

## Standards Document No. 29 Version 4

# The Crew Resource Management Instructor (CRMI) and Crew Resource Management Instructor Examiner (CRMIE) Accreditation Framework

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## **AMENDMENT SUMMARY**

### **Version 4**

A glossary and amendment summary have been added.

Clarification of the requirements for the initial accreditation of a CRMI(G).

Clarification of the requirements for the accreditation of a non-flight-crew CRMI(G).

Clarification of the requirements for the accreditation of a CRMI(L).

Insertion of the latest Terms of Reference for the CRM Advisory Panel.

Minor textual and editorial amendments have also been made.

## **GLOSSARY**

AOC	Air Operator's Certificate
ATPL	Airline Transport Pilot Licence
CRE	Class Rating Examiner
CRI	Class Rating Instructor
CRM	Crew Resource Management
CRMI	Crew Resource Management Instructor
CRMI(G)	Crew Resource Management Instructor (Ground)
CRMI(L)	Crew Resource Management Instructor (Line)
CRMI(S)	Crew Resource Management Instructor (Simulator/Base)
CRMIE	Crew Resource Management Instructor Examiner
CRMIE(L)	Crew Resource Management Instructor Examiner (Line)
HPL	Human Performance and Limitations
LPC	Licence Proficiency Check
MCC	Multi-Crew Co-operation
NOTECHS	Non-Technical Skills
NTS	Non-Technical Skills
OPC	Operator Proficiency Check
RETRE	Revalidation Examiner of Type Rating Examiners
SAR	Search And Rescue
SFE	Synthetic Flight Examiner
SFI	Synthetic Flight Instructor
SOP	Standard Operating Procedure
TOR	Terms of Reference
TRE	Type Rating Examiner
TRI	Type Rating Instructor
TRIE	Type Rating Instructor Examiner

## 1 INTRODUCTION

### 1.1 Origin

- 1.1.1 This document has been developed in conjunction with the Royal Aeronautical Society. All requirements and qualifications contained in it relate to civilian flight experience and operations that comply with EU-OPS and JAR-OPS 3.
- 1.1.2 Crew Resource Management (CRM) training was instigated over two decades ago with the prime aim of supporting flight safety by helping crewmembers develop and enhance their CRM/Multi-Crew Co-operation (MCC) Non-Technical Skills (NTS). To formalise and increase the efficacy of CRM training, CRMIs are required to be accredited and to meet the performance standards described in this document and CAP 737. Where CRMIs are also CAA Authorised Examiners (examples being Type Rating Examiners (TREs), Synthetic Flight Examiners (SFEs) and Revalidation Examiners of Type Rating Examiners (RETREs)) the additional requirements of Standards Documents 14, 24 and 28 (as applicable) must also be fulfilled. This process forms an acceptable means of compliance with the relevant requirements of EU-OPS Subpart N, JAR-OPS 3 Subpart N, and JAR-FCL.
- 1.1.3 Advice concerning the conduct of CRM training and assessment can be obtained from Flight Crew Standards, Safety Regulation Group, Civil Aviation Authority, Aviation House, Gatwick Airport South, West Sussex RH6 0YR. Telephone + 44 (0) 1293 573632.

## 2 THE ACCREDITATION FRAMEWORK

- 2.1 A CRMI is accredited in one of three distinct contexts, namely Ground School, Simulator/Base and Line.
- 2.2 When exercising the privileges of a CRMI accreditation in an aircraft the individual shall hold an appropriate valid and current licence.
- 2.3 With the exception of CRMI Line (CRMI(L)), a CRMI accreditation may be carried forward from one operator to another after suitable training addressing the differences in the second and/or subsequent company's culture, Standard Operating Procedures (SOPs), nature of operations etc. has been given.
- 2.4 With the exception of a CRMI(L), a CRMI may be an instructor for more than one company at any one time. All company CRMIs must be nominated in the company Operations Manual (Part D Training).
- 2.5 The CAA is responsible for the maintenance of standards and standardisation. CAA Inspectors will observe ground school training, simulator training/testing, training/testing in an aircraft and line checks on an opportunity basis.

## 3 CRM INSTRUCTORS - GENERAL

- 3.1 The CAA will accredit suitably experienced and qualified persons to become a CRMI (Ground, Simulator/Base, or Line) following recommendation by an appropriately authorised CRMIE. This accreditation will remain valid subject to the instructor's continued employment as a CRMI. The application procedure is described at [Appendix 6](#).
- 3.2 To become accredited as a CRMI, an applicant should at least:
- a) have completed a basic instructional technique course acceptable to the CAA;
  - b) have or have had commercial air transport experience as a flight crew member; and
  - c) either:
    - i) have successfully passed the Human Performance and Limitations (HPL) examination whilst obtaining the Airline Transport Pilot Licence (ATPL); or

- ii) if holding a Flight Crew Licence acceptable under EU-OPS or JAR-OPS 3.940(a)(3) prior to the introduction of HPL into the ATPL syllabus, have completed a theoretical HPL course covering the whole syllabus of that course; or
- iii) have theoretical knowledge of the subject of CRM or Human Factors training.

3.3 Notwithstanding the above, and when acceptable to the CAA:

- a) a flight-crew member recently accredited as a CRMI may continue to be a CRMI after the cessation of active flying duties;
- b) a former flight crew member having knowledge of HPL may become a CRMI provided they maintain adequate knowledge of the operation and aircraft type, and meet the provisions of paragraph 3.2 above; and
- c) a non-flight-crew member may also hold a CRMI (Ground) (CRMI(G)) accreditation provided they meet the requirements of paragraph 3 and the specific additional requirements pertaining to a non-flight-crew member specified in paragraph 4.

3.4 All CRMIs will need to demonstrate that:

- a) they have the knowledge specified for their relevant role, and can role-model best CRM Practice;
- b) they have the necessary instructional skills;
- c) they are able to assess NTS where required; and
- d) they are able to facilitate a constructive debrief of the above.

The CAA Flight Crew Standards Department requires a Form TS10 to be completed by an appropriately authorised CRMIE for every accreditation or re-accreditation as a CRMI. This does not apply in the case of a CRMI(L) as this is an internal company appointment. However, an operator must ensure that the details of all CRMI(L) accreditation examinations and the period of validity are recorded.

3.5 CRM instruction in the context of single pilot operations shall be delivered by a CRMI who has knowledge of that operational environment. Non-flight-crew single pilot CRMIs must also meet the requirements of paragraph 4, and paragraph 4.5 in particular.

## **4 CRM INSTRUCTORS - GROUND (CRMI(G))**

### **4.1 Requirements**

4.1.1 A CRMI(G) shall have satisfied the conditions in paragraph 3 above, and:

- a) have completed initial CRM training; and
- b) have the knowledge and ability to teach the subjects detailed in [Appendix 9](#).

### **4.2 Privileges**

4.2.1 Accreditation as a CRMI(G) by the UK CAA authorises a person to conduct classroom-based CRM training as required and in accordance with EU-OPS 1.943, 1.945, 1.955 and 1.965, or JAR-OPS 3.943, 3.945, 3.955 and 3.965 in the case of commercial helicopter operations. It should be noted that a CRMI(G) accreditation will no longer be endorsed 'flight crew only', 'cabin crew only' or 'flight crew and cabin crew', and as a result every CRMI(G) must now demonstrate the knowledge, the skills and the credibility required to deliver all of the elements of the flight crew CRM training syllabus required under EU-OPS or JAR-OPS 3 as applicable.

### **4.3 Initial Accreditation**

4.3.1 The assessment for initial accreditation will be carried out by an appropriately authorised CRMIE. A prospective CRMI(G) will be observed delivering training to a class of "live" trainees

during an initial operator's flight crew CRM training course. The training observed must be of sufficient duration and content to provide the CRMIE with the opportunity to confirm the CRMI's depth of knowledge and ability to facilitate learning. It is unlikely, therefore, that a course of less than one day and four trainees would be considered adequate. The examiner will also routinely ask additional questions in order to assess the instructor's wider knowledge of the EU-OPS/JAR-OPS flight-crew CRM Training syllabus, and confirm their ability to translate that knowledge into a facilitated discussion about related operational issues.

#### **4.4 Recency and Re-Accreditation**

4.4.1 An accreditation as a CRMI(G) is valid for a period of three years from the date of the initial test extended to include the remainder of the month in which the observation took place, e.g. an accreditation achieved on 12 September 2008 is valid (subject to maintaining recency requirements) until 30 September 2011. Re-accreditation thereafter will be at the discretion of the CAA and subject to the following requirements:

- a) The instructor should have conducted at least two courses of training in any rolling 12-month period within the three-year accreditation period.
- b) If the recency requirement above is not achieved, accreditation as a CRMI will automatically lapse. An individual whose CRMI accreditation has lapsed may continue to conduct CRM training under the supervision of a qualified CRMI until the recency requirements are met, or they have been re-accredited by a CRMIE. If this cannot be achieved the CRMI should contact Flight Crew Standards at the CAA for further guidance.
- c) One course of training or a part thereof shall be observed by an authorised CRMIE, CAA Training Inspector or suitably qualified member of the CRM Advisory Panel. If this takes place within the final 12 months of validity, the new date of expiry will be three years from the original, e.g. an accreditation valid until 30 September 2009 revalidated on 1 January 2009 will be valid until 30 September 2012. If the accreditation is renewed (this occurs when it is not valid at the time of re-accreditation) or if it is revalidated more than 12 months before expiry, the new accreditation will be valid for three years from the date of the test extended to include the remainder of the month, as in the case of initial accreditation.

4.4.2 Should the assessment result in a failure, a CRMI(G) may not continue to exercise the privileges of their accreditation until such time as any recommended re-training has been undertaken and a CRMIE has re-assessed them as competent.

