



Appendix
to ED Decision 2018/001/R
Executive summary
Procedural information
Explanatory note
Proposed amendments to Part-FCL, Part-ARA and Part-ORA
of the Aircrew Regulation (Regulation (EU) No 1178/2011)
References

RELATED NPA: 2016-03(A) — RMT.0595 — 6.2.2018

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1. Summary of the outcome of the consultation

Please refer to the Explanatory Note to Decision 2018/001/R.



2. Individual comments and responses

In responding to comments, a standard terminology has been applied to attest EASA's position. This terminology is as follows:

- (a) **Accepted** — EASA agrees with the comment and any proposed amendment is wholly transferred to the revised text.
- (b) **Partially accepted** — EASA either agrees partially with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.
- (c) **Noted** — EASA acknowledges the comment but no change to the existing text is considered necessary.
- (d) **Not accepted** — The comment or proposed amendment is not shared by EASA.

comment

38-A

comment by: *Met Office*

The UK Met Office has the following comments to make in respect of NPA2016-03.

Meteorological requirements:

The syllabi should place a greater emphasis on the principles of Threat & Error Management (TEM), which are taking on a greater significance in Civil Aviation Authorities globally. The syllabi should encourage pilots to describe an appropriate TEM approach that encourages risk mitigation before they are encountered.

The syllabi should describe the interpretation of TAFs (for example the bounds and ranges covered by the wind, cloud and visibility elements in TAFs). They should also include learning outcomes on TAF amendment criteria.

response

Accepted.

Thank you for providing this comment.

Area KSA 100 topic *Additional TEM-related Learning Objectives* (100 03 00 00) will address the need for a greater emphasis on the principles of threat and error management (TEM).

LO 050 10 03 01 (01) states: 'Describe, decode and interpret the following aviation weather messages (given in written or graphical format): METAR, aerodrome special meteorological report (SPECI), trend forecast (TREND), TAF, information concerning en-route weather phenomena which may affect the safety of aircraft operations (SIGMET), information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations (AIRMET), area forecast for low-level flights (GAMET), ARS, volcanic ash advisory information.'

This ensures adequate coverage of the interpretation of TAFs.



comment

78-A

comment by: *University of Tromsø School of Aviation***Foreword**

We are grateful for the opportunity to present our feedback on the proposed changes and have done our best to summarize our thoughts and concerns in a clear manner.

Our feedback is based upon comments by Ground Instructors and CTKI/D-CTKI at University of Tromsø School of Aviation (UTSA).

The comments regarding each subject will be placed at their specific location in the NPA, but we would like to emphasize a few things to summarize what we consider our most imperative recommendations here.

- We strongly stand by option 2 (revamp 010 through 090 and the addition of 100 KSA)
- Leave the time available for 061 General Navigation Exam untouched. (2:00 hours)
- Be vary when removing LO's in general - the historic development including procedures, charts, nav aids and such, even though several may have little concrete use today, assist in developing an understanding and should still remain part of the syllabi to achieve higher understanding (everything taught must not necesarrily be part of the final exam).

response

Noted.

Thank you very much for your detailed comments to all parts of the CRD and your positive feedback.

comment

87-A

comment by: *University of Tromsø School of Aviation*

The implementation of BK as a part of most or all LO's is a great idea. Keeping the LO's both relevant, with the depth needed while staying on point is a challenge.

Therefore the amount of LO's marked as BK are seemingly too extensive. We suggest cutting down on BK LO's. Keep those essential for understanding the scope of the subject, cut the rest.

Example from NPA 2016-03(C):

01 |BK| "Extract the appropriate standard masses for passengers, baggage and crew from relevant documents or operator requirements."

02 |LO| "Calculate the traffic load by using standard masses."

Seeing as 01 is a natural and unavoidable prerequisite for LO 02, 01 seems obsolete.



2. Individual comments and responses

response	<p>Recommendation: Remove redundant LO's that is an unavoidable prerequisite for other LO's.</p> <p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>Whilst the concept of BK is maintained, the number of LOs identified as BK has been revised and reduced. Subject 050 is a good example of this revision.</p>
comment	<p>88-A comment by: <i>Julian Scarfe</i></p> <p>I welcome the improvements set out in this NPA and thank the rulemaking group for its considerable efforts.</p>
response	<p>Noted.</p> <p>Thank you for providing this positive feedback.</p>
comment	<p>98-A comment by: <i>CAA-NL</i></p> <p>Dear Sir/Madam,</p> <p>Enclosed the general comments of the Netherlands on the Notice of Proposed Amendment 2016-03 Technical review of the theoretical knowledge syllabi, learning objectives, and examination procedures for air transport pilot licence, multi-crew pilot licence, commercial pilot licence, and instrument ratings.</p> <p>Kind regards, Leonard Boer</p> <p><u>General comments NPA 2016-03</u></p> <p>The Netherlands is of the opinion that the proposed changes will improve the system of theoretical training and examination.</p> <p>Concerning the introduction of the new area 100 KSA (knowledge, skills and attitudes) a reference is made to the Instructional System Design (ISD) methodology. In the proposal no further reference is made where this system is elaborated further.</p> <p>In general, the ISD system is not common used in the EU and insufficient knowledge is available within the training organisations and competent authorities.</p> <p>As the system is not further developed, therefore efficient standardisation between training organisations and competent authorities is not possible. It is not clear if specific training for the system is available, but if not this will result in different interpretation of the rules.</p> <p>The Approved Training Organisations will be responsible for the required reviews and this is quite subjective and this could result in a conflict of interest. For the competent</p>



2. Individual comments and responses

authorities it is difficult to assess the correct application of the system.
In our opinion in this proposal the practical part of pilot training is not sufficiently taken into account. In our opinion incorporation of practical elements in the theoretical training will have more effect than the introduction of a new theoretical training and rating system.

The responsibilities and competences of the assessors and trainers are clearly defined, however it is not fully clear what the competences are for the KSA topics.

The standard of the changes in the Learning Objectives are clearly described. It is not clear how the standard rating of 75% will be determined. It is not clear if 75% is a total score or a score per competency.

The proposed AMC1 FCL.025 (a) (2) described the course KSA must be assessed before the first block of theory exam. It is unclear how this is possible, because the theory test are trained and examined in 2 to 4 theoretical modules.

Therefore SKA can only be implemented and evaluated on the subjects of the first block of theory.

Instead of other subjects there is no maximum number of examination attempts for SKA introduced. Since the ATO determines the score and is also a interested party, it is debatable whether the score represents the actual knowledge level of the candidate. Because of the subjective nature of this system oversight and enforcement could be difficult.

The rating system to determine the standard is limited feasible because the instruction system is not common used in Europe.

response

Partially accepted.

Thank you for providing this comment.

Instructional systems design (ISD). EASA has added a new GM (GM6 ORA.ATO.230(a)) to describe ISD. Chapter 2 and attachments within ICAO Doc 9868, PANS Training, also provide ISD course design information. EASA considers that the new GM and the extensive ICAO attachments provide direction to guide national aviation authorities and ATOs and enable standardisation.

EASA has introduced further AMC text and guidance material. EASA also proposes to run a workshop to facilitate consistent application and standardisation of the Area 100 KSA summative assessments, together with guidance on the ATO requirements, relating to ISD principles.

RMT.0595 does not address practical flight training.

The competencies for the KSA topics are now included in the new GM2 ORA.ATO.230(a) and in the KSA Area 100 LOs.

EASA clarifies that the 75 % pass mark applies to the scenario-based mental maths test. The minimum standard required in each competence at the summative assessment is 'satisfactory' as described in AMC3 ORA.ATO.230(a) and GM ATO.230(a).

The Area 100 KSA should be interwoven into the course and assessments successfully



2. Individual comments and responses

completed within the TK training course. EASA considers the KSA Area 100 to be an element of the TK training course. See FCL.025(a)(2):

‘Applicants shall only take the theoretical knowledge examination when recommended by the approved training organisation (ATO) responsible for their training, once they have completed the appropriate elements of the training course of theoretical knowledge instruction to a satisfactory standard.’

comment 99-A

comment by: *Aero-Club of Switzerland*

European Powered Flying Union and Aero-Club of Switzerland joined forces to comment on all parts of NPA 2016-03. On behalf of our members the author thanks the Agency for the preparation of the set of texts proposed.

The rulemaking group made considerable efforts, we found many improvements when comparing earlier versions with today’s text. Many thanks.

Nevertheless there is still room for some improvements, we concentrated, when we did our work, on the elements being particularly important for the lighter end of General Aviation operations.

response Noted.

Thank you for providing this positive feedback.

comment 105-A

comment by: *FNAM*

The FNAM (Fédération Nationale de l’Aviation Marchande) is the French Aviation Industry Federation / Trade Association for Air Transport, gathering the following members:

- CSTA: French Airlines Professional Union (incl. Air France)
- SNEH: French Helicopters Operators Professional Union
- CSAE: French Handling Operators Professional Union
- GIPAG: French General Aviation Operators Professional Union
- GPMA: French Ground Operations Operators Professional Union
- EBAA France: French Business Airlines Professional Union

And the following associated members:

- FPDC: French Drone Professional Union
- UAF: French Airports Professional Union

Introduction:



2. Individual comments and responses

The comments hereafter shall be considered as an identification of some of the major issues the French industry asks EASA to discuss with third-parties before any publication of the proposed regulation. In consequence, the following comments shall not be considered:

- As a recognition of the third-parties consultation process carried out by the European Parliament and of the Council;
- As an acceptance or an acknowledgement of the proposed regulation, as a whole or of any part of it;
- As exhaustive: the fact that some articles (or any part of them) are not commented does not mean FNAM has (or may have) no comments about them, neither FNAM accepts or acknowledges them. All the following comments are thus limited to our understanding of the effectively published proposed regulation, notwithstanding their consistency with any other pieces of regulation.

General comments :

The FNAM would like to thank EASA for the update of the learning objectives the Theoretical Knowledge syllabi and ground school exams provided within this NPA. Besides the FNAM supports the introduction of the Threat and Error Management concept and application in the training programs. However, regarding the implementation of the competence based training, it will be necessary to ensure consistency between the works of the several working groups on the topic, especially with the RMT. 0599 working group. Besides, the FNAM would like to emphasize that it is necessary to implement trainings based on acquiring skills, and not based on a minimum number of training hours, allowing distance-learning courses.

response

Noted.

Thank you for providing this comment.

On general comments and acquiring skills, the minimum number of hours as defined at implementing rule level remains in place, whilst in addition AMC2 ORA.ATO.230(a) requires an ATO to design their courses to ensure sufficient training and assessment to enable the required level of skill, knowledge and attitudes to be reached.

comment

130-A comment by: Luftfahrt-Bundesamt

The LBA has no comments on NPA 2016-03 (A).

response

Noted.

Thank you for providing this comment.



comment

131-A

comment by: *European Cockpit Association*Attachment [#1](#)

- Overall, ECA acknowledges there has been reorganization of the way some Learning Objectives (LOs) are presented. The splits / moves are visible, and it seems to add clarity and make logical sense.
-
- At the same time, the review shows a **misunderstanding of the concept of Competency-based-training (CBT)**, and therefore puts an almost exclusive focus on checking/assessment provision, **with very few**, if not no, provision on area 100 KSA **training**. In particular, no provision is proposed to develop the trainee's relevant *Core Competencies* through the relevant de-briefings.
-
- Moreover, as CBT is to be the new standard for training and licensing purposes, it is essential that there is a **common and coordinated logic sustaining the relevant EASA Rulemaking activities** to avoid duplication, overlaps, and conflicting provisions. In that respect, there should be only one basis for the definition and implementation of Competencies Frameworks throughout the whole Part FCL, and potentially all Aviation Personnel Licensing and Training provisions.
-
- Furthermore, with the introduction of CBT, Learning Objectives should emphasize - with regard to e.g. operational procedures - on the importance of the policy update of certain documents and procedures. New students should be able to keep up with the continuous development of new documents or updates of old ones. Therefore, it is not only necessary to know certain information (e.g. which documents to keep on board) but also to know the sources of amendments and future developments. Especially concerning long-range operations, pilots are usually further down the career path and the time of flight school is much in the past.
-
- We agree with the need to establish the **minimum amount/percentage of classroom instruction**. However, it is not clear how we can define *the minimum* percentage of classroom instruction. This issue is of particular importance as the classroom instruction, in general, is necessary to check the competencies of the student.
-
- We further fear that the lack of **consistency between the Competencies developed by an ATO and an airline** will create not only extra cost, but also a potential mismatch between the pilot profile required by the airline and the one provided by the ATO. This may cause some pilots being hired and subsequently dismissed by the airline due to their competency level being inappropriate. This will create not only an extra financial burden, but also a significant social cost for pilots-to-be.
-
- We **welcome the improvements in certain fields**, e.g. **subject Instrumentation**



2. Individual comments and responses

(022) where we see a good update of the learning objectives, removing irrelevant topics and adding useful new ones. In particular addition of FMA's, Fly by Wire, general **improved automation knowledge** and unreliable airspeed are a positive change. At the same time, we are missing knowledge requirements on the implementation of HUD displays on more next-gen aircraft as the B787/737Max/A350/etc.

-
- · The introduction of **Threat and Error Management (TEM) is welcomed**. It does add a physical/operational dimension to a subject that some find not very practical. If performed properly it helps the student to think in terms of *understanding => recognition => prevention/recovery*, as per UPRT.
-
- · We further **welcome the introduction of the Fatigue and stress management chapter**. However, ECA is surprised not to find a new Learning Objective demanding explanation of the **components of FRMS**, given the emphasis put on this subject in the foreword. The student should be able to describe FRMS and explain the main components of it.
-
- · Similar refers to the **Peer Support Programs (PSP)**. It is for the benefit of both ATPL and CPL holder to know of the existence of PSP programs and their importance for the safety-culture of an operator.
-
- · Finally, there seems to be a global search for clarification of theoretical notions, which can only be welcomed if it is in addition to the explanation of the notion itself (and not just vulgarization with less resulting knowledge / understanding).

response

Thank you for your multiple comments.

EASA has carefully assessed all the comments received.

Regarding your comment referring to:

1. the reorganisation of the LOs: Noted.

2. debriefings: Accepted.

EASA has provided additional text (AMC3 ATO.ATO.230(a) and GM1 ORA.ATO.230(a)) on the assessment of students in Area KSA 100.

3. coordination with other rulemaking tasks: Noted.

4. defining minimum hours for classroom instruction: Noted.

The minimum number of hours is defined at the implementing rule level.

5. profiles that airlines and ATOs develop: Not accepted.

The competencies are provided by ICAO in outline within the pilot competency framework; however, adapted models are anticipated to meet training phase as done by EASA, and an airline/ATO may construct their own adapted competency framework to include additional requirements and/or adjust placement of observable behaviours and



2. Individual comments and responses

performance indicators.

6. Subject 022: topic area 022 13 07 00 ‘Head-up display (HUD), synthetic vision system (SVS) and enhanced visual system (EVS)’ addresses this.

7. TEM: Noted.

Thank you for the positive comment.

8. fatigue, FRMS and PSP: Accepted.

Topic area 040 03 06 05 ‘Fatigue and stress management’ addresses this.

9. your last paragraph: Noted.

comment

133-A comment by: *Austro Control*

Dear all,

Austro Control fully supports this Notice of Proposed Amendment (NPA) addressing a safety and regulatory coordination issue related to flight crew licensing.

The updated Learning Objectives (LOs) for the theoretical knowledge (TK) syllabi and ground school examinations, as well as the introduced threat and error management (TEM) concept is a huge step in the right direction. The amendments proposed in this NPA and the proposed updated pilot training will for sure contribute to the overall enhancement of the pilots’ core competencies and their ability to make informed decisions.

Austro Control also supports the NPA introducing new LOs under Area 100 ‘knowledge, skills and attitudes’ (KSA).

best regards
 Franz Graser
 member of TeB/FCL-MED

response

Noted.

Thank you for providing this positive feedback.

comment

135-A comment by: *Karl Hunkeler*

The introduction of a new Area 100 KSA is very useful.

response

Noted.

Thank you for providing this positive feedback.



