpart J and Subpart K.

The revision of Subpart J was designed not only to simplify the training and qualification path, but also to make it more 'competency based'.

In point 1.2.8.1 of ICAO Annex 1, it is stated that approved training shall provide a level of competence at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training. Appendix 3 to ICAO Annex 1 deals with the requirements for the issuing of a multi-crew pilot licence for aeroplanes and requires that the training shall be competency based. ICAO defines competence as a combination of skills, knowledge, and attitudes required to perform a task to the prescribed standards.

In the existing implementing rules (IRs) for FCL, pilot training for licences and ratings is mainly prescriptive. Taking into consideration the ongoing work by ICAO to introduce competency-based training principles in ICAO Annex 1, the objective of RMT.0194 is to revise Regulation (EU) No 1178/2011 in order to make all Part-FCL training competency-based.

Almost all training programmes for the issuing of licences, ratings and certificates are based on prior experience requirements and on the number of theoretical and practical training hours.

The experience gained so far with the implementation of the Aircrew Regulation, the results of numerous workshops on the subject, and the industry feedback shows that the 'one-size-fits-all' principle is reaching its limits and that it is necessary to gradually move towards an approach that is based on knowledge, skills and attitudes, and that is more relevant to today's aircraft technology and operational environment.

The existing regulatory framework constrains the instructor's career and thus creates barriers for the increased availability of instructors' population. In addition, and linked to that, nowadays instructors are mainly conducting instructional activities either as a transitional phase of their professional carrier (to build up hours and to gain the experience to apply to airlines), or they are retired professional pilots that wish to continue to receive remuneration for flying activities. The aviation training market is facing a shortage of instructors, which needs to be addressed with timely, appropriate actions.

As a result, RMT.0194 incorporates the content of RMT.0596, and has been divided in two subtasks in order to give priority to improving the regulatory framework to facilitate the adequate supply of instructors and to gradually switch towards a CBTA framework, as follows:

- Subtask 1: Improving the supply of competent flight instructors;
- Subtask 2: Modernising and simplifying the European pilot licensing and training system.

Subtask 1 is necessary to perform a complete review of instructors' requirements in Annex I (Part-FCL) to the Aircrew Regulation and associated acceptable means of compliance (AMC) and guidance material (GM), as well as other related topics (i.e. to correct and align the requirements of the Aircrew Regulation with those of Commission Regulation (EU) No 965/2012 (the Air Operations Regulation)).

Subtask 2 will be analysed in a complementary BIS paper. It would be a basis for a further update of these ToR.



In line with the strategic direction of the General Aviation (GA) Safety Strategy, it was also agreed to review the existing instructor requirements to develop more proportionate ones and other associated measures for private pilots with the aim of making sure that there is a sufficient number of instructors available to ensure the development of GA in Europe. Requirements regarding flight instructors (prerequisites, course-related requirements, and privileges) should be included.

It is also important that the knowledge and skills imparted to the instructors are oriented towards enabling them to put the competencies gained into practice, as soon as they obtain the certificate.

Related safety issues

There are no safety recommendations (SRs), pertinent to the scope of this RMT, addressed to EASA.

Exemptions³ in accordance with Article 70 ‘Safeguard provisions’/Article 71 ‘Flexibility provisions’ and/or Article 76 ‘Agency measures’ of Regulation (EU) 2018/1139⁴ (the Basic Regulation) pertinent to the scope of this RMT are:

FCL.905.SFI — Article 14.6 — derogation, 11 cases — positive assessment

Member States (MS) intended to derogate from requirements set out in FCL.905.SFI of the Aircrew Regulation permitting Synthetic Flight Instructors (SFIs) that do not fulfil the requirements of having at least 3 years of experience (now amended, and requiring at least 50 hours of instructional experience as a TRI or SFI in accordance with this Regulation or Commission Regulation (EU) No 965/2012; and to conduct the flight instruction syllabus of the relevant part of the TRI training course according to point FCL.930.TRI(a)(3) to the satisfaction of the head of training of an ATO) as a Type Rating Instructor (TRI) to provide instruction for the SFI applicants.