#### **4.5 Non-Flight-Crew**

4.5.1 A non-flight-crew CRMI must be able to demonstrate that they have the knowledge, skills and credibility required to be able to train flight crew effectively in all of the areas of the flight crew CRM training syllabus stipulated under either EU-OPS or JAR-OPS 3, as applicable. All prospective non-flight-crew CRMI(G) accreditation observations will therefore be conducted by a CAA Training Inspector or a suitably qualified and nominated member of the CRM Advisory Panel. These will take place during a flight-crew-only CRM training course to ensure the instructor has the opportunity to demonstrate an appropriate level of flight deck awareness, operational knowledge, skills and credibility.

4.5.2 The ability to train flight-crew-specific syllabus topics such as Automation Management and Workload Management on the flight deck should always be included as part of the accreditation assessment, and the candidate CRMI should expect to be asked to present additional material should they not have the opportunity to deliver these and other flight-crew-specific topics during the training course observed.

4.5.3 In this context, non-flight-crew member includes, but is not limited to, the following:

- cabin crew;
- human factor specialists; and

- helicopter police crews, paramedics and Search And Rescue (SAR) crewmembers.

## **5 CRM INSTRUCTORS - SIMULATOR/BASE (CRMI(S))**

### **5.1 Requirements**

5.1.1 The CRMI(S) shall have satisfied the conditions in paragraph 3 above and:

- a) hold a Type Rating Instructor (TRI), TRE, Class Rating Instructor (CRI), Class Rating Examiner (CRE), Synthetic Flight Instructor (SFI) or SFE rating/authority; and
- b) have the knowledge and ability to teach the subjects detailed in [Appendix 9](#).

5.1.2 A TRI/TRE whose authority was issued outside the UK CAA CRM accreditation system is still required to meet the same CRM knowledge and skill requirements as a UK CAA authorised TRI/TRE, including use of the company Behavioural Marker System. They must receive any training necessary and be formally accredited as a CRMI(S) by a CAA Training Inspector or company RETRE prior to conducting any training or checking for a UK operator.

### **5.2 Privileges**

5.2.1 Accreditation as a CRMI(S) by the UK CAA authorises a person to conduct simulator and/or base CRM training as required and in accordance with EU-OPS 1.943, 1.945, 1.955 and 1.965, or JAR-OPS 3.943, 3.945, 3.955 and 3.965 in the case of commercial helicopter operations.

### **5.3 Initial Accreditation**

5.3.1 A TRI/TRE or SFI/SFE is accredited as a CRMI(S) at the same time as their instructor rating or examiner authority is assessed. An appropriately authorised CRMIE, who will be either a CAA Training Inspector or a company RETRE, will conduct assessment for accreditation. A CRI (single pilot aircraft) would not normally be accredited as a CRMI(S). CRE accreditation as a CRMI is only mandated for operations in accordance with EU-OPS Subpart N or JAR-OPS 3 Subpart N. In this case a CAA Training Inspector or CAA Staff Flight Examiner will conduct CRMI(S) accreditation at the same time as examiner competence is assessed.

### **5.4 Re-Accreditation**

5.4.1 CRMI(S) accreditation is for an initial period of three years. Re-accreditation thereafter will be at the discretion of the CAA and will be conducted at the same time as TRI or SFI rating revalidation and/or examiner re-authorisation. TRI, SFI and CRE can only be re-accredited as CRMI(S) by an appropriately authorised CRMIE, normally a company RETRE, CAA Training Inspector or CAA Staff Flight Examiner.

## **6 CRM INSTRUCTORS - LINE (CRMI(L))**

### **6.1 Requirements**

6.1.1 A CRMI(L) shall have satisfied the conditions in paragraph 3 above and possess the knowledge and ability to teach the subjects detailed in [Appendix 9](#).

### **6.2 Privileges**

6.2.1 Accreditation as a CRMI(L) allows that person to conduct Line CRM training as required by, and in accordance with, EU-OPS Subpart N and JAR-OPS 3 Subpart N. An Operator may appoint a CRMI(L) Examiner who is acceptable to the CAA (e.g. a senior Training Captain or RETRE) to undertake this role. The process of initial and re-accreditation should be described in the Operator's Training Manual or Operations Manual.

### **6.3 Initial Accreditation**

6.3.1 Line Training Captains who are not already accredited as a CRMI(S) must be separately accredited as a CRMI(L). The accreditation process may be conducted as a workshop or by observation of the candidate during actual line training. Accreditation as a CRMI(L) for single-pilot operated aircraft may also take place in a workshop environment or by observation during actual line training.

### **6.4 Re-Accreditation**

6.4.1 A CRMI(L) accreditation is valid for an initial period of three years. Re-accreditation thereafter will be at the discretion of the Operator, and may take place in a workshop environment or by observation during actual line training.

## **7 CRM INSTRUCTOR EXAMINERS**

### **7.1 Requirements**

7.1.1 CRMIEs must, at the very least, have the qualifications and experience required of a CRMI in the applicable context and must also hold a valid accreditation as a CRMI in that context.

7.1.2 When exercising the privileges of a CRMI or CRMIE in an aircraft the individual shall hold a valid, current and appropriate licence and be type rated unless carrying out an observation from the jump seat.

7.1.3 Where no CRMIE is available a CAA Training Inspector or suitably qualified member of the CRM Advisory Panel may be authorised to carry out instructor accreditation.

7.1.4 A CRMIE may conduct the accreditation of instructors not employed by the company sponsoring that examiner, subject to a written agreement between the examiner's sponsoring company and the instructor's employer. Copies of such written agreements must be forwarded to the Manager Flight Crew Standards (MFCS) at the CAA. The CAA will, on receipt of this copy agreement, reserve the right without prejudice to refuse to sanction any such agreements.

### **7.2 Privileges**

7.2.1 The CAA will authorise suitably experienced and qualified people to assess a CRMI as competent and to conduct CRMI accreditation in accordance with EU-OPS 1.943, 1.945, 1.955 and 1.965, or JAR-OPS 3.943, 3.945, 3.955 and 3.965 in the case of commercial helicopter operations.

### **7.3 Examiner Authorisation and Re-Authorisation**

7.3.1 Authorisation as a CRMIE will remain valid subject to the examiner's continued employment with the sponsoring company, the CAA (for Training Inspectors and Staff Flight Examiners) and/or membership of the CRM Advisory Panel. Should the examiner cease to be employed as an examiner, or leave the sponsoring organisation, the authorisation will automatically lapse.

### **7.4 CRMIE Ground School**

7.4.1 The authorisation will be for an initial period of three years as described in paragraph 4.4. Thereafter re-authorisation will be at the discretion of the CAA and subject to the following requirements:

- a) the examiner should have conducted at least two accreditation checks in any rolling 12-month period within the three-year authorisation window. Should this not be achieved, authorisation as a CRMIE will automatically lapse and Flight Crew Standards at the CAA (who will determine any re-authorisation requirements) must be

contacted prior to conducting any further accreditation checks. Alternatively, the CRMIE may apply to be re-authorised as described below. Authorisation as a CRMIE will also automatically lapse if accreditation as a CRMI(G) is not maintained (see paragraph 4); and

- b) for re-authorisation, one accreditation check within the last 12 months of the authorisation period will be observed by a CAA Training Inspector or a suitably qualified member of the CRM Advisory Panel. If the re-authorisation is a renewal, the process will still be the same but the validity period will run from the date of the observation to the end of the month plus three years. Re-authorisation as a CRMIE does not automatically re-accredit an individual as a CRMI. A CRMIE must additionally comply with the relevant parts of paragraphs 3 to 6 above.

## **7.5 CRMIE Simulator/Base**

- 7.5.1 The CAA Training Inspector, company RETRE or Type Rating Instructor Examiner (TRIE) undertaking the observation for initial issue, revalidation or renewal of an authorisation to train/test in these contexts also acts as the CRMIE. However, this does not prevent companies qualifying other individuals to undertake CRM instruction and CRMIE duties. The CRMI simulator rating does not stand alone and is embedded as an integral part of an Instructor/Examiner Authorisation. It is revalidated or renewed at the same time as the TRI/TRE checks.

## **7.6 CRMIE Line (CRMIE(L))**

- 7.6.1 CRMIE(L) is a company appointment, and as such the company is responsible for the re-appointment of individuals. The CAA will not issue an authorisation for this context. Each company must nominate a suitably qualified individual or individuals acceptable to the CAA for the role in the Operations Manual. Examples of these individuals include a senior Training Captain or a RETRE. The RETRE authorisation also includes CRMIE(L).

## **8 RECORD-KEEPING**

- 8.1 Records of all training courses conducted by Instructors must be kept for a period of three years. Records of all checks conducted by Examiners must also be kept for a period of three years. These records should show the instructional course dates, the type of course or check, the name(s) of the Instructor(s) and the type of simulator or aircraft (if any) that was used.

## **9 TRAINING APPROVALS**

### **9.1 General**

- 9.1.1 The quality and standardisation of CRM training programmes, their delivery, and NTS assessments are subject to acceptance and verification by the CAA. This does not imply that any particular course is automatically officially approved by the CAA, or entitle a training organisation to claim as such (for example in literature or on a website). A nominated CRMI or CRMIE will be responsible for each course.
- 9.1.2 It is envisaged that larger operators will carry out the training and examination of their own instructors internally and that verification of that process will be carried out by, or on behalf of, the CAA. Smaller operators who do not have their own internal training and examining system may have their instructors examined by the CAA, a CRM Advisory Panel member or a nominated CRMIE.
- 9.1.3 The system of third party training carried out by dedicated organisations other than aircraft operators is expected to continue, although operators are required to take "ownership" of training carried out on their behalf.
- 9.1.4 Both EU-OPS and JAR-OPS 3 require that CRM course material be acceptable to the CAA. The detailed course syllabus should be laid down in Part D of the Operations Manual along

with the name of any third party providers used (it may be a separate volume of the Operations Manual, yet still be an integral part of it).