2. Individual comments and responses

comment	<p>137-A comment by: <i>Finnish Transport Safety Agency</i></p> <p>Trafi supports the NPA and the implementation of Area 100 KSA.</p> <p>It is very positive that the industry has been participating the task strongly and is giving input to the training requirements of the new pilots.</p> <p>As Area 100 KSA is a new concept, Trafi suggests that EASA will provide further guidance to enhance harmonised implementation of KSA. This could be for example workshops, additional material, etc</p>
response	<p>Accepted.</p> <p>Thank you for providing this positive feedback.</p> <p>EASA has provided additional AMC and GM text and it is recommended that EASA provide a workshop for national aviation authorities to facilitate consistent application and standardisation of the Area 100 KSA summative assessments, together with further guidance on the ATO requirements.</p>
comment	<p>143-A comment by: <i>European GNSS Agency</i></p> <p>We have 3 major concerns to chapters 010, 030 and especially to chapter 062</p> <p>Summary of major concerns: Information about PBN is insufficient. There is lack of information about several aspects of GNSS systems. Link of PBN impacts to other subjects (030, 070, 090) is not detailed and shall reflect the importance of PBN.</p>
response	<p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>Topic area 062 07 was reviewed to ensure adequate coverage of the subject matter. Topic area 033 02 01 05 ‘Instrument-approach charts’ includes thorough coverage of approaches and approach procedures requiring the use of PBN.</p>
comment	<p>144-A comment by: <i>GNSS Centre of Excellence</i></p> <p>Proposals to NPA NPA2016-03 base od CABILAVI project delivery http://cabilavi.gnss-centre.cz/ - prepared by Czech Technical University in Prague</p> <p>remark: We also place remarks to each subject separately to according NPA part but this document contains all our remarkrs to NPA</p>



Major concerns

We have 3 major concerns to chapter 010 030 and especially to 062

In second part of this documents are detailed proposed changes in Los.

Remarks to 010 –

only eliminated parts and replaced abbreviations – no changes in legislative incorporated !

There no new LO about PBN – we understand that PBN is mainly solved in 062, there should be some information concerning changes in legislative in area of PBN. Mentioned in subject 010.

We don't understand why LO 010 06 03 05 is eliminated.

We don't find those information unnecessary and we even recommend more information

Remarks to 030

There are no new LOS concerning PBN. Main issue is problematic of FMS with PBN. We recognize PBN will be most used type of navigation in nearest future. Theoretical knowledge shall aim more on this area. Number of LO aimed to this area is significantly lower than conventional navigation. We found as most important to add LO connected with FMS PBN usage. This area is normally covered only in type rating, but with PBN concept established, it is possible to move part of training in earlier training. In subject 030 is essential to state limitations and obligations of PBN during flight planning.

Remarks to 062

Many changes in subject 062 are in consensus with our findings. We agree with most removals and additions in this chapter. In removals part we even identified several more Los which may be removed - 062 01 01 06 and 07. These Los are connected with modulation and we suggest to remove them, or if they are found important to add to these Los several other modulations used in aviation. But it is matter of discussion if this knowledge has any practical use.

But our most important issue with whole NPA is connected with GNSS, part of 062. We found that there are completely missing information about all GNSS signals and services planned in nearest future. L5 E5 and LC will be probably in operation earlier that this NPA will turn in AMC.

Signal on L5 frequency is meant to be new standard for aviation. Glonass will introduce own SBAS system. Multi constellation of several GNSS system will solve problems with achievability and will change the flight planning process, etc. These information are essential and important and shall be incorporated in theoretical training. Specific proposed Los are in second part of this document.

Similarly in area of other GNSS we agree with removal of information of no practical value but we strongly urge to add information about differences of other GNSS systems.

For example information about SBAS usage of other GNSS. Information about types of signals and information incorporated in these signals of Galileo, Glonass and Beidou. It is essential to know which information is GNSS providing to allow pilot to use them most properly.

Galileo systems is removed from LO completely even the fact that in multi constellation is already usable today.

We found these technical information usable for practical flying and we recommend that this chapter of LO shall be changed properly.



Information about antenna shadowing shall be more stressed.

Advanced RNP is covered vaguely, for system which shall be most important in future.

Other issue in 062 is inadequate explanation of several types of RNAV/RNP operation.

We are not sure if this agenda is part of subject 010 or 062, but in this NPA we find information about PBN little underestimated. Number of Los of PBN in compare with classical navigation seems still inadequate, with fact that PBN will, and in many regions already is, the most used navigation way.

Whole chapter of 062 connected to GNSS is changed importantly and number of removals and changes made these LO break away from the concept.

Summary:

Information about PBN is insufficient.

There are completely missing important information about several aspects of GNSS systems.

Link of PBN impacts to other subjects (030, 070, 090) is very weak and shall reflect the importance of PBN.

Part 2: Detailed changes to LO

010 –

Remarks to 010 - only eliminated parts and replaced abbreviations – no changes in legislative incorporated !

010 04 02 05 Ratings

LO explain ganges un authorization to use RNAV/RNP equipment for en-route, terminal and approach operations.

010 05 04 00

LO Describe the purpose and limitations of use of GNSS equipment in VFR flights.

010 06 03 02

LO State the difference in SID and RNAV SID.

010 06 03 05

We don't find those information unnecessary and we even recommend more information

010 06 03 05

LO State the types of RNAV/RNP equipment and navigation performance usually required for departure routes.

LO Explain the use of fly-by and fly-over points.

010 06 04 01 General criteria

LO Explain the relationship between the following terms:

DA, DH, OCA, OCH, MDA, MDH, MOC, DA/H, OCA/H, MDA/H in Continuous Descent Final Approach (CDFA) procedures

LO Translate the following into plain language: TAA, APV, LPV, LNAV/VNAV, LTP, FTP.

010 06 04 02 Approach-procedure design

LO State the accuracy of facilities (VOR, ILS, NDB) + PBN navigation

010 06 04 03 Arrival and approach segments

LO Explain how the use of RNAV/RNP may change approach segments.



LO State what happens if integrity is lost during APCH.

010 06 04 04

LO State what the pilot should do in case of loss of navigation capability during RNAV missed approach.

010 06 04 05

LO State advantages and limitations of RNAV usage during visual maneuvering.

010 06 04 08 PBN navigation (RNAV/RNP) approach procedures

LO Describe the provisions that must be fulfilled before carrying out approaches.

LO Explain possible system composition to use RNAV/RNP approach

LO List RNAV/RNP approaches.

LO Explain APV.

LO Explain LPV.

(this part is partially covered in 062)

010 06 06 01 Basic requirements and procedures

LO State what type of altitude information FMS may provide.

010 07 01 04

LO State the requirement for RNAV/RNP equipment in different types of airspace.

010 07 02 19

LO State the action in case of degradation and/or loss of RNAV/RNP equipment.

LO State the action when entering airspace with RNAV/RNP equipment capable of lower performance than that required.

010 08 04 01 Aeronautical Information Publication (AIP)

LO State in which main part of the AIP the following information can be found:

...

GNSS information part 4.3

020

New Los, especially in part 022, covers nearly all of our previous proposals

Minor concerns only

022 03 03 01 GNSS compass

LO Explain the principle of operations of a GNSS compass.

022 15 01 00 Digital circuits and computers: General, definitions and design

LO Explain the single event effect (SEE) – possible causes and danger of radiation.

033

several changes, but many new aspects not covered – no new Los, just removals or moves

033 01 01 02

LO Explain how to determine the position of a significant VFR point for insertion into a GNSS flight plan.



2. Individual comments and responses

Using distance and bearing from an existing significant point
Using coordinates

033 02 01 04 Standard Instrument Departures (SIDs) and

LO Define SID and STAR for RNAV only.

LO Describe the difference between SID/STAR, RNAV SID/STAR and RNAV SID/STAR overlay.

LO Interpret all data and information represented on SID and STAR charts, particularly:

RNAV waypoints and non-RNAV intersection

Fly-over and fly-by waypoints

033 02 01 05 Instrument-approach charts

LO Define channel number and it's separation.

033 02 01 07 Usability of GNSS/FMC in flight planning and monitoring

LO Describe the advantages of GNSS/FMC equipment use:

Automatic calculation and display of tracks and leg distances

Additional route information in the database (minimum altitudes, approach procedures)

Time and fuel estimates over waypoints

Ability to adjust speed to arrive over a waypoint as a defined time

Time and fuel revisions based on predicted and actual wind

LO Describe limitations of usage GNSS/FMC equipment

Pilot entered errors (flight levels, wind, temperature, fuel)

The effect of other than predicted wind on fuel and time estimates

The effect of aircraft non-standard configuration on FMS predictions

033 04 01 02

LO Check that satellite based facilities are available during the expected time of use.

LO Check that GBAS/SBAS augmentation is available during the expected time of use.

033 04 01 04 pre-flight preparation of GNSS achievability

LO Define why it is important to check GNSS achievability.

LO Define RAIM NOTAM and NANU messages.

LO Explain the difference in use of augmented and non-augmented GNSS in connection with the achievability check.

LO Explain the difference in planned and unplanned outage of GNSS or SBAS.

033 05 01 01

LO Determine the correct entries

RNAV/RNP equipment (item 9, 18).

070 –**Minor concern - several aspects of RNAV are missing****071 01 02 08 RNAV/RNP**

LO State the need for certification of RNAV operations and a particular RNP.

LO State the areas where RNAV/RNP is mandatory in European airspace.

LO State the requirement for additional equipment to fly GBAS or SBAS based approaches.



2. Individual comments and responses

LO Explain RNAV/RNP operating procedures:

Pre-flight preparation, briefing and checks.

In-flight action in case of RNAV capability failure.

LO Explain procedures for RNP APCH

061**061 04 05 03 Determination of appropriate speed**

LO Define ground speed (GS) and explain its relationship to other speeds.

(Ground speed is already mentioned in other Los)

062

Positive changes, we would recommend some additional removals of unnecessary parts, but information about GNSS are not satisfaction in several aspects which are operational important

062 01 01 01 Electromagnetic waves

~~LO State that radio waves travel at the speed of light, being approximately 300 000 km/s or 162 000 NM/s.~~

LO State that radio waves travel at the speed of light, being approximately 300 000 km/s or 162 000 NM/s in vacuum, and that this speed may be lowered when travelling in a material medium.

062 01 01 06 Kinds of modulation (amplitude, frequency, pulse, phase, phase quadrant)

LO Describe the quadrature amplitude modulation (QAM) used by L5 signal.

062 01 01 07 Kinds of digital modulation (PSK, FSK, ASK)

LO Define time multiplex.

LO Define the Frequency Division Multiple Access (FDMA).

LO Define phase-shift keying PSK.

LO Define frequency-shift keying FSK.

LO Define amplitude-shift keying ASK.

LO Define quadrature phase shift keying used by Beidou II signal.

LO State that there several different types of digital modulation.

(These two Los 062 01 01 05 and 062 01 01 06 are in our point of view, out of practical use completely and we would recommend to remove information about modulation completely. But If we presume that knowledge of modulations is necessary it would be advisable to mention new types of modulations used in modern navigation systems.)

062 01 02 03 Types of antennas

~~LO helical antenna used in GPS transmitters.~~

LO Explain antenna shadowing.

LO Explain importance of antenna placement on aircraft.

062 01 03 01 Structure of the ionosphere

LO Explain how different layers of ionosphere influence signal propagation.

062 01 03 07 Factors affecting propagation of GNSS signal

LO State all factors affecting propagation.

LO Explain ionospheric refraction.

LO Explain tropospheric refraction.



LO Explain signal multipath propagation.

LO Explain the impact of solar radiation on signal propagation.

062 06 01 02 Operation – space segment

LO explain that there are several types of satellites currently in orbit which may differ by the type of signals they broadcast.

LO State that the navigation message contains:

- almanac data;
- ephemeris;
- ~~satellite clock correction parameters;~~
- UTC parameters;
- ionospheric model;
- ~~satellite health data.~~
- time parameters and clock corrections
- service parameters

It is essential to mention new development in GNSS signals – L2C, L5, multiconstellation

LO State that there currently are three signals transmitted on L1 frequency, namely C/A code, p(Y) code, L2C and M-code.

LO State that there currently are three signals transmitted on L2 frequency, namely L2C, p(Y) code and M-code. When L2C and M code is only transmitted by several satellites.

LO State that there will be a new code transmitted on L5 frequency (1176.45 MHz) (change after new development).

LO Explain which codes are specified to be used in civil aviation.

LO explain advantages of new codes L2C and L5

LO explain PRN code

User segment

LO Define the time to first fix.

Other GNSS

We agree that many aspect of GNSS theoretical knowledge training are unusable in operation and that is right decision to remove them, but

We also believe that there should be more information about operational significant differences of GNSS

Especially: Glonass FDMA principle and change to CDMA

Beidou: differences in space segment and orbits of satellite which directly effects operational usage

Galileo: interoperability of signals with other GNSS

And information about multiconstellation usability

Information that Galileo is not operational now is not important because of time when his NPA will turn into AMC and information about Galileo should be incorporated

062 06 02 01 Ground-based Augmentation Systems (GBAS)

State that the minimum coverage area is 10° on either side of the final approach path to a distance between 15 and 20 NM, and 35° on either side of the final approach path to a distance of 15 NM and explain difference of coverage for area navigation GBAS



062 06 02 03 European Geostationary Navigation Overlay Service (EGNOS)

State that EGNOS consists of three geostationary ~~Inmarsat~~ satellites which broadcast GPS lookalike signals.

LO State that EGNOS signal is compliant with Annex 10 Amendment 77 SARPS.

LO Explain the information contained in EGNOS message.

LO State that EGNOS message contains 500 bits transmitted with at a rate of 250 bits per second.

LO Explain that EGNOS may transmit different types of messages and state what the purpose of the most important messages is.

062 07 00 00 PBN

LO Explain the concept of availability.

(which is missing 062 07 01 01)

062 07 05 06 RNP AR APCH

LO State that information about approval for RNP AR APCH might be found in EASA rule SPA.PBN.105 and related AMCs.

062 07 05 07 A-RNP

LO State that A-RNP permits a range of scalable RNP lateral navigation accuracies.

LO List functional requirements for A-RNP.

LO Explain Engagement altitude.

LO State STAR Specific Requirements for A-RNP.

LO Explain Contingency Procedures for A-RNP.

LO State A-RNP turn principle

062 07 05 01 RNAV10

LO State that RNP 10 designation is inconsistent with PBN RNP and RNAV specifications. RNP 10 does not include requirements for on-board performance monitoring and alerting. For purposes of consistency with the PBN concept, RNP 10 is referred to as RNAV 10.

LO State that RNAV 10 retains designation of RNP 10 in implementation.

LO State that the flight manual must indicate that a particular GNSS installation meets the appropriate aviation authority's requirements according to the pertinent country of registry and its legislation.

062 07 05 02 RNAV5

LO State that RNAV operations determine the position in the horizontal plane (lateral navigation).

LO State that position may be determined based one or more of

a) VOR/DME;

b) DME/DME;

c) INS or IRS; and

d) GNSS.

LO State that a turn can start as early as 20 NM before the waypoint in the case of large track angle change with a "fly-by" turn; manually initiated turns may overshoot the following track.

062 07 05 03 RNAV/RNP1/2

2. Individual comments and responses

LO State that Operator holding P-RNAV approval may must obtain additional approval for RNAV 1/2.

090 –

Changed numbering of LOs

???? PBN Phraseology

LO State phraseology connected with PBN navigation.

Subject 100 - **KNOWLEDGE, SKILLS AND ATTITUDES (KSA)**

Several chapters of this subject are already used in ATO 010 CTU. We already used scenarios based training for communication and mental math during theoretical training, and we believe that outcomes are better than from classic theoretical knowledge training. We would like also introduce several aspects of KSA chapter **100 02 00 00** MANAGEMENT OF FLIGHT PATH and **100 07 00 00** Knowledge. These practical exercises aimed for improvement of automation by FMS usage seems very important for PBN training and familiarization with usage of GNSS. But during our work on this issue we identify problem that there are several types of FMS/GNSS system used. During our discussion with several ATO their mentioned that they don't use same interface of FMS/GNSS on their planes, and there is no generic type of GNSS/FMS usable for these exercises. Theoretical instructors expressed their fears about theoretical training of other operation procedures that the procedures which are actually used on specific type. They believe that this is part of aircraft familiarization which shall be provided by ATO.

This would lead to duplication of the practical training and theoretical training in subject 100. For optimal usage there shall be some generic type of GNSS/FMS equipment to use, and there should be some research if any such device is available.

We also believe that many parts of KSA training are involved in MCC/CRM training and these trainings shall change accordingly.

Summary:

We are in favour of subject 100KSA incorporation in theoretical training. But we believe that there are several technical issues, which shall be addressed before subject becomes mandatory.

response

Thank you for your multiple comments.

EASA has carefully assessed all the comments received.