As a safety mitigation measure MS proposed that holders of an SFI certificate in order to provide instructions to applicants for an SFI certificate, have to ensure that they have at least 3 years of experience of instructions as an SFI, have completed a specific 2-day SFI tutor course provided by an SFI tutor, and have passed an assessment of competence. In addition to require these SFIs to pass an assessment of competence during an SFI training course in order to maintain the validity of their SFI tutor privilege.

Root causes were inconsistency and complexity of the rules.

FCL.905.CRI — Article 14.4 — exemption, 5 cases — positive assessment

³ Exemptions that have an impact on the development of this RMT’s content and refer to:

- Article 70(1): Measures taken as an immediate reaction to a safety problem;
- Article 71(1): Limited in scope and duration exemptions from substantive requirements laid down in Regulation (EU) 2018/1139 and its implementing rules in the event of urgent unforeseeable affecting persons or urgent operational needs of those persons;
- Article 71(3): Derogation from the rule(s) implementing Regulation (EU) 2018/1139 where an equivalent level of protection to that attained by the application of the said rules can be achieved by other means;
- Article 76(7): Individual flight time specifications schemes deviating from the applicable certification specifications which ensure compliance with essential requirements and, as appropriate, the related implementing rules.

⁴ 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=1536149403076&uri=CELEX:32018R1139>).

Member states intended to exempt from the FCL.905.CRI for the following reasons:

MSs' stated that in PART-FCL the privileges to instruct and examine in complex HPA single pilot aeroplanes have been moved from the class rating instructor (CRI(A)) and class rating examiner (CRE(A)) to the type rating instructor (TRI(A))A and type rating examiner (TRE(A)). Current wording in the Aircrew Regulation removes possibilities for the CRI(A) to instruct in non-complex HP single-pilot aeroplanes, such as PA46, and in complex single-pilot aeroplanes, such as DHC6 or Piaggio 166.

Secondly, MS indicated that according to the current regulation CRI(A) do not have privileges to instruct on high performance non-complex aeroplanes in multi-pilot operations. Therefore, MS intended to permit the multi-pilot operations instruction if the instructor has met the requirements for MCC sated in FCL.720.A(d)(4).

Root cause was inconsistency in the Regulation.

FCL.905.FI — Article 14.4/6 — exemption/derogation, 2 cases — negative assessment

Two MS intended to permit flight instructors (FI(A)) to instruct on high performance non-complex a/c in multi pilot operations. MS proposed to introduce additional qualification requirements for an FI(A) to specify his/her privileges to instruct on single-pilot high performance non-complex aeroplanes in muti-pilot operations. Intention was to extend the privileges on an FI(A) to conduct training required by FCL.720.A (b)(3) and consequently FCL.720.A(d)(4) when applicants seek the privilege to operate single-pilot high performance non-complex a/c in multi pilot operations. As mitigation measure, MS proposed that FI(A) needs to fulfil the same requirements as a TRI(SPA) e.i. – hold a MMCI certificate or hold or have held a TRI(A) certificate for multi pilot aeroplanes (TRI(MPA)).

Root cause was inconsistency in the Regulation.

FCL.930.FI(a) — Article 71.2 — exemption/derogation — under assessment

Regulation 1178/2011 Paragraph FCL.930.FI (a) requires that applicant for the FI course shall have passed a specific pre-entry flight test with an FI qualified in accordance with FCL.905.FI(i) within the 6 months preceding the start of the course.

With this exemption organisation can commence theoretical training part of the FI program for applicants who hasn't completed pre-entry flight test. Pre-entry flight test shall be completed before FI-flight training commences.