## **10 COMPANY APPROVALS**

- 10.1 CRM training can be broadly split into ground school training, simulator training and line training. The responsibility for the different contexts of CRM instruction and instructor examination may be held by one individual or several different individuals within a company. The CRM Training Manager(s) must be nominated in the Company Operations Manual.
- 10.2 A CRMIE specifically authorised and sponsored by a Company for that purpose may revalidate CRMI ratings in each context. The same criteria will apply to third party training organisations that are large enough to undertake and administer such a system.
- 10.3 Smaller companies and third party training organisations which do not have their own internal checking system should liaise directly with the CAA Flight Crew Standards section, which will carry out revalidation of CRMIs. CRM Advisory Panel members may also be authorised for this task.
- 10.4 Where an operator contracts a third party training organisation or another operator to provide CRM training and/or instructor accreditation on its behalf, it is important that this is carried out in accordance with the contracting operator's Operations Manual and it must reflect the culture, practices and nature of their operations.

## **11 GUIDANCE**

### **11.1 CRM Instruction**

11.1.1 The different categories of CRM instruction include:

- initial CRM training;
- conversion course CRM training when changing aircraft type;
- conversion course CRM training when changing operator;
- command course CRM training; and
- recurrent CRM training.

11.1.2 Elements of all these categories of training can be carried out in a classroom and/or in a simulator. While Subparts N of EU-OPS and JAR-OPS 3 specifically forbid NTS assessment during CRM training, every opportunity should be taken to provide feedback to the trainee(s) where appropriate.

11.2 The elements of CRM training that are required in each category of training are laid down in Subparts N of EU-OPS and JAR-OPS 3 and are replicated in [Appendix 9](#).

## **12 NON-TECHNICAL SKILLS ASSESSMENT**

12.1 Subparts N of EU-OPS and JAR-OPS 3 and JAR-FCL require the assessment of NTS (CRM/MCC). However, this Standards Document will focus primarily on its implications for the accreditation of CRMIs and CRMIEs.

12.2 The different contexts of NTS assessment include:

- the Licence Skill Test;
- the Licence Proficiency Check (LPC);
- the Operator's Proficiency Check (OPC);
- the Line Check; and

- the sequence of checks carried out on completion of a Command Course.

The purpose of NTS assessment is to provide feedback to crewmembers, identify any further training needs, and improve the overall CRM training system.

- 12.3 Until recently, the assessment of NTS has lacked any formal measurement criteria, potentially resulting in subjective and extremely variable standards. Research into means of assessment has determined that acquired NTS skills are reflected in recognisable behaviours, whose characteristics are identifiable as measurable behavioural markers. This research is outlined in CAA Paper 98005 – “Behavioural Markers for Crew Resource Management”. An approved Behavioural Marker System should be used when making an assessment of a crewmember’s NTS. The NOTECHS marker system was designed for this purpose as it includes acceptable performance markers. However, other systems may be used with the approval of the CAA.
- 12.4 Instructors and examiners must be thoroughly familiar with their Operator’s marker system in order to enable them to deliver constructive debriefs that will improve performance. They should also make recommendations for further training when this is necessary. A crewmember should not normally be failed purely for poor NTS. The unacceptable Non-technical Skill(s) observed should be linked to a consequential ‘technical’ failure or failures. NTS should not be treated as a separate topic, but should be fully integrated throughout the debriefing using NOTECHS or the relevant company methodology.
- 12.5 Those authorised by the CAA to assess NTS, as required by Subparts N of EU-OPS and JAR-OPS 3 and JAR-FCL, must be familiar with this document, Standards Documents 14, 24 and 28 (as applicable), and CAP 737. They must additionally have received appropriate instruction in the assessment of NTS and hold a valid accreditation as a CRMI.
- 12.6 Operators must establish the procedures to be applied in the event that a flight-crew member does not achieve or maintain the required standards (see EU-OPS and JAR-OPS 3 Subpart P (Training)).

### **13 PROCEDURES FOR NON-UK TREs CONDUCTING OPCs FOR UK AIR OPERATOR’S CERTIFICATE (AOC) OPERATORS**

- 13.1 There will be occasions when a UK AOC operator requires the services of a non-UK TRE to conduct the company OPCs on their pilots. In these circumstances the TRE may not necessarily meet the UK CRM requirements in accordance with this document. Therefore, the UK AOC operator will need to present to their assigned inspector a programme covering the following aspects prior to the non-UK TRE conducting the OPC:
- a) The TRE shall have a current type LPC and also an OPC for his AOC operator and shall be nominated in the Operations Manual Part D.
  - b) The TRE should be authorised for the device to be used for the testing, i.e. either aircraft or simulator or both.
  - c) If the TRE is to be used on a long-term basis, then he will need to undertake a CRM course with the operator and be assessed by a CRMIE as to his competence. This CRMIE may be a RETRE, a CRMIE from within the company, a CAA Training Inspector or a CAA Staff Flight Examiner.
  - d) The UK operator shall supply all company documents for the TRE to study prior to the conduct of the OPC, in particular the behavioural marker system being used.
  - e) If the TRE is to be used on a few occasions, then he will still need knowledge of the company CRM system and in particular the use of the behavioural marker system. Therefore the company remains responsible for ensuring that the TRE has the requisite knowledge to conduct the OPC.
- 13.2 On completion of the OPC, the non-UK TRE shall complete the company paperwork.

## APPENDIX 1 THE SHORT GUIDE TO PERFORMANCE STANDARDS FOR CRM INSTRUCTORS

- 1 The purpose of this short guide is to establish industry standards for CRMIs. This guide is designed to give guidance and information to operators, providers of CRM training and CRMIs on the necessary standards of competence. These were originally formalised in the 'Guide to Performance Standards for Instructors of Crew Resource Management Training in Commercial Aviation' (September 1998). Due to the changing nature of the CRM discipline, information in this new guide should be considered to overrule that of the original, which will be updated in due course.
- 2 This Short Guide details the requirements that candidates must meet to be considered a competent CRMI in each of the following contexts:
  - Simulator and Base Training.
  - Line Training.
  - Ground School Training.
- 3 Some material may appear to be repeated in several contexts where the requirements are similar; this is done for ease of use.
- 4 In each context there are four main areas of competence:
  - i) training design;
  - ii) training delivery;
  - iii) trainee progress assessment; and
  - iv) continuous improvement of training efficacy.
- 5 These areas are subdivided into ten 'Units of Competence', each of which contains a number of performance elements and background knowledge requirements (detailed in the table below). Those elements marked in bold are mandatory, the rest being optional but desirable. To demonstrate the competence required of a CRMI, candidates must be able show that they fulfil all the mandatory elements plus five optional elements.

### Simulator and Base Training

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
A1 Designs CRM training sessions	<ol style="list-style-type: none"> <li>1) <b>Identifies training requirements.</b></li> <li>2) Selects CRM standards.</li> <li>3) Builds in methods of evaluating training effectiveness.</li> </ol>	<ul style="list-style-type: none"> <li>• Understanding objectives.</li> <li>• Company and industry requirements.</li> <li>• Training techniques.</li> <li>• Relevant regulatory requirements.</li> <li>• CRM standards.</li> </ul>
A2 Prepares resources	<ol style="list-style-type: none"> <li>1) <b>Ensures activities are practical and realistic.</b></li> <li>2) Ensures facilities meet requirements.</li> <li>3) Assists in the preparation of briefing materials.</li> </ol>	<ul style="list-style-type: none"> <li>• Simulator procedures and resources.</li> <li>• Available equipment.</li> </ul>
B1 Integrates CRM training	<ol style="list-style-type: none"> <li>1) <b>Makes CRM links with technical training and SOPs where appropriate.</b></li> <li>2) Makes links with flight safety, customer service, company policy.</li> </ol>	<ul style="list-style-type: none"> <li>• Company technical and operational training procedures and requirements.</li> <li>• Human Factors.</li> </ul>

### Simulator and Base Training

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
B2 Creates a climate conducive to learning	<ol style="list-style-type: none"> <li>1) <b>Establishes CRM credentials and rapport with trainees, and clarifies roles.</b></li> <li>2) <b>Clarifies training objectives and methods.</b></li> <li>3) <b>Ascertains and supports trainees' needs.</b></li> </ol>	<ul style="list-style-type: none"> <li>• Potential barriers to learning, including awareness of cross-cultural issues.</li> <li>• How to put trainees at ease.</li> </ul>
B3 Presents knowledge	<ol style="list-style-type: none"> <li>1) <b>Communicates clearly, accurately and adequately.</b></li> <li>2) Creates and sustains realism in the detail.</li> </ol>	<ul style="list-style-type: none"> <li>• Distinguish between process and content outcomes.</li> <li>• Ways to elicit participation.</li> <li>• Methods of giving information/adult learning styles.</li> </ul>
B4 Facilitates learning and coaches individuals	<ol style="list-style-type: none"> <li>1) <b>Encourages trainees to get involved.</b></li> <li>2) <b>Focus is on trainees, not themselves.</b></li> <li>3) <b>Overtly supportive of CRM principles in word and deed (i.e. role models good CRM).</b></li> <li>4) <b>Motivating, patient, confident and assertive manner.</b></li> <li>5) Conducts one-to-one coaching/debrief of crew members as appropriate.</li> <li>6) Encourages mutual support, teamwork and sharing of individual learning experiences.</li> </ol>	<ul style="list-style-type: none"> <li>• Facilitation.</li> <li>• How to give constructive debriefing and feedback.</li> <li>• The difference between coaching and demonstration/instruction.</li> <li>• Group dynamics.</li> </ul>
C1 Monitors and reviews progress	<ol style="list-style-type: none"> <li>1) <b>Continuously monitors and responds flexibly to the training session.</b></li> <li>2) <b>Ensures objectives are achieved.</b></li> <li>3) Reviews progress with trainees.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of tracking performance in the simulator.</li> <li>• Methods of tracking performance.</li> <li>• Principles and purpose of reviews.</li> <li>• What constitutes valid and reliable information.</li> </ul>
C2 Assesses trainees' performance	<ol style="list-style-type: none"> <li>1) <b>Assists trainees to assess own individual and team performance against CRM standards.</b></li> <li>2) Sets new/additional learning objectives.</li> </ol>	<ul style="list-style-type: none"> <li>• Uses of video playback and debriefing to facilitate learning.</li> </ul>
D1 Evaluates CRM training sessions	<ol style="list-style-type: none"> <li>1) <b>Elicits feedback from trainees.</b></li> <li>2) Tracks training session processes against agreed criteria.</li> <li>3) Keeps appropriate records.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of assessing and improving session effectiveness.</li> </ul>