As you have raised the same comments to other parts of the NPA, please refer to the EASA's responses given in those other parts. Regarding Subjects:

- 010, please see EASA's response to comment 100-C;
- 030, please see EASA's response to comment 101-C;
- 020, please see EASA's response to comment 311-B;
- 062, please see EASA's response to comment 354-D;
- 070, please see EASA's response to comment 193-E;
- 090, please see EASA's response to comment 192-E;



- KSA 100: Partially accepted. GM1 ORA.ATO.230(a) is revised as follows:

‘ASSESSMENT OF STUDENTS IN AREA 100 KSA

The Area 100 KSA formative and summative assessments and exercises may include but not be limited to: written planning exercises combining multiple subjects, practical exercises using training devices (if available), scenario-based oral board (viva voce), scenario-based communications exercises, written assignments or project work, and preparation and delivery of group or individual presentations.’

Reference penultimate paragraph: Not accepted.

EASA intends to modernise pilot training to ensure the continued development of the pilot’s competencies throughout their training and career.

Notice of Proposed Amendment 2016-03(A) — General comments

p. 1-3

comment 23-A

comment by: *Michel Lacombe AF Training department and AF ATO*

The aim of EBT is to identify, develop and evaluate the competencies and the related Knowledge, Skills and Attitudes required to operate safely, effectively and efficiently in a commercial air transport environment whilst addressing the most relevant threats according to evidence collected in accidents, incidents, flight operations and training.

This ICAO EBT proposed set of competencies is a complete framework of competencies, competency descriptions and related behavioural indicators, **encompassing the technical and non-technical knowledge, skills and attitudes** to operate safely, effectively and efficiently in a commercial air transport environment.

However, ICAO encouraged operators to develop their own competency system, which should list observable behavioural indicators, meeting their specific needs and including a comprehensive set of technical and non-technical knowledge, skills and attitudes.

By introducing these competencies (but not all) this RMT working group defines, for all, the only acceptable version of the competencies set.

ICAO intended to develop an exemple or a generic competencies matrix in order to allow operators to develop their own set of competencies, the result will be just the opposite and there will be this only incomplete set.

This set should have been presented as an exemple of competencies.

The trainees should be made familiar with the fact that in a TEM model, competencies



2. Individual comments and responses

response	<p>are among the barriers, their own ones. That's why they should be familiar with them, and able to recognize when to use them and how.</p> <p>This could be obtained by showing them little movies shoot during FFS and making them able to assess the use or the absence of use of these competencies by the "actors" or through reports established by LOSA observations.</p> <hr/> <p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>EASA has revised the Area 100 LOs to include the knowledge of all the ICAO pilot competencies; the main KSA LOs are a subset of the present ICAO competencies amended to align with the applicable phase of training, with the addition of those raised in the industry in the training needs analysis (TNA).</p> <p>Reference last paragraph: Noted.</p> <p>European industry strongly supports the active development of the student's understanding and knowledge, skills and attitudes from day one of theoretical knowledge training and throughout all training.</p>
comment	<p>24-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>This NPA shows a misunderstanding of Competency-based-training concept, and puts an exclusive focus on checking/assessment provision, with very few if not no provision on area 100 KSA training.</p> <p>No provision seems to be proposed to develop the trainee's relevant Core Competencies through the relevant debriefings.</p> <p>As ICAO has released a guidance document on the proper creation and use of Competencies Framework and is in the process of reviewing all training and licensing provisions of aviation personnel in the light of that guidance, this NPA should be in compliance with the ICAO principles.</p>
response	<p>Thank you for your multiple comments.</p> <p>EASA has carefully assessed all the comments received.</p> <p>Regarding your comment referring to the lack of provisions or lack of material on training in Area 100 KSA: Not accepted.</p> <p>AMC3 ORA.ATO.230(a) contains material on training delivery.</p> <p>Regarding your comment referring to debriefings: Accepted.</p> <p>EASA has provided additional text in AMC3 ATO.ATO.230(a) and GM1 ORA.ATO.230(a) on the assessment of students in Area KSA 100.</p> <p>Please, see also EASA's response to comment 23-A on this subject.</p>



comment	<p data-bbox="351 329 414 369">39-A</p> <p data-bbox="1101 329 1445 369" style="text-align: right;">comment by: <i>Estonian CAA</i></p> <p data-bbox="351 414 1445 571">Introducing of new principles regarding KSA can mean very subjective evaluation. In the matters of MCC also the evaluation can be very subjective, however according to this NPA the KSA evaluation has very important role on completing the studies and issuing of pilot licence. Therefore it is urgently essential to grant objectivity by the instructor.</p>
response	<p data-bbox="351 571 478 616">Accepted.</p> <p data-bbox="351 638 1445 750">EASA has revised and provided additional text in GM4 ORA.ATO.230(a) on the training and standardisation requirements for the instructor(s) who assesses (assess) the Area 100 KSA, which supplements that in AMC2 ORA.ATO.230(a).</p> <p data-bbox="351 772 1445 884">EASA also proposes to run a workshop for national aviation authorities to facilitate consistent application and standardisation of the Area 100 KSA summative assessments, together with guidance on the ATO requirements.</p>
comment	<p data-bbox="351 996 414 1041">86-A</p> <p data-bbox="909 996 1445 1041" style="text-align: right;">comment by: <i>René Meier, Europe Air Sports</i></p> <p data-bbox="351 1075 430 1120">Check</p>
response	<p data-bbox="351 1131 438 1176">Noted.</p>
comment	<p data-bbox="351 1288 430 1332">106-A</p> <p data-bbox="1189 1288 1445 1332" style="text-align: right;">comment by: <i>FNAM</i></p> <p data-bbox="351 1366 1445 1433">The FNAM would like to emphasize some surprising incoherencies regarding the set of competencies that were presented as a requirement and thus not on a voluntary basis.</p> <p data-bbox="351 1444 1445 1512">Indeed on the one hand, these competencies within a regulatory text seem to define a single acceptable set of competencies for all stakeholders.</p> <p data-bbox="351 1523 1445 1590">On the other hand, the ICAO intends to develop an example of competencies matrix to help operators developing their own set of competencies.</p>
response	<p data-bbox="351 1590 526 1635">Not accepted.</p> <p data-bbox="351 1668 1445 1892">The LOs comprise an amended subset of those promoted by ICAO with additional LOs to address those areas highlighted by the TNA. EASA considers that the development of the competencies in the TK course, and each subsequent stage of training, will raise competency standards throughout each phase of training and therefore will enable a more effective and efficient pilot training pathway, subsequently improving the competence standard of operational pilots.</p>



2. Explanatory Note	p. 6-27
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comment	<p>1-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>2-1-2 / 2-1-3</p> <p>That's a very good idea to explain to new pilots the concept of "EBT core competencies", these competencies have they definitions in ICAO DOC 9995 (Manual of Evidence Based Training), and are already refered to in GM1 ORO FC 230.</p> <p>When we read the definitions and objectives defined in Annex, it seems, that these observable indicators have been modified for these learning objectives.</p> <p>Are you aware that they are already used as encouraged by the Agency and as described in ICAO documents by many operators, how are your going to explain the additions or subtractions of any observable behavioural indicators ?</p> <p>Others EASA groups work with these international definitions, if everything change that will be difficult to harmonize between NAA and operators and to decide which version is valid, the first published, the industrial used or the next version to be produced by any group ??</p>
response	<p>Not accepted.</p> <p>The LOs are an amended subset of those promoted by ICAO that can be developed in a TK course. EASA considers that the development of student pilot competencies, which will also align with educational practices such as varied learning styles, will also raise competency standards and the ability to apply knowledge at entry to later phases of training enabling a more effective and efficient training pathway.</p> <p>Please, see EASA's response to comment 131A on ISD.</p> <p>Please, see EASA's responses to comments 98A and 106A on the adapted competency framework for this phase of training; additional competencies, which include the mental maths and some individual specific LOs placed in the KSA 100 topics, were added in response to the industry-wide training needs analysis (TNA).</p>

comment	<p>2-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>The area100 KSA should teach the future pilots of the needs to develop these core competencies to be able to manage the THREATS and ERROR in the TEM MODEL.</p> <p>There is no use to assess pilots on that knowledge but it is important to expose them trough movies, FFS exercices to show the efficiency of this system to make them able to recognize wich competencies are used and which one do they need to rely on to cope</p>
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2. Individual comments and responses

response	<p>with defined situations.</p> <p>If in lectures or courses presentations of these core competencies as defined by ICAO or EASA in previous GM, the 9 core competencies should be presented nor only 7 (and by the way why only 7 are developed in the LO concept ??).</p> <p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>The following LO was added:</p> <p>Recognise the ICAO Core Competencies listed below and the associated competency descriptions (ICAO Doc 9995 'Manual of Evidence-based Training'):</p> <ul style="list-style-type: none"> — Application of Procedures; — Communication; — Aircraft Flight Path Management, automation; — Aircraft Flight Path Management, manual control; — Leadership and Teamwork; — Problem Solving and Decision Making; — Situation Awareness; — Workload Management. <p>The intention is not to solely assess a student's understanding of these core competencies but to ensure that the student is receiving training to develop many of the competencies during this stage. The competency standard is given in word pictures (GM2 ORA.ATO.230).</p>
comment	<p>25-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>A TNA conducted in 2013 is mentioned. Where can this TNA study be consulted ?</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The 2013 TNA was a private study commissioned by a European ATO, the findings of which were made available to the RMT.0595 Working Group.</p> <p>The TNA conducted in 2015 by the RMT.0595 Working Group was based on many sources including the 2013 TNA. It is proposed that an abridged version of the findings of the 2015 TNA be published.</p>
comment	<p>26-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>Are you sure this company (???) is in itself a good exemple ??? It would be more than beneficial to enrich this statement with data provided by other</p>



2. Individual comments and responses

Response	<p>major stakeholders, such as major legacy airlines, and major ATOs providing initial training.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 25-A on this subject.</p>
Comment	<p>27-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>To avoid extra costs and also potential mismatch between the pilot profile required by the airline and the one provided by the ATO is important that there is an harmonization between the ATO LOs and the requirements of operators.</p>
Response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>There will be a standing rulemaking task (RMT) for the regular update of the LOs, syllabi and examination procedures which will consider input from other relevant rulemaking activities. The requirement for the ATO to ensure a working ISD process also requires external input/data to ensure that the course design is constantly updated to meet industry needs.</p>
Comment	<p>29-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>These LOs will not be the subject of examination questions but are to be assessed ??? However AMC 3 ORA.ATO.230(a) (c) stipulates a 75% minimum pass rate for successful completion in “mental maths KSA” Are there any contradictions ???</p>
Response	<p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>The 75 % minimum pass rate only applies to the mental maths KSA area LO 100 09 test; the development and assessment of the competencies is achieved via summative assessments with a pass being awarded on the achievement of a <i>satisfactory</i> or higher grade.</p>
Comment	<p>30-A comment by: <i>UK CAA</i></p> <p>Page No: 10 and 22</p>



2. Individual comments and responses

Paragraph No: 2.3 Page 10 and 2.7 Page 22

Comment: Several Learning Objectives (LO) have been categorised in all subject tables as Basic Knowledge (BK). The intention is that these LOs will be taught by the Approved Training Organisation (ATO) and tested in progress test, but not examined by the National Aviation Authority (NAA) using the European Central Question Bank (ECQB).

The LOs that have been identified as BK are the principles on which all topic areas are developed and higher levels of understanding are achieved, therefore, it should be a requirement that these principles are examined. If BK is being taught and tested by the ATO, there is no reason why the ECQB is not used to verify this knowledge and that these principles have been embedded and understood by the student.

Justification: If BK is removed from the ECQB along with the existing questions, new more complex questions to a higher level will have to be developed to make the examination generate an adequate coverage of all topic areas in individual subjects. This could have a detrimental effect on some students who are naturally nervous when taking examinations, as there will be no BK questions in the test to allow them to build their confidence and they will be seriously disadvantaged by this proposal.

The EASA Exams Team require each topic area to be 5 deep with the number of questions available in the ECQB, this will not be achievable in some subjects as it will not be possible to write additional question one topic area.

With additional questions examining to a higher level, the table at AMC1 ARA.FCL.300(b), detailing the time allowed for an examination and the number of questions for each topic area, will need to be reviewed to establish if an examination is achievable. We are not aware of any evidence that the RMG have confirmation of this or have carried out any sort of analysis or testing.

Proposed Text: n/a

Response

Partially accepted.

Thank you for providing this comment.

Whilst the concept of BK is maintained, the number of LOs identified as BK has been revised and reduced. Subject 050 is a good example of this revision.

The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.

Comment

31-A

comment by: UK CAA

Page No: 17



2. Individual comments and responses

Response	<p>Paragraph No: Table 1</p> <p>Comment: Cost estimates should be reviewed. Table 1 on page 17 gives an overview of one-off cost incurred by ATO for Options 1 and 2. The top part of the table under Producers/Publisher of courseware, list under Option 1 the costs totalling EUR 66,000, however, under Option 2 these cost are listed as n/a.</p> <p>Justification: These same costs will be incurred under Option 2 as there still is a requirement to amend textbooks and material, graphics and production and proofreading. The cost to both a large and small ATO if Option 2 is accepted will therefore increase by a further EUR 60,000.</p> <p>Proposed Text: To reflect above</p> <p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>The cost estimates included in the RIA were provided by stakeholders; the RIA should be revised in light of this observation.</p>
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Comment	<p>32-A comment by: UK CAA</p> <p>Page No: 19 and 38 Paragraph No: Para 1 Page 19 AMC1 to Appendix 3 Page 38</p> <p>Comment: AMC1 to Appendix 3 provides tables that list the minimum number of theoretical knowledge hours that are required for each course for the issue of a commercial pilot’s licence. It is proposed that these tables are deleted under the NPA. These tables should not be removed.</p> <p>Justification: These tables are used as a guide by NAA inspectors when approving an ATO’s proposed training course and considerably reduce the amount of time required to carry out this task. Removing the tables from the AMC1 to Appendix 3 will further increase the time required to approve a course of training and may have financial implications for an ATO not being able to deliver a course of training within a timely manner.</p> <p>Proposed Text: n/a</p>
Response	<p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>The tables containing the minimum number of hours per subject have been reinserted into AMC1 to Appendix 3. The figures are revised, taking into account feedback that Subjects 020 and 030 in particular should have as a minimum more hours allocated to</p>



2. Individual comments and responses

them, while for Subject 060 the minimum hours of instruction should be reduced. The increase in the minimum number of hours to be devoted to Subjects 020, 030, and 080 is because these Subjects in particular contain LOs that are critical for theoretical knowledge instruction on upset prevention and recovery training (UPRT) and threat and error management (TEM). Following the tables presenting the minimum number of hours per subject, the phrase allowing for ATOs to present alternate subdivisions of hours is also retained: 'Other subdivisions of hours may be agreed upon between the competent authority and the ATO.'