Alternative means of compliance (AltMoC) relevant to the content of this RMT

The following AltMoC have an impact on the development of the content of this RMT:

<u>AltMoC Number</u>	Submitted by	Subject	Regulation points	AMC
2013-00007	CA	Type rating instructor	FCL.935	
2013-00008	CA	TRI for aeroplanes	FCL.930.TRI	
2013-00010	Org	TRI training hours	FCL.910.TRI(b)(2)	
2014-00017	CA	FI refresher seminar for revalidation and renewal	FCL.940.FI(a)(2); FCL.940.FI(c)(1)	AMC1 FCL.940.FI(a)(2)
2015-00009	CA	Training course for type rating instructors for aeroplane	FCL.930.TRI	AMC1 FCL.930.TRI

2015-00012	CA	Acrobatic rating	FCL.010;FCL.800; FCL.905; FCL.910; FCL.915	AMC1 FCL.800
2015-00023	CA	Privileges of a TRI(A) to give instruction in a TRI(A) course	FCL.905.TRI	AMC1 FCL.930.TRI
2017-00028	CA	TRI course for single-pilot aeroplanes — flight instruction	FCL.930.TRI(a)(3)	AMC1 FCL.930.TRI
2018-00053	CA	Type Rating Instructor Flight Training Syllabus	FCL.930.TRI	AMC1 FCL.930.TRI
2018-00060	Org	TRI(H) Training Course Icelandic Coast Guard	FCL.930.TRI	AMC2 FCL.930.TRI

ICAO and third-country references relevant to the content of this RMT

The following references will be considered for the alignment of the content of this RMT with ICAO Standards and Recommended Practices (SARPs), Federal Aviation Regulations (FARs), etc.:

- ICAO Annex 1 ‘Personnel Licensing’ (in particular point 1.2.8.1),
- ICAO Doc 9868 ‘Procedures For Air Navigation Services — Training’,
- ICAO Doc 10056 ‘Manual on Air Traffic Controller Competency-based Training and Assessment’,
- FAR 61 ‘Certification: Pilots, Flight Instructors, and Ground Instructors’.

2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation). This RMT will contribute to the achievement of the overall objectives by addressing the issues outlined in Chapter 1.

The specific objective of this RMT is to enhance safety by:

- improving the supply of competent flight instructors, especially for GA, by developing more proportionate and adequate criteria for the qualification process and making the profession of the flight instructor more appealing.
- introducing new training concepts and criteria, based on competence and attitudes, and more adequate and proportionate requirements for instructors both for professional and private pilots, as appropriate;
- reviewing the entire Subpart J for simplification and consistency between competence and privileges.

The identified actions (i.e. to review the prerequisites and course content for FIs that provide instruction for the leisure pilot licence, such as light aircraft pilot licence(LPL) and the private pilot licence (PPL), to increase coherence and consistency between the rules, to simplify the instructor qualification process and relevant administrative procedures) will ensure a level playing field by preventing the development of exemptions and flexibility provisions by competent authorities (CAs) and industry, and will enhance a harmonised implementation by avoiding different interpretation.



3. How we want to achieve it

During the development of RMT.0194, and building on the concept paper that was developed for RMT.0596, among other things particularly the following items will be addressed:

Subtask 1 — Instructors (Subpart J)

- (a) Review the instructor certificates and associated privileges to make the qualifications process more competency based.
- (b) Review the theoretical knowledge (TK) training path for commercial pilot licence (CPL)/private pilot licence (PPL) holders who aim to become flight instructors (FIs) for issuing non-professional licences (that could then also be extended to professional pilots in single-pilot aerial work activities) and develop a competency-based TK training syllabus.
- (c) Simplify the framework for instructor certificates to reduce granularity and to enable a modular and competency-based approach for crediting the instructor competence to extend their privileges.
- (d) Review and adapt to competence, the prerequisites and privileges for instructors (flight instructor (FI), class rating instructor (CRI), type rating instructor (TRI) and synthetic flight instructor (SFI) for single-pilot aeroplanes (SPA), acting in training conducted for multi-pilot operations for high-performance aeroplanes (HPA) (complex and non-complex).
- (e) Review of the requirements for the STI, as the current requirements prohibit pilots from qualifying without previous instructor experience.
- (f) Review the prerequisites and course content for FIs that provide instructions for GA pilot licences such as the light aircraft pilot licence (LAPL) and the PPL to define proportionate requirements, to promote the access to GA instructor certificates, and to ensure a sufficient number of instructors for GA activities.
- (g) Draft amendments to the Aircrew Regulation and new AMC and GM for aerobatic rating instructors (missing requirement has raised a possible safety issue).
- (h) Review the prerequisites in FCL.905.FI.
- (i) Develop AMC and GM for a pre-entry flight evaluation.
- (j) Coordinate with ongoing RMT.0599 'Evidence-based and competency-based training' to ensure that the instructor provisions facilitate evidence-based training (EBT).
- (k) Review the instrument rating (IR) instructor prerequisites (FI, IRI, TRI).
- (l) Remove all the remaining inconsistencies between the TRI and SFI requirements.
- (m) Draft a new requirement to allow SFIs to instruct for the issue, revalidation and renewal of an SFI or TRI that is restricted to FSTDs.
- (n) Review the mountain instructor (MI) revalidation requirements (FCL.940.MI) and the AMC and GM material for the content of a dedicated MI refresher seminar.
- (o) Consider to what extent instructors need medical certification and/or be actively involved in flight activities for delivering training in a simulated environment.