### Simulator and Base Training

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
D2 Evaluates and develops own practice	<ol style="list-style-type: none"> <li>1) <b>Regularly reviews own performance, strengths and development needs.</b></li> <li>2) <b>Collects feedback about performance from others.</b></li> <li>3) Keeps abreast of developments from Regulator, trade press, etc.</li> <li>4) Maintains a written development record against a development plan.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of assessing own performance.</li> <li>• Methods of improving own performance.</li> </ul>

### Line Training

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
A1 Designs CRM training sessions	<ol style="list-style-type: none"> <li>1) <b>Identifies training requirements.</b></li> <li>2) Selects CRM components of line check.</li> <li>3) Provides opportunities for demonstrating CRM competency.</li> </ol>	<ul style="list-style-type: none"> <li>• Company and industry requirements.</li> <li>• Training techniques.</li> <li>• Relevant regulatory requirements.</li> <li>• CRM standards.</li> </ul>
A2 Prepares resources	Not applicable.	Not applicable.
B1 Integrates CRM training	<ol style="list-style-type: none"> <li>1) <b>Makes CRM links with technical training and SOPs where appropriate.</b></li> <li>2) Makes links with flight safety, customer service, company policy.</li> </ol>	<ul style="list-style-type: none"> <li>• Company technical and operational training procedures and requirements.</li> <li>• Human Factors.</li> </ul>
B2 Creates a climate conducive to learning	<ol style="list-style-type: none"> <li>1) <b>Establishes CRM credentials and rapport with trainees, and clarifies roles.</b></li> <li>2) <b>Clarifies training objectives and consequences.</b></li> <li>3) <b>Ascertains and supports trainees' needs.</b></li> </ol>	<ul style="list-style-type: none"> <li>• Potential barriers to learning, including awareness of cross-cultural issues.</li> <li>• How to put trainees at ease.</li> <li>• Trainees' experience level and expectations.</li> <li>• Adult learning styles.</li> </ul>
B3 Presents knowledge	<ol style="list-style-type: none"> <li>1) <b>Communicates clearly, accurately and adequately.</b></li> <li>2) Looks for training opportunities.</li> </ol>	<ul style="list-style-type: none"> <li>• Ways to elicit participation.</li> <li>• Methods of giving information.</li> </ul>

## Line Training

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
<p>B4 Facilitates learning and coaches individuals</p>	<ol style="list-style-type: none"> <li>1) <b>Encourages trainees to get involved.</b></li> <li>2) <b>Focus is on trainees, not themselves.</b></li> <li>3) <b>Overtly supportive of CRM principles in word and deed (i.e. role models good CRM).</b></li> <li>4) <b>Motivating, patient, confident and assertive manner.</b></li> <li>5) Conducts one-to-one coaching/debrief of crew members as appropriate.</li> <li>6) Encourages mutual support, teamwork and sharing of individual learning experiences.</li> <li>7) Debriefs on practical application of CRM skills.</li> </ol>	<ul style="list-style-type: none"> <li>• Facilitation.</li> <li>• How to give constructive debriefing and feedback.</li> <li>• The difference between coaching and demonstration/instruction.</li> <li>• How to encourage trainees to ask questions and seek advice.</li> </ul>
<p>C1 Monitors and reviews progress</p>	<ol style="list-style-type: none"> <li>1) <b>Continuously monitors and responds flexibly to the training session.</b></li> <li>2) <b>Ensures objectives are achieved.</b></li> <li>3) Reviews progress with trainees.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of tracking performance.</li> <li>• Principles and purpose of reviews.</li> <li>• What constitutes valid and reliable information.</li> </ul>
<p>C2 Assesses trainees' performance</p>	<ol style="list-style-type: none"> <li>1) <b>Assists trainees to assess own individual and team performance against CRM standards.</b></li> <li>2) <b>Conducts formative assessments.</b></li> <li>3) <b>Makes assessment decision and provides clear feedback.</b></li> <li>4) Sets new/additional learning objectives.</li> <li>5) Keeps appropriate records.</li> </ol>	<ul style="list-style-type: none"> <li>• Observation techniques.</li> <li>• Methods of collecting evidence.</li> </ul>
<p>D1 Evaluates CRM training sessions</p>	<ol style="list-style-type: none"> <li>1) <b>Elicits feedback from trainees.</b></li> <li>2) Tracks training session processes against agreed criteria.</li> <li>3) Keeps appropriate records.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of assessing and improving session effectiveness.</li> </ul>
<p>D2 Evaluates and develops own practice</p>	<ol style="list-style-type: none"> <li>1) <b>Regularly reviews own performance, strengths and development needs.</b></li> <li>2) <b>Collects feedback about performance from others.</b></li> <li>3) Keeps abreast of developments from Regulator, trade press, etc.</li> <li>4) Maintains a written development record against a development plan.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of assessing own performance.</li> <li>• Methods of improving own performance.</li> </ul>

## Ground School Training

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
A1 Designs CRM training sessions	<ol style="list-style-type: none"> <li>1) <b>Identifies training requirements and delivery resources.</b></li> <li>2) <b>Sets objectives.</b></li> <li>3) Builds in methods of evaluating training effectiveness.</li> <li>4) Incorporates a variety of activities in design.</li> </ol>	<ul style="list-style-type: none"> <li>• Understanding objectives.</li> <li>• Company and industry requirements.</li> <li>• Training techniques.</li> <li>• Relevant regulatory requirements.</li> <li>• CRM standards.</li> </ul>
A2 Prepares resources	<ol style="list-style-type: none"> <li>1) <b>Ensures activities are practical and realistic.</b></li> <li>2) Ensures facilities meet requirements.</li> <li>3) Assists in the preparation of briefing materials.</li> <li>4) Ensures materials are adequate and clear.</li> </ol>	<ul style="list-style-type: none"> <li>• Existing materials.</li> <li>• Copyright and intellectual property.</li> <li>• Company training standards.</li> </ul>
B1 Integrates CRM training	<ol style="list-style-type: none"> <li>1) <b>Makes CRM links with technical training and SOPs where appropriate.</b></li> <li>2) Makes links with flight safety, customer service, company policy.</li> </ol>	<ul style="list-style-type: none"> <li>• Company technical and operational training procedures and requirements.</li> <li>• Human Factors.</li> </ul>
B2 Creates a climate conducive to learning	<ol style="list-style-type: none"> <li>1) <b>Establishes CRM credentials and rapport with trainees, and clarifies roles and confidentiality.</b></li> <li>2) <b>Clarifies training objectives and methods.</b></li> <li>3) <b>Ascertains and supports trainees' needs.</b></li> </ol>	<ul style="list-style-type: none"> <li>• Potential barriers to learning, including awareness of cross-cultural issues.</li> <li>• How to put trainees at ease.</li> </ul>
B3 Presents knowledge	<ol style="list-style-type: none"> <li>1) <b>Communicates clearly, accurately and adequately.</b></li> <li>2) Creates and sustains realism in the detail.</li> <li>3) Maintains interest.</li> </ol>	<ul style="list-style-type: none"> <li>• Distinguish between process and content outcomes.</li> <li>• Ways to elicit participation.</li> <li>• Methods of giving information/adult learning styles.</li> </ul>
B4 Facilitates learning and coaches individuals	<ol style="list-style-type: none"> <li>1) <b>Encourages trainees to get involved.</b></li> <li>2) <b>Focus is on trainees, not themselves.</b></li> <li>3) <b>Overtly supportive of CRM principles in word and deed (i.e. role models good CRM).</b></li> <li>4) <b>Motivating, patient, confident and assertive manner.</b></li> <li>5) Uses exercises and activities to maximise learning.</li> <li>6) Recognises and responds to individual needs.</li> <li>7) Encourages mutual support, teamwork and sharing of individual learning experiences.</li> </ol>	<ul style="list-style-type: none"> <li>• Facilitation.</li> <li>• How to give constructive debriefing and feedback.</li> <li>• The difference between coaching and demonstration/instruction.</li> <li>• Group dynamics.</li> <li>• Group facilitation techniques.</li> </ul>

## Ground School Training

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
C1 Monitors and reviews progress	<ol style="list-style-type: none"> <li>1) <b>Continuously monitors and responds flexibly to the training session.</b></li> <li>2) <b>Ensures objectives are achieved.</b></li> <li>3) Reviews progress with trainees against formal benchmarks.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of tracking performance.</li> </ul>
C2 Assesses trainees' performance	<ol style="list-style-type: none"> <li>1) <b>Assists trainees to assess own individual and team performance against CRM standards.</b></li> <li>2) Sets new/additional learning objectives.</li> </ol>	<ul style="list-style-type: none"> <li>• Uses of video playback and debriefing to facilitate learning.</li> <li>• Methods of assessing knowledge and skills.</li> </ul>
D1 Evaluates CRM training sessions	<ol style="list-style-type: none"> <li>1) <b>Elicits feedback from trainees.</b></li> <li>2) Tracks training session processes against agreed criteria.</li> <li>3) Elicits formal course evaluation from trainees.</li> <li>4) Keeps appropriate records.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of assessing and improving session effectiveness.</li> <li>• Evaluation techniques.</li> </ul>
D2 Evaluates and develops own practice	<ol style="list-style-type: none"> <li>1) <b>Regularly reviews own performance, strengths and development needs.</b></li> <li>2) <b>Collects feedback about performance from others.</b></li> <li>3) Keeps abreast of developments from Regulator, trade press, etc.</li> <li>4) Maintains a written development record against a development plan.</li> </ol>	<ul style="list-style-type: none"> <li>• Methods of assessing own performance.</li> <li>• Methods of improving own performance.</li> </ul>