2. Individual comments and responses

Comment	<p>37-A comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p> <p>Answer to question No 5 (page 20) Swedish Transport Agency has 23 ATO, 21 of them are complex and 3 are non-complex. The figures and type of courses are specified below.</p> <table border="1" data-bbox="355 539 812 1778"> <thead> <tr> <th>Number</th> <th>Type of courses</th> </tr> </thead> <tbody> <tr><td>3</td><td>ATP(A) modular</td></tr> <tr><td>6</td><td>ATP(A) modular distance</td></tr> <tr><td>1</td><td>ATP(H) modular</td></tr> <tr><td>2</td><td>ATP(H)/IR modular</td></tr> <tr><td>1</td><td>ATP(H)/IR modular distance</td></tr> <tr><td>1</td><td>ATP(H)/VFR modular</td></tr> <tr><td>7</td><td>CPL(A)</td></tr> <tr><td>2</td><td>CPL(A) modular</td></tr> <tr><td>1</td><td>CPL(A) modular distance</td></tr> <tr><td>3</td><td>CPL(H)</td></tr> <tr><td>4</td><td>CPL(H) integrated</td></tr> <tr><td>3</td><td>CPL(H) modular</td></tr> <tr><td>1</td><td>EIR(A) ME</td></tr> <tr><td>1</td><td>EIR(A) modular distance</td></tr> <tr><td>3</td><td>EIR(A) SE</td></tr> <tr><td>7</td><td>IR(A) ME</td></tr> <tr><td>2</td><td>IR(A) ME modular</td></tr> <tr><td>1</td><td>IR(A) ME modular distance</td></tr> <tr><td>7</td><td>IR(A) SE</td></tr> <tr><td>1</td><td>IR(A) SE modular</td></tr> <tr><td>1</td><td>IR(A) SE modular distance</td></tr> <tr><td>3</td><td>IR(H) ME</td></tr> <tr><td>2</td><td>IR(H) modular</td></tr> <tr><td>1</td><td>IR(H) modular distance</td></tr> <tr><td>2</td><td>MPL(A) integrated</td></tr> </tbody> </table>	Number	Type of courses	3	ATP(A) modular	6	ATP(A) modular distance	1	ATP(H) modular	2	ATP(H)/IR modular	1	ATP(H)/IR modular distance	1	ATP(H)/VFR modular	7	CPL(A)	2	CPL(A) modular	1	CPL(A) modular distance	3	CPL(H)	4	CPL(H) integrated	3	CPL(H) modular	1	EIR(A) ME	1	EIR(A) modular distance	3	EIR(A) SE	7	IR(A) ME	2	IR(A) ME modular	1	IR(A) ME modular distance	7	IR(A) SE	1	IR(A) SE modular	1	IR(A) SE modular distance	3	IR(H) ME	2	IR(H) modular	1	IR(H) modular distance	2	MPL(A) integrated
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Response	<p>Noted.</p> <p>EASA thanks you for your input.</p>																																																				



Comment	<p>40-A comment by: Estonian CAA</p> <p>Page 20 questionnaire. Answer to the question 5 by Estonian CAA: Altogether 3 ATOs. Figures and type: Integrated residential courses: 2 modular residential courses: 2 modular distance-learning courses: 0</p>
Response	<p>Noted.</p> <p>EASA thanks you for your input.</p>

Comment	<p>42-A comment by: FTEJerez</p> <p>Comment on the definition of the Basic Knowledge concept in the <i>Explanatory Note</i>:</p> <p>One of our favorite changes proposed is the introduction of the Basic Knowledge Learning Objectives (BK LO). However, there seems to be a conflict between what a BK LO is within the change.</p> <ul style="list-style-type: none"> • On page 10 a BK LO is defined as "<i>The LOs that were considered outdated and no longer relevant to the modern operating environment have been identified. (...) These LOs have been marked in the revised LO tables, in the new column headed 'BK' (basic knowledge).</i>" • On page 22 a BK LO is defined as a LO that "<i>student pilots are expected to attain this level of knowledge in order to fulfil higher level LOs and answer examination questions successfully.</i>" <p>Using the same tag for two very different purposes and leaving the definition of the BK LO that open to interpretation will most likely lead to the elimination of fundamental LOs taken as outdated or irrelevant or the perpetuation of LOs that are really outdated. <u>The definition found on page 22 is, in our opinion, the more suitable and of great use.</u></p>
Response	<p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>The correct definition of a BK LO is: 'student pilots are expected to attain this level of knowledge in order to fulfil higher level LOs and answer examination questions successfully.'</p> <p>The concept of BK has been maintained, although the number of LOs identified as BK has been revised and reduced. Subject 050 is a good example of this revision.</p>



2. Individual comments and responses

Comment	<p>46-A comment by: <i>European Cockpit Association</i></p> <p>Attachment #2</p> <p>PAGE 8 2.1.2. The new 'Area 100 KSA' (knowledge, skills and attitudes)</p> <p>The last paragraph should mention also that ICAO has released a guidance document on the proper creation and use of Competencies Framework. As ICAO is in the process of reviewing all training and licensing provisions of aviation personnel in the light of that guidance, the NPA should be in compliance with the ICAO principles.</p> <p>Moreover, as CBT is to be the new standard for training and Licensing purposes, it is essential that there is a common and coordinated logic sustaining the relevant EASA Rulemaking activities to avoid duplication, overlaps, conflicting provisions. In that respect, there should be only one basis for the definition and implementation of Competencies Frameworks throughout the whole Part FCL, and potentially all Aviation Personnel Licensing and Training provision.</p>
Response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>EASA has introduced the latest ICAO principles, including relevant competencies. There will be a standing rulemaking task (RMT) for the regular update of the LOs, syllabi and examination procedures which will consider input from other relevant rulemaking activities. Existing competencies have been taken into consideration; EASA is centrally involved in the ICAO works and any future revisions to these will be considered by the standing rulemaking task.</p>
Comment	<p>47-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 9 2.3. Activities</p> <p>It is to be noted that the RMT.0599 was not included in the list. This lack of coordination probably explains the lack of consistency of this NPA with the previously released and ongoing drafting deliverables of RMT.0599</p>
Response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA's response to comment 46-A on this subject.</p>
Comment	<p>48-A comment by: <i>European Cockpit Association</i></p>



2. Individual comments and responses

Response	<p>PAGE 12 2.4.3. How could the issue/problem evolve? (If syllabi and LOs are not updated)</p> <p>The paragraph refers to a TNA conducted in 2013. Where can this TNA study and its results be consulted? Since it is referenced in the official EASA consultation - ECA would like to request sharing of the results of this TNA. QUOTE: <i>In September 2013, a TNA was conducted at a European regional airline that recruits pilots from a range of ATOs delivering MPL, integrated and modular training courses. The TNA concluded that whilst 80 % of students entering type training had adequate factual knowledge, only 8 % possessed adequate understanding.</i></p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The 2013 TNA was a private study commissioned by a European ATO, the findings of which were made available to the RMT.0595 Working Group.</p> <p>The TNA conducted in 2015 by the RMT.0595 Working Group was based on many sources including the 2013 TNA. It is proposed that an abridged version of the findings of the 2015 TNA be published.</p>
Comment	<p>49-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 15 2.6.2. Social impacts of the change</p> <p>It is to be noted that the social impact as described in 2.6.2. - is based on the statement of only one carrier. It would be more than beneficial to enrich this statement with data provided by other major stakeholders, such as major legacy airlines, and major ATOs providing initial training. Moreover, the implementation of the area 100 will also have consequences on the recruitment and careers of ATO trainers and assessors. This should be taken into account accordingly.</p>
Response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Pilot recruitment requirements over the coming years are inevitable with forthcoming retirements. With regard to the last paragraph, the ATO instructors and assessors will be extending their skills and therefore it is considered that they will become more employable in other ATO phases of training and roles.</p>
Comment	<p>50-A comment by: <i>European Cockpit Association</i></p>



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Response	<p>PAGE 16</p> <p>2.6.3. Economic impacts</p> <p>The lack of consistency between the Competencies developed by the ATO and the Airline will create not only extra cost, but also a potential mismatch between the pilot profile required by the airline and the one provided by the ATO. At the end, this may cause some pilots to be hired then dismissed by the airline due to their competency level being inappropriate. This will create not only an extra financial burden, but also a significant social cost for pilots-to-be.</p> <p>The TKI shall have the relevant operational/real commercial flight in multicrew experience, in order to ensure the delivery of a training consistent with the airline environment requirements.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The Area 100 KSA LOs were produced considering a TNA from the industry and the ICAO competency framework. At this level, many of these competencies are central to many other professional roles.</p> <p>The training requirements specified in AMC2 ORA.ATO.230(a) and GM4 ORA.ATO.230(a) for instructors delivering Area 100 KSA training or being responsible for assessing Area 100 KSA are considered adequate to ensure the delivery of training that is consistent with airline environment requirements.</p>
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Comment	<p>51-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 21 till 24</p> <p>2.6.5. Monitoring and evaluation</p> <p>The feedback from the end clients – the airlines – is essential. The loop must be closed at that level, in order to ensure that the “end product” (cadet pilots) are adequate to the required competency level.</p> <p>It is also essential to provide an extensive mapping of the competencies as assessed by the ATO, in order to measure the efficiency of the implementation of CBT in the ATOs.</p> <p>On page 24, it is stated that the area 100 LO wont be the subject to examination questions. QUOTE: These LOs will not be the subject of examination questions but are to be assessed by the ATOs. The head of training at each ATO will have to be satisfied that the candidate has achieved the required level of competence in this new LO area before they sit the final TK examination paper.</p> <p>However AMC 3 ORA.ATO.230(a) (c) stipulates a 75% minimum pass rate for successful completion in “mental maths KSA”.</p> <p>The principles underlying the teaching and development of Core Competencies emphasize the fact that the focus shall be put on training, in order to allow “try and errors”, enable the student to build their own individual strategies based on their personal abilities and skills. Putting an extra “pass/fail” exam will be very detrimental to the result, leading to</p>
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2. Individual comments and responses

Response	<p>“monkey behaviors” and “train to pass” strategies, instead of creating positive learning attitudes.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The ATO will be required to demonstrate an effective ISD process and as such it will obtain industry data and needs (from multiple open sources and in many cases with attainable feedback directly from industry).</p> <p>Regarding the mental maths KSA, the 75 % minimum pass rate only applies to the mental maths KSA Area LO 100 09; the Area KSA 100 does include training and development of the competencies.</p>
Comment	<p>79-A comment by: <i>University of Tromsø School of Aviation</i></p> <p>UTSA strongly suggests option 2.</p> <p>In general 100 KSA well received. A part of aviation education, which may have been missing for a long time throughout Europe, might be coming to most or every flight school. A necessity for continuous development and improvement across the board.</p> <p>KSA 100 – a most welcome addition to the ATPL syllabi.</p>
Response	<p>Noted.</p> <p>Thank you for the positive feedback.</p>
Comment	<p>89-A comment by: <i>IATA</i></p> <p>IATA welcomes the revision and update of LOs and the creation of the Area 100 KSA in order to increase pilot’s ability to apply their KSA in a holistic manner. Concerning the specific questions related to the core competency grading:</p> <p>IATA obviously supports the use of ICAO Doc 9995 core competencies. IATA considers that the competency model proposed in the NPA is a customized Doc 9995 competency model which is not totally suitable to assess the pilot Area 100 KSA because the NPA model totally erases the competency ‘application of procedure’, mixes some observable behavioral indicators between different competencies and is difficult to use out of the operational context with applicants having a limited set of knowledge, skill and attitude. Therefore IATA supports to add the knowledge as a competency and recommends to use the ICAO Doc 9995 core competency behavioral indicators only when appropriate and without major customization.</p>
Response	<p>Accepted.</p>



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Thank you for providing this comment.

The Area 100 competencies have been amended to include the knowledge of all the competencies more closely align with those of ICAO Doc 9995.

Please, see also EASA's response to comment 46-A on this subject.

Comment 90-A

comment by: IATA

Concerning the specific questions related to the 4 year transition period

IATA considers the transition period as suitable.

Response

Accepted.

Thank you for your input — the transition period proposed is to be retained.

Comment 92-A

comment by: Julian Scarfe

It would be helpful, either in the AMC/GM are at least in the Explanatory Note, to set out the criteria for inclusion for LOs in particular licences (columns of the table). For example, they might be something like:

- The IR LOs are the subset of ATPL LOs of particular significance to IFR operations in all classes/types
- The CBIR/EIR LOs are the subset of IR LOs of relevance to IFR operations in non-high-performance aircraft and which require significantly more depth of understanding than would be expected of a PPL.
- The CPL LOs are the subset of ATPL LOs of relevance to VFR operations in a single crew environment and in other than large CS-25 aircraft.

This would improve the consistence of their inclusion.

Response

Noted.

Thank you for providing this comment.

The LOs applicable for each licence or rating category will be clearly defined.

Comment 95-A

comment by: Julian Scarfe

The NPA's recommendations on proportionality in 2.9.1 are important and strongly supported. The issue raised on FIs is key.



2. Individual comments and responses

Response	<p>The privileges of the CPL require the holder to operate under commercial pressure that is not assumed for the PPL. An FI, whether personally remunerated or not, is also likely to be under some commercial pressure. However, we do the CPL and FI no favours by simply piling on technical detail. A better appreciation of threat and error management and human performance related to decision making are much more likely to be relevant to the CPL holder or FI than technical detail that currently distinguishes the CPL TK from the PPL TK.</p> <p>A rulemaking task to resolve this is urgently required.</p> <p>Finally, the process mentioned in 2.9.2 for the systematic review and update of LOs is important. We would not allow an aircraft to fly without considering its continuous airworthiness, and we should not regard a TK syllabus as fit for purpose without a maintenance programme.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Area KSA 100 topic ‘Additional TEM-related Learning Objectives’ (100 03 00 00) will address the need for a greater emphasis on the principles of threat and error management (TEM).</p> <p>There will be a standing rulemaking task (RMT) for the regular update of the LOs, syllabi and examination procedures which will consider input from other relevant rulemaking activities.</p>
Comment	<p>102-A comment by: <i>Aero-Club of Switzerland</i></p> <p>Page 27/75 2. Explanatory Note 2.9.1. The proportionality issue</p> <p>We find the current qualification requirements for FI, who instruct solely PPL, to minimum hold CPL (theory) disproportionate. It is sufficient for FI, who solely instruct PPL, to hold a PPL as minimum requirement. This will create equality to the FI requirements for other certificates above LAPL.</p> <p>Rationale: Several members voiced this concern. because it became more and more difficult in recent years to find candidates for FI tasks. We have read and heard many statements indicating the CPL theory being a heavy burden and a high barrier.</p> <p>During our discussion another question was asked: Is there a syllabus accoring to which CPL FI would be trained? Many thanks for clarifying this.</p>
Response	<p>Noted.</p>



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Thank you for providing this comment.

This will be considered as part of future rulemaking activity amending Part-FCL Subparts J and K.

Comment

103-A

comment by: *Aero-Club of Switzerland*

Page 27/75

2. Explanatory Note

2.9.2. An Agency process...

We welcome a process to ensure a regular review and update of the LO's similar to the one applied for CS-25 aircraft, we offer our support to the Agency to prepare and to promote this task.

Rationale:

We have to assure proportionality and to pay due attention to the fact that there are many more General Aviation aircraft types in the air than CS-25 types and models.

Response

Noted.

Thank you for the kind offer of support.

There will be a standing rulemaking task (RMT) for the regular update of the LOs, syllabi and examination procedures which will consider input from other relevant rulemaking activities.

Comment

104-A

comment by: *CAA Norway*

Page 18; Cost for implementing new LOs and ECQB into examination systems:

Considering these new LOs and other proposed changes in the ECQB, the complexity of the examination database increases. Have the Agency considered that this higher complexity increases the need for highly complex examination systems? More complex systems have higher costs, and eventually we may find ourselves in a situation with few or only one service provider who can cover this complexity. In such monopoly situation, the cost may increase even more. The NAAs will need to cover these costs and most likely they will be imposed on the candidate. Flight training is already very expensive, and since the majority of flight students pay for their own education, their cost of training will increase. This may cause fewer students in schools and fewer candidates to share the cost of the examination system, and the result will be even higher costs of flight training.

Page 19; additional costs for the training of inspectors:

The Agency considers costs for training inspectors to assess the 100 KSA to be marginal. The NAA needs to follow up the ATOs use of this subject and the ATOs own training of their own instructors on this subject. In this view, the NAAs can not take it easy on this. The training of inspectors will be considerable, both for the training itself and for



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standardization. Is the Agency providing such courses? As the Agency considers such training to be "marginal", the standardization in Europe will be also be marginal.

Page 20; Answer to question 5:

Norway has 9 ATOs providing training towards licenses (LAPL, PPL, CPL). Of these 9 only 4 provides theoretical knowledge training relevant for the ECQB LOs, either in integrated courses or modular distance learning courses. In addition, there are 9 ATOs providing training towards type ratings.

Int/mod/dist	Type of course	Number of ATOs
Integrated courses	ATP(A)	2
	ATP(H)/IR CPL(H)	1
Modular residential		0
Modular distance learning	ATPL(A) theory	1
	ATPL(H) theory	
	CPL(H) theory	
	EIR theory	
	IR(A) theory IR(H) theory	

Response Noted.

Thank you for providing this comment.

On the costs of implementing the revised LOs and ECQB: EASA is currently considering options for future examination delivery services; the costs of such services and the impact on students’ self-funding training is part of this activity.

On the cost of training inspectors: EASA proposes to run a workshop for national aviation authorities to facilitate consistent application and standardisation of the Area 100 KSA summative assessments, together with guidance on the ATO requirements. The oversight of the training and assessment of Area KSA 100 is considered to be an extension of existing routine oversight activities.

Answer to question 5: Thank you for this information.