- (p) Coordinate with the GA Road Map initiative on all matters related to GA.
- (q) Define the instructor competence in CBTA programmes to create a solid foundation for the transition to Subtask 2.
- (r) Consider the recommendations from the ex post evaluation under EVT.0006.
- (s) Consider safety promotion activities to support the implementation of the regulatory amendments as well as to complement them with other means in addressing the identified instructor' issues.
- (t) Any other issues that are considered relevant by EASA.
- (u) Improve the framework of the Aircrew regulation to make it more robust to innovation and change in technologies and procedures on which pilot competence is based.
- (v) Any other issue related to the subject matters listed above.



Subtask 2 — Modernisation and simplification of the European pilot licensing and training system.

The ToR would be updated on the basis of the BIS 'Flight Crew Licences', Subtask 2 'Modernisation and simplification of the European pilot licensing and training system'.

Implementation of the competence based training principles places additional demands on both the national authorities and the training organisations.

Therefore, Subtask 2 will include:

- a review and update of the relevant parts of Part-ARA and Part-ORA. For example, it should be defined how an ATO can demonstrate a sufficient level of maturity to conduct competence-based training and national authorities should have appropriate legal basis for intervening, if it has determined that an ATO and/or a post holder is not fulfilling its/their obligations.
- A review of the balance between the roles of instructors, examiners, and authorities in the assurance of pilot competence.

4. What are the deliverables

The expected deliverables of RMT.0194 are:

- a notice of proposed amendments (NPA), containing proposed amendments to Part-FCL Subpart J and to the affected provisions of Part-ARA and -ORA as well as amendments to the related AMC and GM (Subtask 1);
- a comment-response document (CRD) to the above NPA;
- an NPA containing amendments to Part-FCL and to the affected provisions of Part-ARA and -ORA as well as the related AMC and GM regarding training requirements for the issue of licences and ratings (Subtask 2);
- a comment-response document (CRD) to the above NPA;
- an Opinion including:
 - amendments to the existing requirements of Part-FCL Subpart J;
 - new requirements in Part-FCL Subpart J, when needed;
 - amendments to the requirements for instructors in other parts of the Aircrew Regulation
- an Opinion including:
 - amendments to the existing requirements of Part-FCL for the prerequisites and training for the issuing of professional licences and ratings (Subtask 2);
- an ED Decision including the related AMC and GM (following adoption of the EASA Opinion by the European Commission).

5. How we consult

EASA will consult the affected stakeholders through an NPA and, depending on the subject, through focused consultation(s), which may include the following:



- technical meetings with the affected stakeholders;
- technical workshops;
- conferences (including teleconferences);
- technical meetings with the ABs;
- focused consultations with FCL experts on key issues via surveys or email; or
- written AB consultations.