## **APPENDIX 2 GUIDANCE TO A CRMIE CONDUCTING THE TEST FOR THE ACCREDITATION OF A CRMI(G)**

### **1 Introduction**

- 1.1 This brief has been written to assist a CRMIE (Ground) when undertaking a CRMI(G) assessment in the class environment. It includes an easy to use checklist in the form of effective CRMI knowledge, skills and attitudes to help the Examiner decide if the candidate has demonstrated the required standard. It also includes a sample Examiner's assessment form.
- 1.2 The checklist and assessment form are designed to be practical tools that capture the key performance indicators in the Short Guide and CAP 737. They are designed to help the CRMIE make and record an assessment of the Instructor's suitability to be accredited as a CRMI(G). The form is also a useful reference for the Instructor as it helps him/her to understand the standards against which he/she is being assessed. Its use, however, is not mandatory and the Examiner may use his or her own company paperwork provided it accurately reflects the Short Guide.
- 1.3 Examiners should remember that the test is not just an opportunity for the Instructor to demonstrate proficiency. As the majority of tests will result in a PASS, best practice demands that all CRMIEs use this as an opportunity to give supportive feedback that helps develop and enhance the candidate's knowledge and skills.

### **2 Documents**

- 2.1 In addition to any course material, Examiners should also be familiar with the general content of the following documents:
  - The Short Guide to Performance Standards of Ground Instructors;
  - the relevant sections of EU-OPS or JAR-OPS 3 as applicable;
  - CAP 737 (available at [www.caa.co.uk/cap737](http://www.caa.co.uk/cap737));
  - this document (available at [www.caa.co.uk/standardsdocuments](http://www.caa.co.uk/standardsdocuments));
  - NOTECHS or Company CRM Standards;
  - form TS10; and
  - the CAA CRMI Application Form.

### **3 The Test**

- 3.1 CRMIEs will need to be familiar with guidance for pre-test preparation, briefing, conducting tests and debriefing skills given in this document and CAP 737.
- 3.2 Pre-Test Preparation:
  - ensure the candidate has completed a CRMI (Ground) Application Form and forwarded it to the CAA; and
  - agree a date/time, allowing for extra opportunity for briefing/debriefing of the candidate.
- 3.3 It is vital that the candidate is aware of the standards against which they are being assessed. They should be provided with a copy of the Short Guide and any Company Examiner Checklist prior to undertaking an assessment. The CRMIE will need to establish the type of course, review the syllabus/course material and establish the experience level and recency of the candidate and course trainees.
- 3.4 The CRMIE must confirm that the observation is to be carried out while the candidate conducts training with a class of "live" trainees and the training footprint will be of sufficient length to allow them sufficient opportunity to confirm the candidate's depth of knowledge and

their ability to facilitate learning. The Examiner should also ensure that the candidate knows that they can expect to be questioned on material not planned to be covered during the observation in order to assess their knowledge of other areas of the EU-OPS/JAR-OPS 3 flight crew CRM syllabus and confirm their ability to translate that knowledge into a facilitated discussion covering related operational issues.

3.5 In addition, when the candidate is non-flight-crew, the observation will be conducted on a flight-crew-only CRM training course (i.e. initial, recurrent, conversion or command), and will be carried out by a CAA Training Inspector or nominated member of the CRM Advisory Panel. This is to ensure the candidate has the opportunity to demonstrate they have the level of flight deck awareness, operational knowledge, credibility and the skills to be able to present to a flight-crew-only course.

3.6 The CRMIE should always bear in mind the following requirement drawn from CAP 737:

*“Examining CRM Instructor performance requires that the Examiner displays the best examples of CRM skill in handling the CRMI throughout the test, without losing any of the objectivity required to ensure a minimum standard.”*

#### **4 Briefing/Conducting the Test**

4.1 The CRMIE needs to brief the candidate in plenty of time before the course starts – this ensures there is time to:

- set an open and professional tone;
- establish that the purpose of the test is for the candidate to demonstrate his/her competence;
- discuss the examiner’s role (including seating position and involvement with the class);
- discuss briefing the class about the examiner;
- establish what the training objectives are for the session;
- allow an opportunity for the candidate to ask questions;
- establish how many courses the candidate has run in the validity period;
- explain that the examiner will maintain an unobtrusive role during the training, leaving the candidate responsible for course conduct and timing;
- explain and emphasise that the needs of the trainees will take precedence over any other requirements; and
- explain that the CRMIE will also ask questions to ascertain the candidate’s depth of knowledge and understanding of topics not discussed as part of the course being observed prior to delivering the result.

4.2 The CRMI check is primarily based on observation, and it cannot be over-emphasised that the CRMIE **must have evidence** that supports their final assessment of the candidate’s competence.

#### **5 Assessment Criteria**

5.1 The required CRMI competence standards are described in “The Short Guide to Instructor Standards”. The aim of that checklist is to provide a summary of the key knowledge, skills and attitudes required to aid making an assessment of the candidate’s competence. Defining the behaviours that constitute a “good role model” is open to some degree of subjectivity; however, the term encapsulates one of the most important aspects of instructor competence and credibility, irrespective of the other skills required. The following list of behaviours is not exhaustive but is considered sufficient to convey an understanding of the concept and allow an informed assessment to be made.

5.2 A competent CRMI:

- is overtly supportive of CRM principles in word and deed (actively role models good CRM);
- seeks feedback and responds appropriately;
- works hard to establish a rapport with trainees;
- is open and honest;
- creates an atmosphere of trust and respect;
- preserves confidentiality;
- is a good listener;
- openly strives to improve own performance;
- is supportive of fellow trainers; and
- is always patient, sensitive and respectful of others.

**6 Examiner's Checklist for CRMI (Ground) Observations**

6.1 There is space on the assessment form for the candidate to describe the key training objectives for each module and the training session overall. This gives the Examiner a clear insight into what the instructor is trying to achieve from the outset, and the Examiner should try to ensure that this is captured in as much detail as possible, as success or otherwise in achieving them forms one of the cornerstones of the assessment process.

6.2 The CRMIE may find using the simple nine-point checklist on the assessment form describing the key knowledge, skills and attitudes required to be an easy way to analyse and assess each performance element. An example is shown below.

Did the candidate support the achievement of the objectives, YES or NO?

In deciding, consider the following:

- Did the candidate demonstrate the **knowledge** required for the role?
- Was the candidate **supportive of CRM concepts** and did the candidate **role model** best CRM practice?
- Did the candidate **encourage trainees to participate, share their experiences and self-analyse**?
- Did the candidate **identify and respond to the trainees' needs** relative to their expertise/experience?
- Did the candidate **integrate** practical CRM within technical training and line operations?
- Did the candidate incorporate **NOTECHS or Company CRM Standards** when appropriate?
- Did the candidate identify and discuss the **CRM reasons** for accidents/incidents/events?
- Did the candidate regularly **check for understanding and resolve ambiguity**?
- Did the candidate demonstrate effective **instruction and facilitation skills**?

6.3 The Examiner may find that casually checking the trainees' understanding of the material presented throughout the day can provide useful evidence to confirm their final assessment and improve the quality of feedback to the candidate. The Examiner should take care not to re-open CRM training topics, but just seek to gather evidence that confirms and supports their final assessment of the candidate's performance.

## 7 Unacceptable Performance Indicators

7.1 What constitutes a failure of the candidate to reach the required standard? In reaching a conclusion it is useful to first consider whether or not the desired training objectives described by the candidate at the outset have been met. If not, was it for reasons outside of the control of the candidate? Were the training objectives met in spite of the candidate, rather than because of him? In all cases the Examiners must use their judgement and take into consideration any exceptional circumstances. However, if the CRMIE has evidence that confirms **repetition** of any of the following (paragraphs 7.4 to 7.14) this should normally result in the award of a failed assessment in that skill or knowledge area. A failure to reach the required standard in one or more areas will result in the candidate being assessed as unsatisfactory overall.

7.2 The following poor performance indicators should be used by the CRMIE when determining whether or not the candidate has displayed an acceptable level of proficiency. It must be emphasised that this list is not exhaustive and only includes the more common causes of failure. The CRMIE must still exercise his/her own judgement when assessing the candidate.

7.3 The use of the word "limited" in the following examples refers to a level of performance that the Examiner believes is unacceptable. The Examiner should be able to explain why it was unacceptable and what the candidate could do to rectify the issue.

7.4 *Did the candidate support the achievement of the objectives, YES or NO?*

The candidate:

- required multiple interventions and frequent assistance from the other facilitator(s) was required to support the achievement of the training objectives; or
- clearly showed that their own poor knowledge, skills or attitude failed to support the achievement of the training objectives.

7.5 *Did the candidate support CRM concepts and did they role model best CRM practice?*

The candidate:

- expressed the opinion that CRM training is of little value;
- was unfriendly, unwelcoming, impatient, insensitive, disrespectful or judgemental;
- demeaned the trainees;
- used humour inappropriately;
- let personal opinion deflect from the training objectives;
- rarely demonstrated empathy for the trainee's position; or
- did not remain calm under stress or became overly emotional.