Comment 107-A

comment by: FNAM

Regarding the paragraphs 2.1.2 and 2.1.3, the FNAM thinks it is useful to explain the concept of “EBT core competencies”. However, the FNAM would like to point out that there is a need for standardisation between the EBT core competencies presented in this NPA and the document published by ICAO on the subject. The FNAM suggests that the observable indicators for these learning objectives should be in compliance with the ICAO



2. Individual comments and responses

Response	<p>principles in particular to ensure the same level playing field with non EU Member States.</p> <p>One of the goals of the area 100 KSA is to teach the future pilots the need for developing these core competencies so that they could manage the threats and errors in the TEM model. The FNAM would like to point out that there is no need to assess future pilots on that knowledge, the only need is that the trainees understand the use of competencies in a TEM model, and the way they can rely on them. That will be the work of the instructors to develop these trainees' competencies and not the other way around: we are not born with them but we have to develop them by knowing them, understanding them, not by being assessed.</p> <p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA's responses to comments 23-A and 109-A on this subject.</p>
Comment	<p>108-A comment by: FNAM</p> <p>Regarding the paragraph 2.6.2, the FNAM wonders why the social impact was only based upon one low-cost airline. What are the reasons for such a choice? The FNAM suggests that the EASA publishes a benchmark gathering data from all the major European stakeholders in order to have a representative point of view.</p>
Response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The social impact assessment included in the RIA was provided for illustrative purposes; consideration to a revision of the RIA should be undertaken in the light of this observation.</p>
Comment	<p>129-A comment by: FNAM</p> <p>Regarding the paragraph 2.6.5 of this NPA (A), the FNAM thinks it is a good idea for EASA to monitor a set of core indicators that will be used to measure if the objectives of this proposal have been met. This will be useful in particular to update the regulatory texts according to the industry needs. Nevertheless, the FNAM would like to know the following details :</p> <ul style="list-style-type: none"> • What will be the cost of such a system and who will pay for it? • Do you have an estimation of the data processing cost? <p>Both the ATOs and the competent authorities will be responsible for providing the data to the Agency. The FNAM would like to draw your attention to the possible burden for the ATOs who might be required to report the data twice: once for their national aviation authorities and once for the administrative Agency. Therefore it would be a good idea to</p>



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Response	<p>create a continuous monitoring system with a single entry point.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>As EASA develops the tools to continuously monitor how accurately this RMT proposal has achieved its objectives, and as those tools mature, cost implications will be considered.</p>
Comment	<p>132-A comment by: FAA</p> <p><i>Page 24- The Agency invites stakeholders to provide suggestions on how to further define the level of depth and scope of knowledge of the particular LOs in addition to the use of the taxonomy verbs as described in GM1 FCL.310, FCL.515(b) and FCL.615(b).</i></p> <p>The taxonomy verb changes are an improvement and the expectations are clearer. What is less clear is the level of knowledge and understanding that is expected between a person receiving their IR, their CPL, or their ATPL. A significant number of LOs include all of the licenses and ratings. It is even more evident in the LOs marked for both the CPL and ATPL airplane. Is there a difference in expectation from what is to be taught for a CPL versus an ATPL? Does it vary depending upon the subject area? Or does a training organization use the CPL course and just add the ATPL topics to it and its complete?</p>
Response	<p>Noted.</p> <p>Thank you very much for your feedback.</p> <p>There was no intention to vary the depth of knowledge taught for a specific LO across the licence categories or ratings.</p>
Comment	<p>136-A comment by: Finnish Transport Safety Agency</p> <p>Attachment #3</p> <p>2.6.3 Economic impacts</p> <p>Please find attached the answers from Trafi to question 5 and 6.</p> <p>Question 5 How many ATOs of each type are in your country? Please specify figures and type of the ATOs: integrated residential courses; modular residential courses; modular distance-learning courses. Please see attachment List of Approved Training Organisations.</p> <p>Question 6</p>



2. Individual comments and responses

	<p>Please comment on the cost calculations presented in the table 2 for competent authorities. If you do not agree with these estimations, please provide corrected cost impacts with justifications.</p> <p>Finland is using Lplus for theoretical knowledge examinations. Therefore the additional cost for Trafi depends on possible costs determined by Lplus.</p> <p>For the training and operations manual approval the hourly rate is 180€. The estimate would be 5 to 10 hours per ATO, e.g 900-1800€.</p>
Response	<p>Noted.</p> <p>Thank you very much for the provision of this information.</p>
Comment	<p>138-A comment by: <i>Finnish Transport Safety Agency</i></p> <p>2.8 Implementation timelines</p> <p>The proposed 4 year implementation timeline is acceptable for Trafi.</p> <p>Please notice the ECQB questions for UPRT are needed 8.4.2018 and questions for PBN 25.8.2018.</p>
Response	<p>Accepted.</p> <p>Thank you for your input — the transition period proposed is to be retained.</p>

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision) — Annex I: PART-FCL — SUBPART A: GENERAL REQUIREMENTS

p. 28

Comment	<p>52-A comment by: <i>European Cockpit Association</i></p> <p>Attachment #4</p> <p>PAGE 28 AMC1 FCL.025(a)(2)</p> <p>The requirement is inconsistent with the requirement to pass a 75% rate in “mental maths KSA”.</p>
Response	<p>Not accepted.</p> <p>Thank you for providing this comment.</p>



2. Individual comments and responses

Please, see EASA’s response to comment 29-A on this subject.

Comment 53-A comment by: *European Cockpit Association*

PAGE 28
 AMC1 FCL310, FCL515(b), FCL615(b)
General remark:
 It must be noted that ISD is not fully consistent with the CBT principles as developed in Doc 9995. In particular, the taxonomy used may be significantly different and may create discrepancies between the recruits profile, the final competency level attained and the competency level expected by the airlines. Moreover, on-the-shelf ISD already used by the aviation industry (such as MPL) is not a CBT as described and accepted in Doc 9995 and EASA GM for the implementation of EBT.
Training aims:
 The core competencies as described in the NPA **do not cover the full pilot Core Competencies Framework**. This assessment can only be done adequately in the fully relevant operational environment, i.e. in a cockpit. It is critical to recognize that the assessment made during the TK phase cannot be exhaustive and fully representative of a Pilot Competency. **It is thus unfair and unnecessary to condition the application to the TK exam to the successful assessment of a partial Competency Framework.**

response Not accepted.
 Please, see EASA’s responses to comments 23-A and 46-A on this subject.

comment 69-A comment by: *European Cockpit Association*

PAGE 28
 AMC1 FCL.025(a)(2) KSA
 ECA would like to ask for clarification on how the ATO will perform such assessment? AMC3 ORA.ATO.230(a) and GM1 ORA.ATO.230(a) look difficult to implement. In our view, this needs a more indepth study.

Response Noted.
 Please, see EASA’s responses to comments 137-A and 39-A on this subject.

Comment 91-A comment by: *IATA*

IATA asks to clarify if Area 100 KSA is mandatory or not because of conflicting wording



2. Individual comments and responses

Response	<p>between AMC 1 FCL.025 (a)(2) in NPA 2016-03(A) and NPA 2016 03 (F) which states : " The Area 100 'Knowledge, skills and attitudes' (KSA) Learning Objectives (LOs) should be considered by approved training organizations (ATOs) when designing their CPL/ATPL theoretical knowledge course(s). "</p> <p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>Area 100 KSA assessment is mandatory and the wording will be clarified.</p>
Comment	<p>100-A comment by: CAA-NL</p> <p>Enclosed the comments of the Netherlands on the <u>Notice of Proposed Amendment 2016-03 (A)</u></p> <p>Subject 100 Feedback on subject 100 KSA Good development to pay attention to other competencies as well. Difficult to test competencies at the end of the theoretical training before the student has received practical flight training. Ideally this is to be done at the end of the pilot training during the last flight exam. It is difficult to test with theoretical examination only.</p> <p>In the subject about 'Human Performance and Limitations' attention can be paid to KSA. A solution may be the implementation of an oral examination at the end of the theoretical training. ATO's now organise written 'admission tests' to grant a candidate permission to take the Part-FCL theoretical examinations (this is an Part-FCL rule). Instead of these written admission tests, ATO can organise oral tests to recommend a candidate admission to the EU exams. In an oral (admission) test the candidate can show the KSA competencies better than in a written test.</p> <p>Preliminary conclusion: Subject 100 should become part of the training syllabus of the ATO. Use the Subject 100 LO to check if a candidate can be recommended by the ATO to take the theoretical exams.</p>
Response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>For clarification, EASA intends that the competencies are developed during the theoretical knowledge training using a range of learning styles; the environment and method of the assessments will naturally be varied and examples have been added to the text.</p>
Comment	<p>109-A comment by: FNAM</p>



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response	<p>The FNAM would like some clarifications regarding the AMC FCL.025(a)(2), especially for the terms “have successfully completed the applicable Area 100 KSA assessment”. Indeed with the French interpretation of the regulatory texts, the ATOs will have to implement an exam that the trainees will have to pass, with a requirement equal or higher than the official exams, before being eligible for the qualifying test. There seems to be no added value in compelling future pilots to pass the Area 100 KSA assessment (which represents only a partial competency framework) in order to be allowed to apply for the theoretical knowledge exam.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>EASA considers that to meet future industry training needs, robustly, across EASA Member States, requires both effective theoretical knowledge examinations and the Area 100 KSA assessments. EASA considers that the modernisation of the training system, to meet industry needs, best educational practices, and enable the use of technologies is essential for the current generation of student pilots, industry and safety. Regarding the competencies, EASA considers that the competencies should be continuously developed from day one of pilot training.</p>
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3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision) — Annex I: PART-FCL — SUBPART D: COMMERCIAL PILOT LICENCE — CPL

p. 28-31

comment

43-A

comment by: FTEJerez

Comment on

3. Proposed amendments,
Annex I: PART-FCL,
SUBPART D — COMMERCIAL PILOT LICENCE — CPL,
'AMC1 FCL.310; FCL.515(b); FCL.615(b) Theoretical knowledge examinations
Page 30 - Interpretation.

Excerpts from any aircraft manuals including but not limited to CAP 696, 697, and 698 for Aeroplanes and CAP 758 for Helicopters, may be used in training courses and for reference during theoretical-knowledge examinations. Where the competent authority does not permit the use of these manuals during examinations, alternative data manuals shall be provided to support the relevant questions. Definitions that are included in these data manuals are explained in the relevant manual. Where questions refer to excerpts from aircraft manuals, the associated aircraft data will be provided in the examinations.

Recommendations:

- For the subjects associated with the CAP 696, 697, and 698 for Aeroplanes and



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response	<p>CAP 758 for Helicopters, <u>keep the usage of these manuals in the exams</u>, making the CAPs official or creating EASA-equivalent manuals. If there is information that a pilot in a real case scenario should consult, then the exams should replicate that situation as much as possible. We should not limit the use of the CAPs because of the supposedly excessive information they have - that is information a pilot would have to find in their available documentation.</p> <ul style="list-style-type: none"> • Create new manuals and/or give access to the on-line available documentation for the exams in the subjects 010 - Air Law and 070 - Operational Procedures (more on this on the specific parts addressing these exams on the following sections) <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>EASA has opened preliminary discussions with stakeholders regarding updating the current CAP documents. The UK CAA have indicated their willingness to support EASA in this task. EASA agreed that the priority, however, is to update the Student Pilot Route Manual and has focused all available resources on this activity.</p>
comment	<p>54-A comment by: <i>European Cockpit Association</i></p> <p>Attachment #5</p> <p>PAGE 30 GM1 FCL.310; FCL.515(b); FCL.615(b) - Theoretical knowledge examinations</p> <p>The proposed taxonomy is a good way forward to help standardize the observation and data collection of Core Competencies. It should be applied consistently for all stakeholders, including the Instructors Performance Indicators. It should be also mentioned that other taxonomies exist, and have the same merits.</p>
response	<p>Noted.</p> <p>Thank you for your positive feedback.</p>
comment	<p>110-A comment by: <i>FNAM</i></p> <p>Regarding the AMC1 FCL.310, there seems to be no added value in compelling future pilots to pass the Area 100 KSA assessment (which represents only a partial competency framework) in order to be allowed to apply for the theoretical knowledge exam.</p> <p>Regarding the GM1 FCL.310, the FNAM finds that introducing the explanation of the verbs used in the Benjamin Bloom taxonomy will be useful for standardization and data</p>



2. Individual comments and responses

response	<p>collection of core competencies. It should be applied on a regular basis for all the actors, in particular the instructors performance indicators. There are also other taxonomies that have the same purposes, therefore their existence could also be mentioned in this paragraph.</p> <p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 109-A on this subject.</p> <p>Second paragraph: While EASA acknowledges the existence of other taxonomies, the RMT.0595 Working Group supported the use of Benjamin Bloom’s taxonomy in the context of this RMT.</p>
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3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision) — Annex I: PART-FCL — SUBPART G: INSTRUMENT RATING — IR p. 31-35

comment	<p>3-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>(b) The classroom training should include classroom and practical work to address the subject of the 100 KSA LOs area , such as lessons, tutorials and demonstrations using movies, training devices, computer-based training, and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.</p>
response	<p>Noted.</p> <p>Thank you for your input.</p> <p>With reference to the last section of the sentence, EASA considers the active development of the student’s competencies very important.</p>
comment	<p>76-A comment by: <i>roger henshaw</i></p> <p>Ref page 51 CBIR/EIR examination for 022 Instrumentation - I fundamentally disagree with restricting the examination in this subject to 12 questions with each question worth approximately 8%. A minimum of 18 or 20 is a more reasonable number to provide a better estimate of knowledge with a reasonable margin for errors.</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p>



2. Individual comments and responses

The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.

comment	<p>111-A</p> <p style="text-align: right;">comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph (b) of the AMC1 FCL.615 (b), that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph (b) of the AMC1 FCL.615 (b): “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s responses to comments 3-A, 23-A, and 109-A on this subject.</p>

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision) — Annex I: PART-FCL — SUBPART I: ADDITIONAL RATINGS p. 37-38

comment	<p>112-A</p> <p style="text-align: right;">comment by: <i>FNAM</i></p> <p>The FNAM is surprised to see that the phrases “Approved distance learning (correspondence) courses may also be offered as part of the course. The minimum amount of classroom teaching, as required by ORA.ATO.305, has to be provided” have been suppressed from this AMC. The FNAM would like some clarifications on that subject: is it still possible to have some approved distance-learning for the EIR theoretical knowledge? The FNAM would like to highlight the fact that it is necessary to let the possibility for ATOs to use distance-learning courses.</p>
response	<p>Accepted.</p> <p>Thank you for providing this comment.</p>



2. Individual comments and responses

The applicable AMCs will be revised to state: ‘Approved distance-learning (correspondence) courses may also be offered as part of the course. The minimum amount of classroom instruction, as required by ORA.ATO.305, may include all of the above except item (b)(9).’

The approved CB-IR(A) or EIR TK course hours should be divided between the subjects, as based on the ATO’s course established through instructional systems design, and agreed upon between the competent authority and the ATO.’

comment	<p>113-A</p> <p>The FNAM suggests to add, in paragraph (b) of the AMC2 FCL.825 (d), that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the AMC2 FCL.825 (d) paragraph (b): “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>	comment by: <i>FNAM</i>
response	<p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s responses to comments 3-A, 23-A, and 109-A on this subject.</p>	

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and GuidanceMaterial (Draft EASA Decision) — Annex I: PART-FCL — Appendix 3: TRAINING COURSES FOR THE ISSUE OF A CPL AND AN ATPL p. 38-46

comment	<p>4-A</p> <p>The classroom training should include classroom and practical work to address the subject of the 100 KSA LOs area , such as lessons, tutorials and demonstrations using movies, training devices, computer-based training, and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.</p>	comment by: <i>Michel Lacombe AF Training department and AF ATO</i>
response	<p>Noted.</p>	



2. Individual comments and responses

Thank you for providing this comment.
 Please, see EASA’s responses to comments 3-A, 23-A, and 109-A on this subject.

comment

5-A comment by: *Michel Lacombe AF Training department and AF ATO*
 The training should include classroom and practical work to address the subject and the area 100 KSA LOs, such as lessons, tutorials and demonstrations using movies, training devices, computer-based training, and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.

response

Noted.
 Thank you for providing this comment.
 Please, see EASA’s responses to comments 3-A, 23-A, and 109-A on this subject.

comment

6-A comment by: *Michel Lacombe AF Training department and AF ATO*
 The training should include classroom and practical work to address the subject in the 100 KSA LOs area, such as lessons, tutorials and demonstrations using movies, training devices, computer-based training, and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.

response

Noted.
 Thank you for providing this comment.
 Please, see EASA’s responses to comments 3-A, 23-A, and 109-A on this subject.

comment

7-A comment by: *Michel Lacombe AF Training department and AF ATO*
 The training should include classroom and practical work to address the subject and the 100 KSA LOs area, such as lessons, tutorials and demonstrations using movies, training devices, computer-based training, and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.

response

Noted.
 Thank you for providing this comment.



2. Individual comments and responses

Please, see EASA's responses to comments 3-A, 23-A, and 109-A on this subject.

comment 8-A comment by: *Michel Lacombe AF Training department and AF ATO*

The training should include classroom and practical work to address the subject and the 100 KSA LOs area, such as lessons, tutorials and demonstrations using movies, training devices, computer-based training, and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.

response Noted.

Thank you for providing this comment.

