



## TERMS OF REFERENCE

- Task Nr:** RMT.0411 (OPS.094)
- Issue:** 2
- Date:** 12 November 2012
- Regulatory reference:**
- Regulation (EC) No 216/2008<sup>1</sup> (the Basic Regulation)
  - Council Regulation (EEC) No 3922/91<sup>2</sup>
  - Draft Regulation on Air Operations; Annex III 'Part-ORO' (organisation requirements for air operations)<sup>3</sup>
  - Draft Acceptable Means of Compliance (AMC) and Guidance Material (GM) on Air Operations, Annex III 'Part-ORO'<sup>4</sup>
  - Commission Regulation (EC) No 1178/2011<sup>5</sup>
- Reference documents:**
- JAA Temporary Guidance Leaflet (TGL) No 44: JAR-OPS 1, Amendment 13, Section 2<sup>6</sup>

**1. Subject:** Crew Resource Management (CRM) Training

**2. Problem/statement of the issue and justification; reason for regulatory evolution (regulatory tasks):**

Crew Resource Management (CRM) is the effective utilisation of all available resources (e.g. crew members, aeroplane systems, supporting facilities and persons) to achieve safe and efficient operation. The objective of CRM is to enhance the communication, human factors and management skills of the crew members concerned. The emphasis is placed on the non-technical aspects of the crew performance.

<sup>1</sup> Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1). Regulation as last amended by Regulation (EC) No 1108/2009 of the European Parliament and of the Council of 21 October 2009 (OJ L 309, 24.11.2009, p. 51).

<sup>2</sup> Council Regulation (EEC) No 3922/91 of 16 December 1991 on the harmonization of technical requirements and administrative procedures in the field of civil aviation (OJ L 373, 31.12.1991, p. 4). Regulation as last amended by Commission Regulation (EC) No 859/2008 of 20 August 2008 amending Council Regulation (EEC) No 3922/91 as regards common technical requirement and administrative procedures applicable to commercial transportation by aeroplane (OJ L 254, 20.9. 2008, p. 1).

<sup>3</sup> Opinion No 04/2011 of the European Aviation Safety Agency of 1 June 2011 for a Commission Regulation establishing Implementing Rules for air operations. ORO.FC115 and ORO.FC.215. Available under: <http://www.easa.europa.eu/agency-measures/opinions.php>.

<sup>4</sup> See: Comment Response Document (CRD), dated 4 October 2010, to Notice of Proposed Amendment (NPA) 2008-22c and 2009-02c. AMC1-OR.OPS.FC.115&215 and AMC2-OR.OPS.FC.115&215. Available under: <http://easa.europa.eu/rulemaking/r-archives.php>. It is to be noted that the Agency's Decision will only be published after the Commission Regulation has been amended based on the Agency's Opinion 04/2011.

<sup>5</sup> Commission Regulation (EC) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1). Regulation as last amended by Commission Regulation (EC) No 290/2012 of 30 March 2012 (OJ L 100, 5.4.2012, p. 1).

<sup>6</sup> Joint Aviation Authorities (JAA) Administrative & Guidance Material, Section Four: Operations, Part Three (JAR-OPS): Temporary Guidance Leaflet No 44: JAR-OPS 1, Amendment 13, Section 2 updated to incorporate Section 2 text proposals from suspended JAA NPAs; 01.06.2008.

One major prerequisite to develop and enhance CRM capabilities is to establish training requirements. At present, a regulatory framework for CRM training exists for commercial air transport by aeroplane as laid down in Commission Regulation (EC) No 859/2008<sup>7</sup>. The Joint Aviation Authorities (JAA) Temporary Guidance Leaflet No. 44 provides administrative and guidance material to the Commission Regulation.

The European Aviation Safety Agency ('the Agency'), when establishing opinions for Implementing Rules on Art. 8 of Regulation (EC) No 216/2008 (air operations) as well as Acceptable Means of Compliance (AMC) and Guidance Material (GM) thereto, also transposed the provisions on CRM training from Commission Regulation (EC) No 859/2008 into the new legal framework. As a result in the Agency's Opinion No 04/2011 CRM training is addressed in the organisation requirements for air operations (Annex III 'Part-ORO')<sup>8</sup>. These rules will be complemented by AMCs which have been transferred from the JAA Temporary Guidance Leaflet No. 44, and which will be laid down in an Agency Decision<sup>9</sup>.

During the public consultation of the Agency's Notice of Proposed Amendment (NPA) that led to Opinion No 04/2011 as well as will lead to a decision, it emerged that the regulatory framework concerning CRM training needs further improvement to take into consideration experience gained as well as recent developments. In addition, the Agency received in the meantime rulemaking proposals from the European Human Factors Advisory Group (EHFAG) proposing to further specify AMC and GM related to CRM training.

Based on the comments of stakeholders and on the rulemaking proposals the Agency has identified the following issues, among others, which may have to be addressed:

- Concerning 'non-technical skills' and the associated training, the envisaged regulatory framework at the present stage may lead to little practical and partly non-effective training, because it might not be clear in all cases what the term 'suitably qualified' means. This implies a possible risk that no measurable improvement in the accident rate caused by known hazards and no substantial prevention of future hazards associated with these factors may be achieved.
- As the assessment of CRM may be considered inherently subjective in nature, the risk of misinterpretation of the assessment process might undermine the confidence in CRM training. This may in turn create negative reactions towards the usefulness of CRM skills development in order to increase safety, and may diminish the training value.
- In the regulatory framework, as envisaged at present, there are no specific requirements to take into account the needs and culture of the operator in the CRM training.
- Repetitive training for the major CRM topics may not, to a certain extent, yet meet the primary objective of CRM training, which is to give operators effective tools to mitigate risks and hazards.