7.6 *Did the candidate demonstrate the knowledge required for the role?*

The candidate:

- was unable to describe the key training objectives for each subject, or could only describe them with difficulty;
- displayed limited knowledge of the material presented;
- either was unable to provide or could only provide limited elaboration or explanation of the material when asked to do so by the trainees;
- displayed limited knowledge of the company behavioural/non-technical standards;
- either was unable to explain or had great difficulty explaining the relationship between the company behavioural/non-technical standards and optimum performance in line operations;

- displayed limited knowledge of the core EU-OPS/JAR-OPS CRM subjects, e.g. communications, leadership, workload/task management, teamwork, situation awareness, problem-solving and decision-making; or
- displayed limited knowledge of the legislative requirements or publications pertaining to Human Factors training for flight crew, e.g. EU-OPS/JAR-OPS, CAP 737 and this document.

7.7 *Did the candidate encourage trainees to participate, share their experiences and self-analyse?*

The candidate:

- made limited attempts to encourage trainees to participate, or share their experiences; or
- frequently either ignored or stifled trainee input.

7.8 *Did the candidate identify and respond to the trainees' needs relative to their expertise/experience?*

The candidate:

- did not attempt to establish the trainees' starting point, background or level of any relevant experience;
- either failed to respond, made limited attempts or made inappropriate responses to trainees' requests for further explanation or elaboration of training material; or
- made limited or no attempts to alter or adapt the training material or content when this was clearly required in order to meet the trainees' needs.

7.9 *Did the candidate integrate practical CRM within technical training and line operations?*

The candidate:

- failed to integrate practical CRM measures within technical training; or
- was unable to relate CRM measures to line operations.

7.10 *Did the candidate incorporate NOTECHS or Company CRM Standards when appropriate?*

The candidate:

- made no, or limited, attempts to link the applicable non-technical marker system or CRM standards to effective crew behaviours during line operations; or
- made no, or limited, attempts to apply the applicable non-technical marker system or CRM standards when either describing or reinforcing effective behaviour.

7.11 *Did the candidate identify and discuss the non-technical reasons for accidents/incidents/events?*

The candidate:

- focused on the technical causes and made few, if any, attempts to identify any ineffective non-technical skills; or
- made limited or inappropriate attempts to facilitate what may have been more effective behaviours when discussing incidents/accidents.

7.12 *Did the candidate regularly check for understanding and resolve ambiguity?*

The candidate:

- rarely attempted to ensure trainees' questions were adequately answered; or
- rarely attempted to resolve any ambiguities or misunderstandings.

7.13 *Did the candidate demonstrate effective instructional skills?*

The candidate:

- was clearly unprepared and demonstrated a clear lack of familiarity with the training materials;
- was often unclear, hesitant, confused, confusing or unstructured;
- presented too much information using jargon, terminology and language that was inappropriate for trainees;
- made few, if any, attempts to present the session in a relevant and motivating manner;
- consistently failed to deal with inappropriate trainee behaviour that detracted from the training objectives or stifled trainee participation;
- frequently glossed over key concepts or spent excessive time discussing irrelevant points;
- consistently delivered material in a monotone fashion;
- consistently delivered material with little or no eye contact; or
- lacked energy and appropriate enthusiasm. The trainees were bored and disengaged.

7.14 *Did the candidate demonstrate effective facilitation skills?*

The candidate:

- rarely asked open questions that probed or deepened the discussion;
- rarely reflected or deflected questions back to the trainees and consistently answered the trainees' questions directly without giving the rest of the group an opportunity to contribute;
- consistently presented personal views and opinions and little attempt was made to either summarise or synthesise the participants' own views;
- consistently interrupted the trainees or rarely gave them sufficient time to formulate a response; or
- either consistently ignored trainees' responses or rarely displayed effective listening skills such as paraphrasing.

## **8 Conducting the Debrief**

8.1 The debrief should be conducted as follows:

- The CRMIE should adopt an appropriately relaxed but professional tone for the debrief and deliver the test result at the outset.
- The overall aim is to facilitate learning and for the CRMIE to role model an effective debriefing that ensures that the candidate makes the analysis of their own performance.
- The debriefing should focus on the candidate's development and include an appropriate balance of positive and negative feedback.
- In the event of a failure the examiner must indicate what re-training the candidate will need to undertake prior to a further assessment.
- The written report should reflect the content and key areas of performance debriefed.

8.2 Pass:

- State the result of the test and congratulate the candidate CRMIE.

8.3 Fail:

- State the result, with the reasons and evidence in descending order of priority;

- state the effect on the CRMI's rating - "I have to advise you that you will be unable to exercise the privileges of a CRMI until your re-assessment is successful"; and
- state the areas where re-training is required.

8.4 Pass or Fail:

- Facilitate the main debrief points and agree any retraining requirements;
- the candidate CRMI must leave the debrief knowing what their strengths are; and
- the candidate CRMI must leave the debrief knowing what, if anything, needs to change and how to change it.

8.5 Administration

8.5.1 A record of all CRMIE checks must be kept for a period of three years.

8.5.2 Pass:

- Complete the TS10 Examiner's report and forward to the CRM Administrator at the CAA. Advise Company training department if applicable.

8.5.3 Fail:

- Advise Company training department.
- Complete the TS10 Examiner's report/CRMI Assessment Form.
- Complete FCL 252 Notice of Failure including any re-training requirements and give the CRMI a copy.

8.5.4 Examiners should ensure any records are kept in accordance with Data Protection requirements and remember the CRMI has the right to access them.

**APPENDIX 3 SPECIMEN CRMI (GROUND) ASSESSMENT FORM****CRMI (Ground) Assessment**

CRMI Candidate Information					
Rank + Name		CAA Number		Company	
<b>Expiry date of current rating if applicable:</b>					
<b>To be completed by the CRMI Candidate under Assessment</b>					
<b><u>Session Description</u></b> (Provide a brief overview of the training you will be delivering – type and purpose of training/number and description of trainees.)					
<b><u>Training Objectives</u></b> (Provide a list of the key training objectives or desired outcomes from the training that you will be delivering.)					
<b>To be completed by the Examiner</b>					
<b><u>General Comments</u></b> (Refer to areas identified in the checklist on the reverse side of this form.)					
<b>Result: PASS/FAIL</b>					
<b>Examiner's Name and Signature:</b>			<b>Date:</b>		

Did the CRMI candidate support the achievement of the objectives? YES/NO (Provide reasons/give examples below)	
Did the CRMI candidate demonstrate the <b>knowledge</b> required for the role?	
Did the CRMI candidate <b>support CRM concepts</b> and did they <b>role model</b> best CRM practice?	
Did the CRMI candidate encourage trainees to <b>participate, share their experiences</b> and <b>self-analyse</b> ?	
Did the CRMI candidate <b>identify</b> and respond to the <b>trainees' needs</b> relative to expertise/experience?	
Did the CRMI candidate <b>integrate</b> practical CRM within technical training and line operations?	
Did the CRMI candidate incorporate <b>NOTECHS</b> or <b>Company CRM Standards</b> when appropriate?	
Did the CRMI candidate identify and discuss the <b>non-technical</b> reasons involved in accidents, incidents and events included in case studies?	
Did the CRMI candidate regularly <b>check for understanding and resolve ambiguity</b> ?	
Did the CRMI candidate demonstrate effective <b>instruction and facilitation skills</b> ?	

## **APPENDIX 4 GUIDANCE TO A CRMIE CONDUCTING THE TEST FOR THE ACCREDITATION OF A CRMI (LINE OR SIMULATOR)**

### **1 Introduction**

1.1 This brief has been written to address the two following CRMI assessment scenarios:

- A RETRE or TRIE undertaking a CRMI(S) assessment in the simulator environment.
- A CRMIE Line undertaking a CRMI(L) assessment.

It includes an easy to use checklist in the form of effective CRMI knowledge, skills and attitudes to help the Examiner decide if the candidate has demonstrated the required standard. It also includes a sample Examiner's assessment form.

1.2 The checklist and assessment form are designed to be practical tools that capture the key performance indicators in the Short Guide and CAP 737. They are designed to help the Examiner make and record an assessment of the candidate's suitability to hold either a CRMI(S) rating as part of their TRE or TRI or to be accredited as a CRMI(L). The form is also a useful reference for the candidate as it helps him/her to understand the standards against which he/she is being assessed. Its use, however, is not mandatory and the Examiner may use his or her own company paperwork provided it accurately reflects the Short Guide.

1.3 Examiners should remember that the test is not just an opportunity for the candidate to demonstrate proficiency. As the majority of tests will result in a PASS, best practice demands that all examiners use this as an opportunity to give supportive feedback that helps develop and enhance the candidate's knowledge and skills.

### **2 The Accreditation Process**

2.1 Line Training Captains who are already accredited as a CRMI(S) do not need to be separately accredited as a CRMI(L). Those who are not must be accredited by either a company-nominated CRMIE or a RETRE (a RETRE authorisation also includes CRMIE L)).

2.2 The accreditation process may be conducted as a workshop or by observation of the candidate CRMI(L) conducting actual line training.

### **3 Documents**

3.1 Examiners must be familiar with the following documents (in addition to company Operating Manuals/procedures and RETRE and TRIE requirements if applicable):

- EU-OPS requirements for the testing and training of non-technical skills;
- The Short Guide to Performance Standards for Simulator Instructors;
- CAP 737 (available at [www.caa.co.uk/cap737](http://www.caa.co.uk/cap737));
- this document (available at [www.caa.co.uk/standardsdocuments](http://www.caa.co.uk/standardsdocuments)); and
- the relevant Company Behavioural Marker System/CRM Standards, e.g. NOTECHS.