Please, see EASA's responses to comments 3-A, 23-A, and 109-A on this subject.

comment 55-A comment by: *European Cockpit Association*

Attachment [#6](#)

PAGE 38

Appendix 3: TRAINING COURSES FOR THE ISSUE OF A CPL AND AN ATPL; 'AMC1 to Appendix 3 Training courses for the issue of a CPL and an ATPL; A. ATP integrated course: aeroplanes; THEORETICAL KNOWLEDGE; C.

The word *training* should be changed back to *instruction*. Instruction involves an instructor, therefore a much more active involvement. Alternatively, include the word instruction here. (same comment for all sections: 'B. ATP modular theoretical knowledge course: aeroplanes; 'C. CPL/IR integrated course: aeroplanes; 'D. CPL integrated course: aeroplanes; 'E. CPL modular course: aeroplanes; 'F. ATP/IR integrated course: helicopters; 'G. ATP integrated course: helicopters; 'H. ATP modular theoretical knowledge course: helicopters; 'I. CPL/IR integrated course: helicopters; 'J. CPL integrated course: helicopters; 'K. CPL modular course: helicopters;) A question remains what is the balance between the instruction (subjects that are taught with the involvement of instructor) and training (including computer based training)

response Accepted.

Thank you for providing this comment.

The word 'instruction' is retained.

comment 56-A comment by: *European Cockpit Association*



2. Individual comments and responses

<p>-A</p>	<p>PAGE 39</p> <p>‘B. ATP modular theoretical knowledge course: aeroplanes</p> <p>Commented text: The amount of time spent in actual classroom instruction should not be less than 10% of the total duration of the course. Comment: ECA would like to request a clarification on the source of 10% figure. Our impression is that it is excessively low. 10% is not scientifically proven, so we can as well strive for at least 50%. (same comment for all sections). Moreover, we agree with the need to establish the minimum amount/percentage of classroom instruction. However, how can we define the minimum percentage of classroom instruction? Classroom instruction in general is necessary to check the competencies of the student.</p>
<p>response</p>	<p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>The minimum percentage of time to be spent in the actual classroom required for distance learning will be monitored in the standing rulemaking task. EASA considers that ATOs will use and develop a wide range of methods and resources/technologies to develop and assess the student that may or may not be in a classroom and hence considers the limitation in delivery method and environment at this stage to be potentially negative to the enabling of effective and efficient training.</p>
<p>comment</p>	<p>57-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 38. 39, ...</p> <p>Appendix 3: all TK knowledge provisions</p> <p>The area 100 knowledge is fundamentally different from the others. The 10% rule may provide enough time for practical training and assessment when embedded in an integrated course. However, it may become completely meaningless when cut into bits in separate modular courses. It will also create a lot of confusion when a trainee will apply to several ATOs for the respective modules, and be confronted to inconsistent Core Competencies definitions, training and assessment. This will lead to negative training, and “monkey behaviours” played by the trainees.</p>
<p>response</p>	<p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s responses to comments 56-A and 109-A on this subject.</p>
<p>comment</p>	<p>70-A comment by: <i>European Cockpit Association</i></p>



2. Individual comments and responses

response	<p>PAGE 42-45 F. ATP/IR integrated course: helicopters G. ATP integrated course: helicopters H. ATP modular theoretical knowledge course: helicopters and I, J and K</p> <p>A request for clarification: A request for clarification whether the ATO has to obtain an EFB approval? and whether it can be used in flight training?</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The comment in its present form is not fully understood. — questions regarding individual course approvals should be directed to the appropriate competent authority.</p>
comment	<p>80-A comment by: <i>University of Tromsø School of Aviation</i></p> <p>Establishing a standard that allows and urges each ATO to divide the 750 hours required between subjects upon agreement with the competent authority is wise. The current classification of minimum hours pr. subject is obsolete.</p> <p>However, an overview of expected scope of each subject could be added. This to give each (and especially new ATO's) a guide line. We recommend grouping the subjects by approximate size, i.e:</p> <p>"The scope of each subject varies and each ATO may have special considerations regarding extensive teaching in specific areas. EASA divides the subject into three subgroups depending on expected time required.</p> <p>Subgroup 1, more extensive subjects. Expected to require up to 100 hours or more</p> <ul style="list-style-type: none"> • Navigation (General - and Radio Navigation) • Aircraft General Knowledge • Flight Performance and Planning • Meteorology <p>Subgroup 2, less extensive subjects. Expected to require up to 50 hours or more</p> <ul style="list-style-type: none"> • Human Performance and Limitations • Air Law • Operational Procedures • Principles of Flight <p>Subgroup 3, least extensive subjects. Expected to require less than 50 hours</p> <ul style="list-style-type: none"> • Communications"



2. Individual comments and responses

response	<p>This naturally applies to both ATPL and CPL for fixed wing and helicopters with respective variations. 100 KSA should also be included.</p> <p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 32-A on this subject.</p>
comment	<p>94-A comment by: IATA</p> <p>IATA asks to clarify the training content of the instructors delivering the Area 100 KSA.</p> <p>First, the NPA 2016-03(A) often mentions ‘the necessary ATO training’ and the link with AMC 2 ORA.ATO.230 (a) is not obvious for the NPA 2016-03 (A) readers.</p>
response	<p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 39-A on this subject.</p>
comment	<p>114-A comment by: FNAM</p> <p>The FNAM suggests to add, in paragraph A. ATP integrated courses, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph A. ATP integrated courses: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Thank you for your multiple comments.</p> <p>Regarding your comment referring to the use of movies, etc.: Noted.</p> <p>Regarding your comment referring to the limitation to understand the competencies: Not accepted.</p> <p>Please, see EASA’s responses to comments 23-A and 106-A.</p>



2. Individual comments and responses

comment	<p>115-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph B. ATP modular theoretical knowledge course: aeroplanes, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph B. ATP modular theoretical knowledge course: aeroplanes: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>
comment	<p>116-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph C. CPL/IR integrated course: aeroplanes, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph C. CPL/IR integrated course: aeroplanes: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>
comment	<p>117-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph D. CPL integrated course: aeroplanes, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the</p>



2. Individual comments and responses

response	<p>following revision of the paragraph D. CPL integrated course: aeroplanes: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>
comment	<p>118-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph E. CPL modular course: aeroplanes, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph E. CPL modular course: aeroplanes: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>
comment	<p>119-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph F. ATP/IR integrated course: helicopters, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph F. ATP/IR integrated course: helicopters : “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media</p>



2. Individual comments and responses

response	<p>training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>
comment	<p>120-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph G. ATP integrated course: helicopters, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph G. ATP integrated course: helicopters: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>
comment	<p>121-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph H. ATP modular theoretical knowledge course: helicopters, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph H. ATP modular theoretical knowledge course: helicopters: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Noted.</p>



2. Individual comments and responses

Thank you for providing this comment.
 Please, see EASA’s response to comment 114-A on this subject.

comment

122-A

comment by: *FNAM*

The FNAM suggests to add, in paragraph I. CPL/IR integrated course: helicopters, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph I. CPL/IR integrated course: helicopters: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations **using movies**; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority **to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.**”

response

Noted.
 Thank you for providing this comment.
 Please, see EASA’s response to comment 114-A on this subject.

comment

123-A

comment by: *FNAM*

The FNAM suggests to add, in paragraph J. CPL integrated course: helicopters, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph J. CPL integrated course: helicopters: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations **using movies**; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority **to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.**”

response

Noted.
 Thank you for providing this comment.
 Please, see EASA’s response to comment 114-A on this subject.



2. Individual comments and responses

comment	<p>124-A comment by: <i>FNAM</i></p> <p>The FNAM suggests to add, in paragraph K. CPL modular course: helicopters, that the aim of this classroom training is to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model. Therefore, we suggest the following revision of the paragraph K. CPL modular course: helicopters: “The classroom training should include classroom and practical work to address the subject and the Area 100 KSA LOs, such as but not limited to: lessons, tutorials and demonstrations using movies; planning, communications, group presentation, scenario and project exercises; practical work using training devices, computer-based training, workbook exercises, assignments, airport and/or aviation industry field trips and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.”</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision) — Annex I: PART-FCL — Appendix 5: INTEGRATED MPL TRAINING COURSE p. 46

comment	<p>9-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>The training should include classroom and practical work to address the subject and the 100 KSA LOs area, such as lessons, tutorials and demonstrations using movies, training devices, computer-based training, and other media training, as approved by the competent authority to make trainees able to understand the use of core competencies to manage threats and errors in the TEM model.</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 114-A on this subject.</p>
comment	<p>58-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 46 Appendix 5: INTEGRATED MPL TRAINING COURSE The word <i>training</i> should be changed back to <i>instruction</i>. Instruction involves an instructor, therefore a much more active involvement. Alternatively, include the word</p>



2. Individual comments and responses

	instruction here. (same comment for all sections)
response	Accepted. Thank you for providing this comment. The word ‘instruction’ is to be retained.

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and GuidanceMaterial (Draft EASA Decision) — Annex I: PART-FCL — Appendix 6: MODULAR TRAINING COURSES FOR THE IR p. 47-48

comment	59-A	comment by: <i>European Cockpit Association</i>
	PAGE 47 Appendix 6: MODULAR TRAINING COURSES FOR THE IR The word <i>training</i> should be changed back to <i>instruction</i> . Instruction involves an instructor, therefore a much more active involvement. Alternatively, include the word instruction here. (same comment for all sections)	
response	Accepted. Thank you for providing this comment. The word ‘instruction’ is to be retained.	

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and GuidanceMaterial (Draft EASA Decision) — Annex VI: Part-ARA — Subpart GEN p. 48

comment	60-A	comment by: <i>European Cockpit Association</i>
	PAGE 48 Annex VI Part-ARA: ‘AMC1 ARA.GEN.220(a)(5) Record-keeping (b)(1) : the assessment shall not be a pass/fail result, but a description of the competency level assessed in each Core Competency, according to the approved taxonomy	
response	Noted. Thank you for your input.	



2. Individual comments and responses

comment	<p>125-A</p> <p style="text-align: right;">comment by: <i>FNAM</i></p> <p>In the AMC1 ARA.GEN.220(a)(5), it is mentioned that the documentation in support of the application for a licence, certificate, rating, authorisation or attestation or change to a licence, certificate, rating, authorisation or attestation, will cover in particular the course Area 100 KSA assessment. The FNAM would like to draw your attention to the words used in this AMC. Indeed the word assessment refers to a pass/fail result, whereas it should only be a description of the competency level assessed in each domain according to the approved taxonomy.</p>
response	<p>Noted.</p> <p>Thank you for your input.</p>

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision) — Annex VI: Part-ARA — Subpart FCL p. 48-63

comment	<p>33-A</p> <p style="text-align: right;">comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p> <p>Subject 061-General Navigation</p> <p>Time for ATPL(A), ATPL(H), ATPL(H)/IR in General Navigation is set to 1h 30min.</p> <p>Comment: The number of questions will remain the same but the time will be shortened. Several ATO reports present time of 2h being too short. Students feel stressed for time. Our view is that being able to be fast is not as important as being able to do correct calculations in this subject. Too short time gives the students incentive to study question banks rather than really learning how to solve problems/calculations.</p> <p>Proposal: Time for ATPL(A), ATPL(H), ATPL(H)/IR in General navigation should be 2h30 min</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.</p>

comment	<p>36-A</p> <p style="text-align: right;">comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p>
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2. Individual comments and responses

response	<p>Comment: To limit the KSA assessment only to the theoretical part of the training is a limitation. It would make more sense for the KSA assessment to span the whole training, including the practical part. The final assessment could be handed in before the skill test. If this is outside the scope of this RMT we suggest that this option is considered for future RMT:s</p> <p>Proposal: Let the KSA assessment span both the theoretical and practical part of the training with the complete KSA assessment to be handed in to the authorities before the skill test.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>EASA considers that the knowledge, skills and attitudes (KSA) in the competencies should be progressively developed and assessed in all stages of pilot training.</p> <p>Please, see also EASA’s responses to comments 109-A and 100-A on this subject.</p>
comment	<p>41-A comment by: FTEJerez</p> <p>Comment on Subject 022 — AIRCRAFT GENERAL KNOWLEDGE — INSTRUMENTATION</p> <p>One of the most common complains we get about our integrated course is regarding the moment Instruments is taught, and I know that this situation is not exclusive to FTEJerez. This subject has two big blocks - basic instruments and advanced instruments - that a student needs in different moments during their training. It is hard to imagine an efficient course where we put a student flying without having learned about basic instruments, the same way it is clearly not in the students best interest to learn about advanced instruments months before his MCC/JOC course.</p> <p>What we would suggest is that the exam on the subject is split into two:</p> <p>Basic Instruments</p> <p>022 01 00 00 SENSORS AND INSTRUMENTS 022 02 00 00 MEASUREMENT OF AIR-DATA PARAMETERS 022 03 00 00 MAGNETISM — DIRECT-READING COMPASS AND FLUX VALVE 022 04 00 00 GYROSCOPIC INSTRUMENTS</p> <p>Advanced Instruments</p> <p>022 05 00 00 INERTIAL NAVIGATION AND REFERENCE SYSTEMS (INS AND IRS) 022 06 00 00 AEROPLANE: AUTOMATIC FLIGHT CONTROL SYSTEMS 022 08 00 00 TRIMS — YAW DAMPER — FLIGHT-ENVELOPE PROTECTION 022 09 00 00 AUTOTHRUST – AUTOMATIC THRUST CONTROL SYSTEM 022 10 00 00 COMMUNICATION SYSTEMS 022 11 00 00 FLIGHT MANAGEMENT SYSTEM (FMS)/FLIGHT MANAGEMENT AND GUIDANCE SYSTEM (FMGS) 022 12 00 00 ALERTING SYSTEMS, PROXIMITY SYSTEMS 022 13 00 00 INTEGRATED INSTRUMENTS — ELECTRONIC DISPLAYS</p>



2. Individual comments and responses

response	<p>022 14 00 00 MAINTENANCE, MONITORING AND RECORDING SYSTEMS 022 15 00 00 DIGITAL CIRCUITS AND COMPUTERS</p> <p>Schools that do not have this problem can just teach the subjects back to back and maintain things as they are, but for schools such as ours this would bring relevant pedagogical benefits. Additionally, having two exams allows for a better and more thorough evaluation of the student's knowledge whereas now, to have a suitable exam basically requires we exam each block rather superficially.</p> <p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Thank you for providing this comment referring to Subject 022 — AIRCRAFT GENERAL KNOWLEDGE — INSTRUMENTATION.</p> <p>Your proposed split between basic and advanced instruments may be considered during future updates of the LOs.</p>
comment	<p>44-A comment by: FTEJerez</p> <p>Comment on: Subject 010 — AIR LAW Theoretical knowledge examination</p> <p>Air Law is a vast subject and teaching it has been a challenge in the pilot training industry since the beginning, as the instructor has to convene teaching a subject for a real life scenario where 90% of the times you have to consult the reference material with an exam that is 100% memory items.</p> <p>The training should be focused in replicating the practical use of Air Law as much as possible and, as so, we propose that the exam splits its questions in two categories:</p> <ul style="list-style-type: none"> - 010 05 00 00 (Annex 02) and 010 09 00 00 (Annex 14) - mostly memory items, no reference material; - Rest of it - All documentation available to be used as reference material, the student has to search through and find the correct answer. <p>We believe that this change in the examination procedure would help provide a more practical use of the documentation. Rather than having instructors directing the students to whatever more or less random set of facts EASA has on their exams in any given moment, this focuses the instruction and the examination toward a working knowledge of the documents.</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>At present, EASA is not in a position to create the reference material as part of this RMT. EASA will take this up as a follow-up action for future rulemaking and refer this to the</p>



2. Individual comments and responses

standing rulemaking task for further consideration.

comment 45-A comment by: FTEJerez

Comment on:
Subject 070 —Operational Procedures
Theoretical knowledge examination

Operational Procedures is a vast subject and teaching it has been a challenge in the pilot training industry since the beginning, as the instructor has to convene teaching a subject for a real life scenario where 90% of the times you have to consult the reference material with an exam that is 100% memory items.

The training should be focused in replicating the practical use of Operational Procedures, such as SOP and reference material, as much as possible and, as so, we propose that the exam splits its questions in two categories:

- Emergency descent procedure, nb of fire extinguishers and their location, first aid medical kits availability, etc... - mostly memory items, no reference material;
- CAP with SOPs, checklists and an example of a MEL or CDL and OPS manual Part C - All documentation available to be used as reference material, the student has to search through and find the correct answer.

We believe that this change in the examination procedure would help provide a more practical use of the documentation. Rather than having instructors directing the students to whatever more or less random set of facts EASA has on their exams in any given moment, this focuses the instruction and the examination toward a working knowledge of the documents.

response Noted.

Thank you for providing this comment.