Following the comments received and the rulemaking proposals made, the Agency decided to initiate a rulemaking task (RMT.0411, (OPS.094)) to review the AMC and GM on CRM training for flight crew, cabin crew and technical crew. This activity will take into account, among others, the following safety recommendations<sup>10</sup>:

<sup>7</sup> In EU-OPS see e.g. OPS 1.943 on initial operator's CRM training, OPS 1.945 on conversion training and OPS 1.965 on recurrent training and checking.

<sup>8</sup> In the Agency's Opinion 04/2011 see e.g. ORO.FC.115 on CRM training and ORO.FC.215 on initial operator's CRM training.

<sup>9</sup> In the CRD, dated 4 October 2010, to NPA 2008-22c and 2009-02c see e.g. AMC1-OR.OPS.FC.115&215 and AMC2-OR.OPS.FC.115&215 on CRM training.

<sup>10</sup> These Safety Recommendations were established, among others, as a result of the investigation of

1. Safety Recommendation SPAN-2011-026: It is recommended that the European Aviation Safety Agency (EASA) performs investigations or studies intended to know the status of application and the real effectiveness of the current EU requirements applicable to CRM. The results of these studies should permit to identify the weak points existing in this field and should contain proposals on how to strengthen them.
2. Safety Recommendation SPAN-2011-027: It is recommended that the European Aviation Safety Agency (EASA) standardise the CRM training that must be provided to the operations inspectors of national authorities, and define the criteria that must be met by said inspectors in order to exercise their duties as inspectors in the area of CRM.
3. Safety Recommendation FRAN-2012-042: EASA review the requirements for initial, recurrent and type rating training for pilots in order to develop and maintain a capacity to manage crew resources when faced with the surprise generated by unexpected situations.
4. Safety Recommendation FRAN-2012-043: EASA ensure that operators reinforce CRM training to enable acquisition and maintenance of adequate behavioural automatic responses in unexpected and unusual situations with a highly charged emotional factor.
5. Safety Recommendation FRAN-2012-044: EASA define criteria for selection and recurrent training among instructors that would allow a high and standardised level of instruction to be reached.
6. Safety Recommendation FRAN-2012-021: EASA introduce the surprise effect in training scenarios in order to train pilots to react to these phenomena and work under stress.

Future safety recommendations related to CRM training, which will be published during this rulemaking task, will be taken into consideration, as appropriate.

In this context it should be pointed out that the reality of multinational and cross-cultural air crew teams has to be considered. It has to be recognised that each culture has different communication specifics, ways of understanding and approaching the same situation or problem. Therefore, attention should be given to mixed multinational and cross-cultural flight crew and cabin crew teams, and their mutual interaction.

### **3. Objective:**

Human factors continue to be one of the significant causes of accidents and incidents. CRM as the effective utilisation of all available resources to achieve safe and efficient operation with emphasis on non-technical aspects of the crew performance is an important factor in this respect. In order to strengthen the CRM performance, the flight crew, but also cabin crew and technical crew, must be trained properly in this area.

The overall objective is to establish and maintain a high uniform level of civil aviation safety in Europe (Art. 2 of Regulation (EC) No 216/2008). The specific objective of this rulemaking task is to establish and maintain a high uniform level of safety in air operations by reviewing, amending and expanding AMC and GM on CRM training, as appropriate.

- (a) the accident involving a McDonnell Douglas DC-9-82 (EC-HFP) at Madrid-Barajas Airport on 20 August 2008 (No.'s 1 and 2);
- (b) the accident involving an Airbus A330-203 (F-GZCP) during the flight from Rio de Janeiro to Paris on 1 June 2009 (No.'s 3 to 5); and
- (c) the serious incident of an Airbus A340-313 (F-GLZU) in cruise flight over the north Atlantic Ocean on 22 July 2011 (No. 6).

**4. Specific tasks and interface issues (deliverables):**

- To review existing AMC and GM for CRM training to Annex III 'Part-ORO' of Opinion 04/2011.
- To amend existing AMC and GM, as appropriate, for CRM training to Annex III 'Part-ORO' of Opinion 04/2011.
- If appropriate, to expand the applicable framework to aircraft to which Annex III 'Part-ORO' of Opinion 04/2011 is not applicable (i.e. non-commercial operations with other than complex motor powered aircraft) by developing appropriate AMC and GM.
- If appropriate, to amend the regulatory framework on civil aviation aircrew concerning CRM training related issues.

**5. Working methods** (in addition to the applicable Agency procedures):

Task to be carried out by a Group. It is envisaged that the Group, before reviewing and amending the existing AMC and GM, and before developing new AMC and GM, if appropriate, will do the following: For a time period of nine to twelve months the Group will investigate the subject of CRM training thoroughly by e.g. in-depth discussions, organising internal workshop(s) and inviting recognised experts. The main purpose is to collect experience gained over the past couple of years that may help in improving the regulatory framework. Consequently, the timescale towards the publication of the NPA is expanded as shown below.

RIA type: At present a light RIA is envisaged. However, if major impacts are foreseen, a full RIA will be provided.

**6. Timescale, milestones:**

NPA: 2014/Q2  
CRD: 2015/Q1  
Decision: 2015/Q2