6. Interface issues

Possible interface issues between RMT.0194 and the following activities:

- RMT.0599 ‘Evidence-based and competency-based training’;
- RMT.0196 ‘Update of flight simulation training devices requirements’;
- RMT.0678 ‘Simpler, lighter and better Part-FCL requirements for general aviation’;
- RMT.0230 ‘Regulatory framework to accommodate unmanned aircraft systems in the European aviation system’;
- RMT.0595 ‘Technical review of theoretical knowledge syllabi, learning objectives, and examination procedures for the Air Transport Pilot Licence (ATPL), Multi-Crew Pilot Licence (MPL), Commercial Pilot Licence (CPL), and Instrument Rating (IR)’.
- General Aviation and Rotorcraft Safety Roadmap
- SPT.012 ‘Promote the new European provisions on pilot training’ and more specifically, the safety promotion activities to mitigate contributing factors to LOC-I accidents and incidents

7. Profile and contribution of the rulemaking group

A task force (TF) has been set up to work on the review of Subpart J to address the shortage of flight instructors, to develop proposals for increasing the supply of competent flight instructors, and to reduce the granularity and complexity of instructor certificates.

For their work on Subtask 1 of RMT.0194, the TF members have experience, expertise, knowledge, and competence in the following:

- initial pilot training and checking;
- competent authority oversight;
- training organisations;
- commercial air transport operators that employ different categories of instructors and examiners: TRI, SFI, CRI, TRE, SFE, CRE, etc.;
- GA associations;
- FCL

The establishment of a rulemaking group is foreseen for Subtask 2 of RMT.0194.



The rulemaking group members should have experience and expertise in the domains of FCL requirements and regulatory and operational requirements for training organisations and operators.

8. Reference documents

8.1 Affected regulations

- Annex I (Part-FCL) to 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 296, 25.10.2012, p. 1)

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)

8.3 Affected decisions

- ED Decision 2011/016/R of 15 December 2011 on Acceptable Means of Compliance and Guidance Material to 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 ('Acceptable Means of Compliance and Guidance Material to Part-FCL')
- ED Decision 2012/006/R of 19 April 2012 on Acceptable Means of Compliance and Guidance Material to 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 ('Acceptable Means of Compliance and Guidance Material to Part-ARA')
- Decision N° 2012/007/Directorate R of the Executive Director of the Agency of 19th April 2012 on Acceptable Means of Compliance and Guidance Material to 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 ('Acceptable Means of Compliance and Guidance Material to Part-ORA')

8.4 Reference documents

8.4.1 Technical documents

- 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)
- Annex 1 'Personnel Licensing' to the Convention on International Civil Aviation



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- ICAO Doc 9841, AN/456 'Manual on the Approval of Flight Crew Training Organizations', Second Edition – 2012
 - 2012CAO Doc 9868 'Procedures for Air Navigation Services Training', Second Edition — 2016
 - ICAO DOC 9625 "MANUAL OF CRITERIA FOR THE QUALIFICATION OF FLIGHT SIMULATION TRAINING DEVICES - VOLUME I – AEROPLANES", 4th Edition, 2015

8.4.2 Academic documents

- Marsh, H.W., Martin, A.J., Yeung, A., & Craven, R. (in press, accepted February 2016). 'Competence self-perceptions'. In A.J. Elliot., C. Dweck., & D. Yeager (Eds). 'Handbook of Competence and Motivation', New York: Guilford Press.
- Civil Aviation Safety Authority Australia July 2009 'Competency Based Training and Assessment in the Aviation Environment' CAAP 5.59A-1(0).
- Dreyfus H.L. and Dreyfus S.E. 1986 'Mind over Machine: The Power of Human Intuition and Expertise in the Era of the Computer' New York: Free Press.
- Dreyfus H.L. Novice-to-Experts Scale based on the 'Dreyfus model of skill acquisition' from the professional standards for conservation, Institute of Conservation London 2003.
- Hodge S. (Griffith University Australia) 2014 'Expertise and the representation of knowledge in Training Packages' paper presented at the AVETRA 17th Annual Conference.
- Kearns S.K. (University of Western Ontario Canada), Mavin T.J. and Hodge S. (Griffith University Australia) 2016 'Competency Based Education in Aviation – Exploring Alternate Training Pathways' Rutledge New York, NY 10017 USA.
- Talbot M. Monkey See, Monkey Do: A Critique of the Competency Model in Graduate Medical Education' July 2004.