At present, EASA is not in a position to create the reference material as part of this RMT. EASA will take this up as a follow-up action for future rulemaking and refer this to the standing rulemaking task for further consideration.

comment 72-A comment by: KLM Flight Academy

The times and amount of questions for 061 ATPLA, ATPLH and ATPLH(IR) is too short. Gen Nav exams were time critical in the past. It is better to change the time back 02:00. If some of the comments with the proposal to cancel the transfers to other subjects on LO 061 there is another argument to keep the time on 02:00.

Furthermore it has to be reviewed if an amount of questions for 061 01 can be redivided over the other 061 items.



2. Individual comments and responses

response

Noted.

Thank you for providing this comment.

The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.

comment

77-A

comment by: roger henshaw

ref page 54 040 - Human Performance - for the CBIR/EIR. I fundamentally disagree with limiting the number of examination questions to 12 with each question worth approximately 8%. I suggest 18 or 20 would be a fairer number of questions to more fully examine knowledge whilst allowing an improved margin for errors.

response

Noted.

Thank you for providing this comment.

Please, see EASA's response to comment 76-A on this subject.

comment

83-A

comment by: University of Tromsø School of Aviation

Our main concern regarding time available on the exam is the fact that nothing gets easier with this revision.

That in itself is **not** a problem, we are welcoming most changes with open arms, but it leaves room for some discussion.

In general and for all subjects; the movement of several LO's to Basic Knowledge (BK) LO's will most likely change the average difficulty of all exams. When questions that today may be considered "free points" by students gets removed, they will be naturally be replaced by more advanced/harder questions.

This impact will vary greatly between each subject depending on the syllabi being replaced/added/removed. Whether the total amount of LO's increase or decrease will – as we see it – either way result in a more challenging examination for each and every student.

Because of this, it seems unnecessary to reduce the time available on the GNAV exam. It should be noted that at UTSA, this exam is more or less the only one where the general norm is students using all of the time available.

In general; a *reduction in syllabi should not lead to a reduction in time available if the amount of questions remains the same.*

However; If time shows that the full 2 hours is not needed for the examination, a reduction may be considered. We would rather have some students finishing the exam



2. Individual comments and responses

response	<p>with too much time available, then every student having too little. Alternatively, a reduction in exam size by reducing the questions may be considered. We do however feel that the proposed exam sizes are fitting to the syllabi to be taught, and do not consider this a good option.</p> <p>Our Recommendation:</p> <ul style="list-style-type: none"> • Leave the time available for 061 General Navigation untouched. • If data from examinations show a reduced time spent, the implementation of 1:30h for 061 may then be considered - but not until sufficient data have been recorded and an adjustment can be made based upon that data. <p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>Whilst the concept of BK is maintained, the number of LOs identified as BK has been revised and reduced. Subject 050 is a good example of this revision.</p> <p>The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.</p>
comment	<p>84-A comment by: <i>University of Tromsø School of Aviation</i></p> <p>With the addition of LO's, an increase in total questions and time allowed makes sense. The purposed 45 questions and 1:30 hours for ATPL(A) is most likely a good match.</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.</p>
comment	<p>85-A comment by: <i>University of Tromsø School of Aviation</i></p> <p>With the addition of LO's, an increase in total questions and time allowed makes sense. The purposed 36 questions and 0:45 hours for ATPL(A) is most likely a good match.</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p>



2. Individual comments and responses

The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.

comment 134-A comment by: Karl Hunkeler

In the following subjects there are more questions for CBIR/EIR than for the regular IR: 022 02, 050 03. Is that intentional, or an error?

response Noted.

Thank you for providing this comment.

The publication of the tables at AMC1 ARA.FCL.300(b) is delayed to give EASA time to evaluate the impact of introducing scenario-based questions into the examinations and to complete the study into the associated impact on the time allocated for each individual question in an examination.

3. Proposed amendments — 3.1. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision) — Annex VII: Part-ORA — Subpart ATO p. 64-73

comment 10-A comment by: Michel Lacombe AF Training department and AF ATO

Mental maths should only be exercices to allow the Situation awareness.
 What's the use of test at this level (with the curent aircrafts, that's a huge step back in history !!!!)

response Not accepted.

Thank you for providing this comment.

This view is not shared by EASA and is not supported with evidence considering the responses to the TNA.

comment 11-A comment by: Michel Lacombe AF Training department and AF ATO

exercices in training is enough, what's the use of adding a new barrier ????

response Not accepted.



2. Individual comments and responses

EASA's direction is to modernise the training system to holistically train and develop students' and pilots' competencies (at appropriate level and focus).

Please, see also EASA's responses to comments 46-A, 109-A, and 100-A on this subject.

comment

12-A

comment by: *Michel Lacombe AF Training department and AF ATO*

If we want to implement core competencies, starting by creating an exam, is the better way to fail (well done !!!!)

The only need is that the trainees understand the use of competencies in a TEM model, and the way they can rely on them.

That will be the work of the instructors to develop these competencies with they trainees and not the other way, we are not born with them but we have to develop them by knowing them, understanding them, not by only beeing assessed.

response

Not accepted.

Please, see EASA's responses to comments 23-A and 109-A on this subject.

comment

13-A

comment by: *Michel Lacombe AF Training department and AF ATO*

What's the use of creating a new exam, KSA MATHS (what is it) in the new airplanes what's the use of this (old) new principle.

We were used to practise them 30 years ago when the system and the planes needed it, do you think there is a plus value in this old concept ot is it a return of nostalgia for some old guys ????

response

Not accepted.

Thank you for providing this comment.

This view is not shared by EASA and is not supported with evidence considering the responses to the TNA.

comment

14-A

comment by: *Michel Lacombe AF Training department and AF ATO*

Thats a very good idea to present the core competencies, but :

- why only 7 when the Agency published already 9 last winter ??
- why is there different definitions from the ICAO ones ????
- Why avoiding to present Aircraft flight Path Manual control ??? And Application of Procedures ??? Aren't they core competencies for the working group, or did they thought that would be difficult to explain in a classroom ???



2. Individual comments and responses

response	<p>We should present the 9 core competencies as defined by ICAO and as published by the EASA. With scenarios and movies we should be able to explain the interest of all these core competencies in the management of a flight and the management of Threats and Error in a TEM model.</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s responses to comments 23-A, 100-A, 106-A, and 109-A on this subject.</p>
comment	<p>15-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p style="text-align: center;">Use ICAO competency definition and KSA indicators:</p> <p style="text-align: center;">Competence : Communication :</p> <p style="text-align: center;">Competence description : Demonstrates effective oral, non-verbal and written communications, in normal and non-normal situations</p> <p style="text-align: center;">KSA indicators:</p> <ul style="list-style-type: none"> • Ensures the recipient is ready and able to receive the information • Selects appropriately what, when, how and with whom to communicate • Conveys messages clearly, accurately, and concisely • Confirms that the recipient correctly understands important information • Listens actively and demonstrates understanding when receiving information • Asks relevant and effective questions • Adheres to standard radiotelephony phraseology procedures. • Accurately reads and interprets required company and flight documentation • Accurately reads, interprets, constructs and responds to data link messages in English • Completes accurate reports as required by operating procedures • Correctly interprets non-verbal communication • Uses eye contact, body movement and gestures that are consistent with and support verbal message
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 7-F on this subject.</p>
comment	<p>16-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p>



2. Individual comments and responses

Use the ICAO competencies definition and KSA indicators**Competence** : Aircraft Flight Path Management automation**Competence Description** : Controls the aircraft flight path through automation, including appropriate use of flight management system(s) and guidance.**KSA indicators** :

- Controls the aircraft using automation with accuracy and smoothness as appropriate to the situation
- Detects deviations from the desired aircraft trajectory and takes appropriate action
- Contains the aircraft within the normal flight envelope
- Manages the flight path to achieve optimum operational performance
- Maintains the flight path during flight using automation whilst managing other tasks and distractions
- Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload
- Effectively monitors automation, including engagement and automatic mode transitions.

response

Noted.

Thank you for providing this comment.

Please, see EASA's response to comment 8-F on this subject.

comment

17-A

comment by: *Michel Lacombe AF Training department and AF ATO***Use ICAO competency definition and KSA indicators :****Competence** : Leadership and teamwork**Competence description** : Demonstrates effective leadership and team working**KSA indicators** :

- Understands and agrees with the crew's roles and objectives
- Creates an atmosphere of open communication and encourages team participation
- Uses initiative and gives directions when required
- Anticipates and responds appropriately to other crew members' needs
- Carries out instructions when directed
- Communicates relevant concerns and intentions
- Gives and receives feedbacks constructively
- Confidently intervenes when important for safety
- Demonstrates empathy and shows respect and tolerance for other people
- Engages others in planning and allocates activities fairly and appropriately according to abilities
- Addresses and resolves conflicts and disagreements in a constructive manner
- Projects self-control in all situations



2. Individual comments and responses

response	<p>Noted.</p> <p>Please, see EASA’s response to comment 9-F on this subject.</p>
comment	<p>18-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>Use ICAO competency definition and KSA indicators</p> <p>Competence : Problem-solving and decision making</p> <p>Competence description : Accurately identifies risks and resolves problems. Uses the appropriate decision-making processes</p> <p>KSA indicators</p> <ul style="list-style-type: none"> • Seeks accurate and adequate information from appropriate resources • Perseveres in working through a problem • Identifies and verifies why things have gone wrong • Employ(s) proper problem-solving strategies • Perseveres in working through problems without reducing safety • Uses appropriate and timely decision-making processes • Sets priorities appropriately • Identifies and considers option effectively • Monitors, reviews, and adapts decisions as required • Identifies and manages risks effectively • Improvises when faced with unforeseeable circumstances to achieve the safest outcome
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 10-F on this subject.</p>
comment	<p>19-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>Use ICAO definition and KSA indicators</p> <p>Competence : Situation awareness</p> <p>Competence description : Perceives and comprehends all relevant information available and anticipates what could happen that may affect the operation</p> <p>KSA indicators</p> <ul style="list-style-type: none"> • Identifies and assesses accurately the state of the aircraft and its systems.



2. Individual comments and responses

<p>response</p>	<ul style="list-style-type: none"> • Identifies and assesses accurately the aircraft’s vertical and lateral position, and its anticipated flight path. • Identifies and assesses accurately the general environment as it may affect the operation • Keeps track of time and fuel • Maintain awareness of the people involved in or affected by the operation and their capacity to perform as expected • Anticipates accurately what could happen, plans and stays ahead of the situation • Develops effective contingency plans based upon potential threats • Identifies and manages threats to the safety of the aircraft and people • Recognizes and affectively responds to indications of reduced situation awareness. <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 11-F on this subject.</p>
<p>comment</p>	<p>20-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>Use ICAO competency definition and KSA indicators</p> <p>Competence : Workload management Competence description : Manages available resources efficiently to prioritize and perform tasks in a timely manner under all circumstances KSA indicators :</p> <ul style="list-style-type: none"> • Maintain self-control in all situations • Plans, prioritises and schedules tasks effectively • Manages time efficiently when carrying out tasks • Offers and accepts assistance, delegates when necessary and asks for help early • Reviews, monitors and cross-checks actions conscientiously • Verifies that tasks are completed to the expected outcome • Manages and recovers from interruptions, distractions, variations and failures effectively <p>response</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 12-F on this subject.</p>
<p>comment</p>	<p>21-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p>



2. Individual comments and responses

response	<p>Use ICAO competency definition and KSA indicators</p> <p>Competence : Knowledge Competence description : Demonstrates knowledge and understanding of relevant information, operating instructions, aircraft systems and the operating environment. All the learning and expertise required to achieve a flight and ability to maintain them.</p> <p>KSA indicators :</p> <ul style="list-style-type: none"> • Demonstrates practical and applicable knowledge of limitations and systems and their interaction • Demonstrates required knowledge of published operating instructions • Demonstrates knowledge of the physical environment, the air traffic environment including routings, weather, airports and the operational infrastructure • Knows where to source required information • Demonstrates a positive interest in acquiring knowledge • Is able to apply knowledge effectively <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 13-F on this subject.</p>
comment	<p>22-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>Use all the ICAO defined competencies with their KSA indicators</p> <p>Competence : Aircraft Flight Path Management manual control Competence description : Controls the aircraft flight path through manual flight, including appropriate use of flight management system(s) and flight guidance systems</p> <p>KSA indicators :</p> <ul style="list-style-type: none"> • Controls the aircraft manually with accuracy and smoothness as appropriate to the situation • Detects deviations from the desired aircraft trajectory and takes appropriate action • Contains the aircraft within the normal flight envelope • Controls the aircraft safely using only the relationship between aircraft attitude, speed and thrust • Manages the flight path to achieve optimum operational performance • Maintains the flight path during manual flight whilst managing other tasks and distractions • Selects appropriate level and mode of flight guidance systems in a timely manner considering phase of flight and workload • Effectively monitors flight guidance system including engagement and automatic mode transitions <p>Competence : Application of procedures & knowledge</p>



2. Individual comments and responses

response	<p>Competence description ; Identifies and applies procedures in accordance with published operating instructions and applicable regulations, using the appropriate knowledge</p> <p>KSA indicators</p> <ul style="list-style-type: none"> • Identifies the source of operating instructions • Follows SOP’s unless a higher degree of safety dictates an appropriate deviation • Identifies and follows all operating instructions in a timely manner • Correctly operates aircraft systems and associated equipment • Complies with applicable regulations • Applies relevant procedural knowledge <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 14-F on this subject.</p>
comment	<p>28-A comment by: <i>Michel Lacombe AF Training department and AF ATO</i></p> <p>Is the focus put on Mental Maths in this NPA correlated with any significant safety or competency concern???</p> <p>We haven't seen these days any safety recommendation emitted that advocates for such emphasis.</p> <p>Moreover, the evolution of modern cockpit design has rendered this skill much less critical.</p>
response	<p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 13-A on this subject.</p>
comment	<p>34-A comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p> <p>AMC1 ORA.ATO.230(a) (7) Appendices (iii) “The Area 100 assessment form should include...”</p> <p>Comment: The Area 100 KSA will be new territory to both the Competent Authorities as well as for the ATO:s. To make the transition as cost effective as possible we believe that the assessment form should be standardized and provided by EASA. More guidance materials should also be provided to assist the introduction of this new LO. As students frequently attend an ATO in one member state and subsequently perform their exams in another, an abundance of different KSA assessment forms will lead to unnecessary work</p>



2. Individual comments and responses

response	<p>for the Competent Authorities. There is also the problem of different ATO:s assessing the KSA in different ways. Having the same form should at least provide some common grounds.</p> <p>Proposal: The RMT.0595 group should produce a standardized assessment form for the Area 100 KSA and more guidance material and examples to help in the introduction of the new LO. We believe this to be of vital importance in order to limit the implementation costs to both ATO s and the Competent Authorities.</p> <p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>The requirement for the assessment form has been removed from AMC1 ORA.ATO.230(a)(7).</p>
comment	<p>35-A comment by: <i>Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)</i></p> <p>AMC2 ORA.ATO.230(a)(6) “assessors of the Area 100 KSA assessments should receive...”</p> <p>Comment: One assessor in training teaching another assessor in training is like a blind leading a blind. The educational task of the respective Competent Authority will be extensive. More guidance to this is needed to facilitate the introduction of the KSA LO. We need to assure that all assessors make their assessment in the same way...or as similar as possible.</p> <p>Proposal: Educational material should be developed to help standardize the training of KSA assessors. We believe this to be of vital importance in order to limit the implementation costs to both ATO s and the Competent Authorities</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s responses to comments 39-A and 137-A on this subject.</p>
comment	<p>61-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 64 Annex VII Part-ORA: ‘AMC1 ORA.ATO.230(a) Training manual and operations manual</p> <p>(7) appendices (ii) and (iii) : mental maths is not described as such in the Observable behaviors composing the Core Competencies. The mental maths assessment method described goes against the assessment methodology for non-technical skills.</p> <p>The significant focus put on Mental Maths in the NPA is not correlated with any significant</p>