### **4 The Test**

4.1 While RETREs and TRIEs will already be familiar with the guidance for pre-test preparation, briefing, conducting tests and debriefing skills, CRMI examiners must also be familiar with the guidance for pre-test preparation, briefing, conducting tests and debriefing given in this document and CAP 737. The following notes may help them in planning the test to include the CRMI elements.

4.2 Pre-Test Preparation:

4.2.1 If necessary, the Examiner should agree a date/time with the candidate to allow for briefing and debriefing separate to the assessment session observed. It is vital that the candidate is aware of the standards against which they are being assessed. They should be provided with a copy of the Short Guide and any Company Examiner Checklist prior to undertaking an assessment.

4.2.2 The Examiner will need to establish the type of test or training, review the content and establish the experience level of both the candidate and the other participants.

4.2.3 Additionally, the Examiner should bear in mind the following requirement drawn from CAP 737:

*“Examining CRM Instructor performance requires that the Examiner displays the best examples of CRM skill in handling the CRMI throughout the test, without losing any of the objectivity required to ensure a minimum standard.”*

4.3 Briefing/Conducting the Test

4.3.1 The Examiner needs to brief the candidate in plenty of time before the course starts – this ensures there is time to:

- set an open and professional tone;
- establish that the purpose of the test is for the candidate to demonstrate his/her competence;
- establish what the objectives are for the session;
- allow an opportunity for the candidate to ask questions;
- discuss the Examiner’s role (including seating position and involvement with the simulator, aircraft or flight crew, if applicable); and
- discuss briefing the session’s participants about the Examiner.

4.3.2 The test should be conducted according to the following principles:

- The Examiner should maintain an unobtrusive role during the session, leaving the candidate responsible for its conduct and timing.
- The Examiner should bear in mind that the needs of the session’s participants will take precedence over any other requirements.
- Whereas the CRMI element of the check is primarily based on observation, it may be necessary for the Examiner to ask questions as part of the debrief to ascertain the candidate’s depth of knowledge of CRM aspects not covered during the observation.

4.3.3 The assessment is primarily based on observation, and it cannot be over-emphasised that the examiner **must have evidence** that supports their final assessment of the candidate’s competence.

4.4 Debriefing/Report

4.4.1 The debrief should be conducted according to the following principles:

- Examiners should adopt an appropriate relaxed but professional tone required for the debrief and deliver the test result at the outset;
- the overall aim is to facilitate learning and for the examiner to role model an effective debriefing that ensures that the candidate makes the analysis of their own performance;
- the debriefing should focus on the candidate’s development and include an appropriate balance of positive and negative feedback; and

- the written report should reflect the debrief.

## 5 Assessment Criteria

5.1 The required competence standards are described in “The Short Guide to Instructor Standards”. The aim of the assessment checklist is to provide a summary of the key knowledge, skills and attitudes required to aid making an assessment of the candidate’s competence. Defining the behaviours that constitute a “good role model” is open to some degree of subjectivity; however, the term encapsulates one of the most important aspects of instructor competence and credibility, irrespective of the other skills required. The following list of behaviours is not exhaustive but is considered sufficient to convey an understanding of the concept and allow an informed assessment to be made.

5.2 A competent CRMI:

- is overtly supportive of CRM principles in word and deed (actively role models good CRM);
- seeks feedback and responds appropriately;
- works hard to establish a rapport with trainees;
- is open and honest;
- creates an atmosphere of trust and respect;
- preserves confidentiality;
- is a good listener;
- openly strives to improve own performance;
- is supportive of fellow trainers; and
- is always patient, sensitive and respectful of others.

5.3 Examiner’s Assessment Checklist

5.3.1 The Examiner may find using this simple nine-point checklist as an easy way to check the appropriate CRMI performance issues. The bold text could be used as prompt points on the Examiner’s notes.

- Did the candidate support the achievement of the **objectives**?
- Did the candidate support CRM concepts and **role model** best CRM practice?
- Did the candidate **integrate** practical CRM within technical training?
- Did the candidate identify the **CRM reasons** for outcomes?
- Did the candidate incorporate the **Company CRM Standards** (e.g. NOTECHS)?
- Did the candidate use **facilitation** skills effectively to encourage flight crew to self-analyse?
- Did the candidate **assess flight crew’s non-technical performance accurately**?
- Did the candidate demonstrate the **CRM knowledge** required for the role?
- Did the candidate demonstrate the **instructional skills** required for the role?

5.3.2 There is space on the example assessment form for the candidate to describe the key training, checking or scenario objectives. This gives the Examiner a clear insight into what the instructor is trying to achieve from the outset, and the Examiner should try to ensure that this is captured in as much detail as possible, as success or otherwise in achieving them forms one of the cornerstones of the assessment process.

- 5.3.3 The Examiner may find using the simple nine-point checklist on the assessment form that captures the key knowledge, skills and attitudes required to be an easy way to analyse and assess each performance element.

## 6 Unacceptable Performance Indicators

6.1 What constitutes a failure of the candidate to reach the required standard? In reaching a conclusion it is useful to first consider whether or not the desired training objectives described by the candidate at the outset have been met. If not, was it for reasons outside of the control of the candidate CRMI? Were the training objectives met in spite of the candidate's CRMI, rather than because of it? In all cases the Examiners must use their judgement and take into consideration any exceptional circumstances. However, if the Examiner has evidence that confirms **repetition** of any of the following unacceptable performance indicators (paragraphs 6.3 to 6.11), this should normally result in the award of a failed assessment in that skill or knowledge area. A failure to reach the required standard in one or more areas will result in the candidate being assessed as unsatisfactory overall. It must be emphasised that the list of descriptors under each category is not exhaustive and only describes the more common causes of failure. A CRMIE must still exercise his or her own judgement when assessing the candidate.

6.2 The use of the word "limited" in the following examples refers to a level of performance that the Examiner believes is unacceptable. The Examiner should be able to explain why it was unacceptable and what the candidate could do to rectify the issue.

6.3 *Did the candidate support the achievement of the objectives?*

The candidate:

- clearly showed that their own poor knowledge, skills or attitude failed to support the achievement of the (training) objectives.

6.4 *Did the candidate support CRM concepts and did they role model best CRM practice?*

The candidate:

- expressed the opinion that CRM training is of little value;
- was unfriendly, unwelcoming, impatient, insensitive, disrespectful or judgemental;
- demeaned the trainees;
- used humour inappropriately;
- let personal opinion deflect from the (training) objectives;
- rarely demonstrated empathy for the trainee's position; or
- did not remain calm under stress or became overly emotional.

6.5 *Did the candidate integrate practical CRM within the technical training?*

The candidate:

- failed to integrate practical CRM measures, knowledge or skills within technical training/checking undertaken; or
- was unable to relate CRM measures, knowledge or skills to line operations before, during or after the training/checking event.

6.6 *Did the candidate identify and discuss the CRM reasons for outcomes?*

The candidate:

- focused on the technical causes and made few, if any, attempts to identify any ineffective non-technical skills; or

- made limited or inappropriate attempts to determine what may have been more effective behaviours when discussing failures/successes.

6.7 *Did the candidate integrate the Company CRM Standards (e.g. NOTECHS)?*

The candidate:

- made no, or limited, attempts to apply the company non-technical marker system or CRM standards when either describing or reinforcing effective behaviour.

6.8 *Did the candidate use facilitation skills effectively to encourage the flight crew to self-analyse?*

The candidate:

- rarely asked open questions that probed or deepened the discussion;
- consistently presented personal views and opinions and little attempt was made to either summarise or synthesise the participants' own views;
- consistently interrupted the trainees or rarely gave them sufficient time to formulate a response; or
- either consistently ignored trainees' responses or rarely displayed effective listening skills such as paraphrasing.

6.9 *Did the candidate assess flight crew non-technical performance accurately?*

The candidate:

- made no, or limited, attempts to include the assessment of non-technical performance when debriefing or recording trainee's performance;
- made no, or limited, reference to any company-approved non-technical marker system or CRM standards when debriefing or recording trainee's performance; or
- consistently failed to accurately assess trainees' non-technical performance in accordance with any company-approved non-technical marker system or CRM standards.

6.10 *Did the candidate demonstrate the CRM knowledge required for the role?*

The candidate:

- displayed limited CRM knowledge;
- either was unable to provide or could only provide limited elaboration or explanation of the material when asked to do so by the trainees;
- displayed limited knowledge of the company behavioural/non-technical standards;
- either was unable to explain or had great difficulty explaining the relationship between the company behavioural/non-technical standards and optimum performance in line operations;
- displayed limited knowledge of the core EU-OPS/JAR-OPS CRM subjects, e.g. communications, leadership, workload/task management, teamwork, situation awareness, problem-solving and decision-making; or
- displayed limited knowledge of the legislative requirements or publications pertaining to Human Factors training for flight crew, e.g. EU-OPS/JAR-OPS 3, CAP 737 and Standards Document No. 29.

6.11 *Did the candidate demonstrate the instructional skills required for the role?*

The candidate:

- was clearly unprepared and demonstrated a clear lack of familiarity with the training session (if applicable);
- was often unclear, hesitant, confused, confusing or unstructured;

- made few, if any, attempts to maintain a motivating manner;
- frequently glossed over key concepts or spent excessive time discussing irrelevant points;
- did not attempt to establish the trainees' starting point, background or level of any relevant experience;
- either failed to respond, made very limited attempts or made inappropriate responses to trainees' requests for further explanation or elaboration;
- made limited or no attempts to alter or adapt the training material or content when this was clearly required in order to meet the trainees' needs.
- consistently delivered material in a monotone fashion; or
- consistently delivered material with little or no eye contact.

## **7 Conducting the Debrief**

7.1 CRMIEs who are not a RETRE or TRIE may find the following guide to conducting the debrief useful:

- The CRMIE should adopt an appropriately relaxed but professional tone for the debrief and deliver the test result at the outset.
- The overall aim is to facilitate learning and for the CRMIE to role model an effective debriefing that ensures that the CRMI makes the analysis of their own performance.
- The debriefing should focus on the CRMI's development and include an appropriate balance of positive and negative feedback.
- In the event of a failure the examiner must indicate what re-training the candidate will need to undertake prior to a further assessment.
- The written report should reflect the content and key areas of performance debriefed.