2. Individual comments and responses

response	<p>safety or competency concern. As of today, there is no safety recommendation emitted that advocates for such emphasis. Moreover, the evolution of modern cockpit design has rendered this skill much less critical than for older instrument layouts.</p> <p>Mental maths tools may be very efficiently used to enhance both Workload management and Situational Awareness Competencies. Those tools are however not the only ones available and efficient for the purpose, and according to the individual abilities of the trainee, they may be less adequate than other relevant tools. They may be trained and used as such in a CBT syllabus, but there is no rationale to push for a full formal pass/fail exam.</p> <p>The assessment should be as little invasive as possible, in the philosophy of LOSA observations, in order to capture behaviours as natural and unbiased as possible due to the assessment context.</p> <p>Not accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA's response to comment 13-A on this subject.</p>
comment	<p>62-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 64 and 65 AMC2 ORA.ATO.230(a) (3) the paragraph uses terms inconsistent with the ones describes in GM1 FCL310. The competency assessment philosophy of the ATO should apply to all trainees and instructors/assessors/examiners. (6) the provision is very welcome, and raises the issue of inter-reliability for Small ATOs having only 1 or 2 KSA assessors and thus required to outsource partially to comply with this provision.</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>EASA proposes to run a workshop to facilitate the consistent application and standardisation of the Area 100 KSA summative assessments, together with guidance on the ATO requirements.</p>
comment	<p>63-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 65 AMC3 ORA.ATO.230(a) Paragraphs (a) and (c) : Mental Maths is not part of the Core Competencies as described in GM2 ORA.ATO.230(a) Paragraph (c): mental math KSA is treated as Pass/fail, in contradiction with the principles</p>



2. Individual comments and responses

response	<p>of Competency-based-training Paragraph (e): the wording is unclear. What does “should provide at least 5 assessments” ? Does it mean that there should be at least 5 assessments performed for each student? Or at least 5 sets of assessment to be potentially used alternatively? As area 100 KSA training and assessment is supposed to be embedded within the global training syllabus, does it mean that the ATO should develop at least 5 different TK training syllabi?</p> <p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Regarding mental maths, please see EASA’s response to comment 29-A.</p> <p>Regarding assessments, EASA has clarified the text on assessment requirements and reduced the overall number required.</p>
comment	<p>64-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 66 GM1 ORA.ATO.230(a) The proposed provision lacks the requirement for a debriefing, in order to enable the student pilot to identify his strengths and weaknesses. Paragraph (d) to be deleted, as Mental Maths is not a Core Competency as described in GM2 ORA.ATO.230(a)</p>
response	<p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>EASA has amended the text to include in the debrief the student’s strengths, weakness and development aims and strategies.</p> <p>Regarding mental maths, please see EASA’s response to comment 13-A.</p>
comment	<p>65-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 66 GM2 ORA.ATO.230(a); Area 100 KSA Word pictures This provision is welcome, and should be extended to all Competency assessment made in the ATO, in particular for Instructors and Assessors competencies.</p>
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Thank you for your positive feedback.</p>



comment	<p>66-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 67 A. AREA 100 KSA ASSESSMENT INDICATORS The terms and wording used here differ significantly from the EBT Core Competencies used in Doc 9995 as well the EBT principles as proposed in the GM published by EASA in December 2015. <u>This part shall be aligned and merged with the one developed for EBT, and potentially put in a separate CS to Part FCL, to be a single consistent reference for all Competency-Based-Training.</u> Allowing similar terms to exist in different places of the regulation will inevitably lead to confusion and potentially compliance/mutual recognition issues.</p>
response	<p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>EASA has modified the observable behaviours whilst retaining the applicability to training in this phase.</p>
comment	<p>67-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 73 ‘GM3 ORA.ATO.230(a) Training manual and operations manual</p> <p>The proposed provision <u>lacks the requirement for a debriefing</u>, in order to enable the student pilot to identify his strengths and weaknesses. <u>There should be a way for the student to receive feedback</u>, in order to identify his weaknesses. Moreover, to ensure correct assesment of whether the student understood the issue/concept - independent, non-database questions need to be asked.</p>
response	<p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 64-A on this subject.</p>
comment	<p>68-A comment by: <i>European Cockpit Association</i></p> <p>PAGE 73 ‘AMC1 ORA.ATO.305 Classroom instruction</p> <p>It must be noted that distance learning prevents the proper assessment of a significant number of Observable Behaviours. Therefore, it is doubtful that a proper KSA assessment could be performed through distance learning.</p>



2. Individual comments and responses

response Not accepted.

Thank you for providing this comment.

EASA considers that through the use of carefully constructed exercises and available technology many of the competencies can be developed, and some assessed, during distance-learning training. The development and assessment of competencies during the required classroom instruction remains an option.

comment 71-A comment by: *European Cockpit Association*

PAGE 64
AMC2 ORA.ATO.230(a) Training manual and operations manual

Rewrite: integrate threat and error management (TEM) and/or crew resource management (CRM), and CBT knowledge.

response Accepted.

Thank you for providing this comment.

AMC2 ORA.ATO.230(a) has been substantially amended.

comment 73-A comment by: *KLM Flight Academy*

5 assessments per student will take a lot of time for the instructors. A minimum of 2 assessments would be fine to gain experience with such test tools. It would be good to mention a minimum duration of such assessments. Best option is not to prescribe the amount and duration. Leave it to the ATO and the approving NAA.

response Partially accepted.

Thank you for providing this comment.

EASA has amended the text to a minimum of two summative assessments and one formative assessment.

comment 74-A comment by: *KLM Flight Academy*

All assessments, also for distance learning, should be done at the ATO. How can the student be observed on the KSA LO's if they are not present at the ATO.

response Not accepted.



2. Individual comments and responses

Thank you for providing this comment.
Please, see EASA’s response to comment 68-A on this subject.

comment

75-A

comment by: *KLM Flight Academy*

Each instructor should receive training. Does that mean that each TKI has to be able to assess students and to be capable to give instruction on simulators? It is hard to believe that this will happen.

response

Accepted.

Thank you for providing this comment.

The training requirements specified in AMC2 ORA.ATO.230(a) and GM4 ORA.ATO.230(a) for instructors delivering Area 100 KSA training or being responsible for assessing Area 100 KSA have been revised. There is no requirement for training to be conducted on simulators.

comment

93-A

comment by: *IATA*

IATA recommends to use 75% as the minimum required score to pass the mental math assessment because mental-math is an important skill for future pilots and it is obvious that present high-school-training in most EU countries is not forcing students to become and stay competent in this subject-matter.

response

Noted.

Thank you for your positive feedback.

comment

96-A

comment by: *IATA*

IATA asks to clarify the training content of the instructors delivering the Area 100 KSA. Secondly, IATA considers that Area 100 KSA instructors requirements described in AMC 2 ORA.ATO.230 (a) (3) & (4) are clearly personnel requirements and therefore should move to ORA.ATO.210 (g)&(h) for consistency reasons.

Third, IATA considers that ‘the necessary ATO training’ required for Area 100 KSA instructors is not necessarily applicable for theoretical knowledge instructor involved in the theoretical knowledge part of a type rating course. This distinction between Area 100 KSA instructor and theoretical knowledge instructor is not clear enough.

response

Partially accepted.



2. Individual comments and responses

Thank you for providing this comment.

The training requirements specified in AMC2 ORA.ATO.230(a) and GM4 ORA.ATO.230(a) for instructors delivering Area 100 KSA training or being responsible for assessing Area 100 KSA have been revised.

comment

97-A

comment by: IATA

IATA also considers that AMC 2 ORA.ATO.230 (a) (6) should mention that Area 100KSA assessor should have previous experience as Area 100 KSA instructors.

IATA is also concerned by the fact that on one hand, the theoretical Knowledge is checked by an official exam, and on the other hand 100 KSA is assessed by the ATO itself? For consistency, the Area 100 KSA should be done by the NAA or on its behalf.

response

Not accepted.

Thank you for providing this comment.

The design of and responsibility for the Area 100 KSA training and assessments, and the training of instructors delivering Area 100 KSA training or being responsible for assessing Area 100 KSA, will rest with the ATO. The ATO's ISD process, management system, and training and assessment programme will be overseen by the competent authority to ensure that all are robust and working effectively.

comment

126-A

comment by: FNAM

The FNAM wonders why there is a huge focus on Mental Maths in this NPA. Mental Maths should only be exercises to allow the situation awareness. Therefore, the assessment should be as less pervasive as possible since we do not see a significant safety or competency concern nowadays with the evolution of the cockpits.

Besides, the FNAM would like to highlight the fact that in page 24 of this NPA, regarding the Area 100 KSA, it is written that "These LOs will not be the subject of examination questions but are to be assessed by the ATOs". Nevertheless, later in this document, in the paragraph (c) of the AMC3 ORA.ATO.230(a), it is stated that "the minimum score for the KSA mental maths assessment should be 75%". Therefore, the FNAM would like to have some clarifications on the matter.

response

Noted.

Thank you for providing this comment.

Please, see EASA's responses to comments 13-A, 29-A and 93-A on this subject.



2. Individual comments and responses

comment	<p>127-A comment by: <i>FNAM</i></p> <p>Regarding the paragraph 6 of the AMC2 ORA.ATO.230 (a), the FNAM would like to draw your attention to small ATOs that only have 1 or 2 KSA Assessors and that will have to outsource in order to be in compliance with this provision.</p>			
response	<p>Noted.</p> <p>Thank you for providing this comment.</p> <p>Please, see EASA’s response to comment 62-A on this subject.</p>			
comment	<p>128-A comment by: <i>FNAM</i></p> <p>The FNAM would like to highlight the fact that the Mental Maths KSA are considered as a pass/fail exam in the paragraph (c) of the AMC3 ORA.ATO.230 (a) which is inconsistent with the competency based training principles.</p> <p>Besides, in the paragraph (e) of this AMC, it is written: “The ATO should provide a minimum of five Area 100 KSA assessments”. The FNAM finds this sentence confusing. Indeed this sentence could be understood in several ways :</p> <ul style="list-style-type: none"> • Does each student need to perform at least 5 assessments? • Does the ATO need to implement at least 5 different sets of assessment that could be used? • Does the ATO need to implement at least 5 different theoretical knowledge syllabi since the Area 100 KSA is part of the global training syllabus? <p>In the GM1 ORA.ATO.230 (a), the FNAM thinks it would be a good idea to implement a debriefing to help the trainee in determining his strengths and weaknesses.</p> <p>The FNAM thinks it is a good idea to present the core competencies in this NPA. However, the Area 100 KSA Assessment indicators should be aligned with the ones described in ICAO document 9995. The FNAM has been surprised to see that only 7 core competencies were presented in this document whereas they are 8 in the ICAO document 9995 (the Aircraft Flight Path Management, manual control is missing from the KSA indicators described in this NPA) and according to the Decision 2015/027/R published by the EASA one more behavioural indicators related to ‘knowledge’ should be added to the ones of the ICAO: “The core competencies listed in ICAO Doc 9995 serve as an example. Industry practice and experience indicate that behavioural indicator related to ‘knowledge’ (not defined in Doc 9995) are very useful and may be included as an additional core competency”. 9 core competencies should be in this document.</p> <p>Furthermore, the FNAM wonders why the definitions of the KSA indicators are not the same as the ICAO’s ones:</p>			
<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 33%;">Competency</th> <th style="width: 33%;">Competency Description</th> <th style="width: 33%;">Behavioural indicator</th> </tr> </thead> </table>		Competency	Competency Description	Behavioural indicator
Competency	Competency Description	Behavioural indicator		



2. Individual comments and responses

ICAO and EASA (decision 2015/027/R) competency	Competency written in the NPA 2016/03	FNAM 's proposition	Competency description written in the NPA	FNAM 's proposition	Behavioural indicator written in the NPA	FNAM 's proposition
Communication	= ICAO	N/A	≠ ICAO's definition	The FNAM suggests to use the same definition as the one stated in the ICAO document 9995	≠ ICAO's definitions	The FNAM suggests to use the same definitions as the ones stated in the ICAO document 9995
Aircraft Flight Path Management, automation	= ICAO	N/A	≠ ICAO's definition	The FNAM suggests to use the same definition as the one stated in the ICAO document 9995	≠ ICAO's definitions	The FNAM suggests to use the same definitions as the ones stated in the ICAO document 9995
Aircraft Flight Path Management, manual control	∅	The FNAM does not see why this competency is not taken into account and suggests to add this competency to be in compliance with the ICAO document 9995	∅	The FNAM does not see why this competency is not taken into account and suggests to add this competency to be in compliance with the ICAO document 9995	∅	The FNAM does not see why this competency is not taken into account and suggests to add this competency to be in compliance with the ICAO document 9995
Leadership and Teamwork	= ICAO	N/A	≠ ICAO's definition	The FNAM suggests to use the same	≠ ICAO's definition	The FNAM does not see why this



2. Individual comments and responses

				definition as the one stated in the ICAO document 9995		competency is not taken into account and suggests to add this competency to be in compliance with the ICAO document 9995
Problem Solving and Decision Making	= ICAO	N/A	= ICAO's definition	N/A	≠ ICAO's definition	The FNAM does not see why this competency is not taken into account and suggests to add this competency to be in compliance with the ICAO document 9995
Situation Awareness	= ICAO	N/A	≠ ICAO's definition	The FNAM suggests to use the same definition as the one stated in the ICAO document 9995	≠ ICAO's definition	The FNAM does not see why this competency is not taken into account and suggests to add this competency to be in compliance with the ICAO



2. Individual comments and responses

						document 9995
Workload Management	≈ICAO	The FNAM suggests to use the same wording as the one stated in the ICAO document 9995	≠ ICAO's definition	The FNAM suggests to use the same definition as the one stated in the ICAO document 9995	≠ ICAO's definition	The FNAM does not see why this competency is not taken into account and suggests to add this competency to be in compliance with the ICAO document 9995
Knowledge	≈EASA Decision 2015/027/R	N/A	≠ EASA's Decision 2015/027/R	The FNAM suggests to harmonise the different publications	≠ EASA's Decision 2015/027/R	The FNAM suggests to harmonise the different publications

In the GM3 ORA.ATO.230 (a), the FNAM thinks it would be a good idea to implement a debriefing to help the trainee in determining his strengths and weaknesses.

response

Partially accepted.

Thank you for providing this comment.

Debrief requirements added; please see EASA's response to comment 73-A.

Assessment text amended, please see EASA's response to comment 73-A; and competencies, please see EASA's responses to comments 23-A, 27-A, 46-A, and 106-A.

Mental maths: please see EASA's responses to comments 29-A and 126-A.

comment

139-A

comment by: Finnish Transport Safety Agency



2. Individual comments and responses

response	<p>AMC1 ORA.ATO.230(a) Training manual and operations manual</p> <p>In point (d) new row 7 is added, where point (i) requires ‘The assessment form for each exercise..’ Please specify which exercises are meant.</p> <p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>The requirement for the assessment form has been removed from AMC1 ORA.ATO.230(a)(7).</p>
comment	<p>140-A comment by: Finnish Transport Safety Agency</p> <p>AMC2 ORA.ATO.230(a)</p> <p>Point (a) (2) correct reference is GM2 ORA.ATO.230(a)</p>
response	<p>Accepted.</p> <p>Thank you for providing this comment.</p> <p>AMC2 ORA.ATO.230(a) has been substantially amended.</p>
comment	<p>141-A comment by: Finnish Transport Safety Agency</p> <p>AMC2 ORA.ATO.230(a)</p> <p>Point (a) (5) uses language ‘initial instructor training’. However it seems that the intention is not to set additional training requirements for initial FI course but requirements for ATOs to train their own instructors. Therefore, please clarify the language.</p> <p>In addition, if the intention is to set new requirements for FIs, the requirement should be under FCL.930.FI. If the intention is to set requirements for ATOs internal training for instructors, the requirement should be under Operations Manual part D instead of Training Manual.</p> <p>The training requirements in point (a)(6) and (7) for assessors should also be stated under Operations Manual part D instead of Training Manual.</p>
response	<p>Partially accepted.</p> <p>Thank you for providing this comment.</p> <p>The training requirements specified in AMC2 ORA.ATO.230(a) and GM4 ORA.ATO.230(a) for instructors delivering Area 100 KSA training or being responsible for assessing Area 100</p>



2. Individual comments and responses

KSA have been revised.

comment

142-A

comment by: *Finnish Transport Safety Agency*

GM1 ORA.ATO.230(a)

Please clarify whether ‘KSA assessor’, ‘KSA mental maths assessor’ and ‘ATO assessor’ have different training requirements.

If the requirements are same, please select only one term for the assessor to clarify the intention.

response

Accepted.

Thank you for providing this comment.

The training requirements specified in AMC2 ORA.ATO.230(a) and GM4 ORA.ATO.230(a) for instructors delivering Area 100 KSA training or being responsible for assessing Area 100 KSA have been revised.



Appendix A — Attachments

 [F.pdf](#)

Attachment #1 to comment [#131](#)

 [A.pdf](#)

Attachment #2 to comment [#46](#)

 [Attachment List of ATOs.pdf](#)

Attachment #3 to comment [#136](#)

 [A.pdf](#)

Attachment #4 to comment [#52](#)

 [A.pdf](#)

Attachment #5 to comment [#54](#)

 [A.pdf](#)

Attachment #6 to comment [#55](#)