7.2 Pass:

- State the result of the test and congratulate the candidate CRMI.

7.3 Fail:

- State the result, with the reasons and evidence in descending order of priority;
- state the effect on the CRMI's rating - "unfortunately you will be unable to exercise the privileges of a CRMI until your re-assessment is successful"; and
- state the areas where re-training is required.

7.4 Pass or Fail:

- Facilitate the main debrief points and agree any retraining requirements;
- the candidate CRMI must leave the debrief knowing what their strengths are; and
- the candidate CRMI must leave the debrief knowing what, if anything, needs to change and how to change it.

## **8 Administration**

8.1 A record of all checks must be kept for a period of three years.

8.2 Pass:

- Complete (TS10, if applicable) Examiner's Report/any assessment form used.

8.3 Fail:

- Advise Company training department.

- Complete relevant sections of (TS10, if applicable) Examiner's Report/any Assessment Form.
- Complete FCL 252 Notice of Failure and give the candidate a copy (if applicable).

8.4 Examiners should ensure any records are kept in accordance with Data Protection requirements and remember the candidate has the right to access them.

**APPENDIX 5 SPECIMEN CRMI (SIMULATOR/LINE) ASSESSMENT FORM****CRMI (Simulator/Line) Assessment**

<b>Candidate Information</b>		<b>CRMI Status</b>	Line <input type="checkbox"/>	Sim <input type="checkbox"/>
<b>Rank + Name</b>		<b>CAA Number</b>		<b>Company</b>
<b>Examiner Information</b>				
<b>Rank + Name</b>		<b>CAA Number</b>		

**To be completed by the candidate**

**Description of training/checking scenario** (Provide a brief overview of the assessment scenario, e.g. type and purpose of training, testing or checking/description of flight crew involved.)

**Training/Checking or Scenario Objectives** (Provide a list of the key objectives or desired outcomes.)

**To be completed by the Examiner**

**General Comments** (Refer to areas identified in the nine-point checklist on the reverse side of this form.)

The candidate has/has not met the requirements of the Assessment.

<b>Candidate's Signature</b>		<b>Date</b>	
<b>Examiner's Signature</b>		<b>Date</b>	

<b>Nine-Point Checklist for CRMI Performance</b>	
Written Observations	Assessment
Was the achievement of stated <b>objectives/desired outcomes</b> supported?	
Did the candidate <b>support CRM concepts</b> and did they <b>role model</b> best CRM practice?	
Did the candidate <b>integrate</b> practical CRM within the technical training?	
Did the CRMI identify the <b>CRM reasons</b> for errors/good results?	
Did the candidate integrate the Company <b>CRM Standards</b> (e.g. NOTECHS)?	
Did the candidate use <b>facilitation</b> skills effectively to encourage flight crew to self-analyse?	
Did the candidate <b>assess flight crew non-technical performance accurately</b> ?	
Did the CRMI demonstrate the <b>CRM knowledge</b> required for the role?	
Did the CRMI demonstrate the <b>instructional skills</b> required for the role?	

## APPENDIX 6 CRM/CRMIE APPLICATION PROCESS

- 1 No applications will be progressed until an application form has been completed and returned to Flight Crew Standards, together with all the relevant fees, paid by either cheque or credit card. Details for payment are attached to the application form.
- 2 A receipt for payment will be returned.
- 3 Fees payable are laid down in the CAA Flight Crew Licensing Scheme of Charges available at [www.caa.co.uk/ors5](http://www.caa.co.uk/ors5). Cheques should be made payable to the Civil Aviation Authority.

- 4 Contact Addresses:

For General Enquiries on CRM Training matters and Application Packages:

CRM Administration Manager  
Flight Crew Standards, 1W  
Civil Aviation Authority (SRG)  
Aviation House  
Gatwick Airport South  
West Sussex RH6 0YR  
Tel: +44 (0) 1293 573632  
Fax: +44 (0) 1293 573959

## **APPENDIX 7 COMPLETION OF FORM FCL 252 – THE TEST AND EXAMINATION – NOTICE OF FAILURE**

- 1 The FCL 252 is a triplicate, no carbon required form. The completion of the form is fairly self-explanatory. However, when giving the reason(s) for failure, state **which** items were failed. There is no requirement to give details of **why** those items were failed.
- 2 The training requirement should prescribe the minimum amount of training and must state the aspect(s) to be trained.
- 3 On the reverse of the top (white) sheet the instructions for completion state:
  - a) The top WHITE copy is to be handed to the CRMI.
  - b) The second YELLOW is to be posted to the CAA (this should be sent to CRM Administration, Flight Crew Standards).
  - c) The third PINK is retained in the pad. (Flight Crew Standards sees a potential problem with data protection if the pad is kept available for use, in a flight bag for example, and is therefore NOT secure. It is strongly recommended that you keep the pink copy in a place that will fulfil the requirements of the Data Protection Act.)

## **APPENDIX 8 TERMS OF REFERENCE OF THE CRM ADVISORY PANEL (CRMAP)**

### **1 Mission Statement**

The CRM Advisory Panel (the Panel), acting in the interest of Industry, will provide cost-effective, timely and high quality advice and assistance to the Civil Aviation Authority (CAA) on the accreditation and standardisation of CRM Providers, Examiners and Instructors to ensure the highest standards of Human Factors and CRM training, education and practice.

### **2 Purpose**

- a) To provide the CAA with guidance on Performance Standards for CRM Providers, Examiners and individual Instructors taking account of the needs of the Industry.
- b) To propose amendments and updates to those standards.
- c) To promote a common understanding of the accreditation processes and requirements.
- d) To advise and, when requested, to assist the CAA on the assessment of the performance of Examiners, Providers and individual Instructors of CRM.
- e) To act as an arbitrator in the case of disputes over CRM training standards and provide the findings to interested parties.
- f) To advise and, when requested, to assist the CAA in the maintenance of Examiners', Providers' and Instructors' techniques and standards.

### **3 Standards**

- a) The standards required of CRM Examiners, Providers and individual Instructors are those established in CAP 737 and Standards Document No. 29 and as supplemented by current Aeronautical Information Circulars (AICs).
- b) The Panel's standards of operating and its procedures will be in the direct support of the content of these documents and any relevant Legislation and amendments.
- c) Standards of Examiners are those determined by the CAA.

### **4 Responsibilities**

- a) The Panel will normally meet four times per year.
- b) Members will be expected to attend at least two of these meetings per year.
- c) The Panel Chairman will ensure a balanced quorum at each meeting where significant decisions are made.
- d) In relation to CRM and Human Factors (HF), in a cost-effective, timely and effective manner:
  - 1) Provide advice to the CAA on all matters relating to CRM Training.
  - 2) Continually review and recommend accreditation procedures to enable the CAA to qualify CRM Examiners, Instructors and Providers to a consistent and acceptable standard.
  - 3) Be aware of and respond to all changes in HF Legislation, particularly with respect to the training and accreditation of CRM Examiners and Instructors.
  - 4) Provide qualified Assessors to act as advisors/arbitrators should a dispute arise which relates to CRM training standards.

### **5 Resources**

- a) Meeting venues and a measure of administrative support will be provided by the CAA, where appropriate.

- b) Certain fee charging, where appropriate.

## **6 Personnel**

### **6.1 Appointment to the Panel**

- a) Prospective members, whether nominated by organisations, invited or making direct application, shall fill an appropriate vacancy, as indicated in Membership (Appendix 1 to Terms of Reference).
- b) All membership applications shall follow the procedure indicated in Applications (Appendix 2 to Terms of Reference).
- c) The Chairman and Vice Chairman will be nominated by the members, and will hold Office for three years, after which an election will be held. Nothing will stop those in Office offering themselves for re-election.

### **6.2 Membership Criteria**

Any person acting as a member shall be:

- a) actively involved, or show a proven track record, in the design, development, delivery, improvement or management of Human Factors training;
- b) demonstrably interested in the cost-effective application of Human Factors as a major contribution to flight safety; and
- c) motivated to serve regularly and effectively on the CRM Advisory Panel.

## Appendix 1 to Terms of Reference

### Membership

- a) Chaired by a person, acceptable to the CAA, who has a recognised background in Human Factors in Aviation: *Captain Graham Cruse*
- b) A deputy chairman, acceptable to the CAA, who has a recognised background in Human Factors in Aviation: *Captain Paul Field*
- c) CAA Gateway: *Captain Peter Shaw*
- d) A secretary, acceptable to or provided by the CAA: *Elizabeth Afekare*

Where possible suitable Members will be selected from the following list:

- e) CAA Training Inspector/Specialist - nominated:
- f) RAeS Human Factors Group - nominated:
- g) Flight Crew members of a Representative Body - nominated:
- h) Instructor from a Flight Crew Representative Body - nominated:
- i) TRI/TRE and/or RETRE - nominated:
- j) CRMIE - nominated:
- k) CAA FCL member - nominated:
- l) CRMI - nominated:
- m) Industry CRM Training Specialists - invited:
- n) Nationally recognised Training Organisations - invited:
- o) A representative from the Research Community - invited:
- p) Cabin Crew member - invited:
- q) Basic Training School member - invited:
- r) Person(s) of recognised high standing in the field of Human Factors – invited:
- s) Helicopter/rotary industry representative – invited:
- t) Specialist with a European/global perspective – invited:

Other members may be invited from the above-mentioned categories to increase total membership to sufficiently meet the task.

## **Appendix 2 to Terms of Reference**

### **Applications**

- 1) Applications for membership will be managed by a Membership Sub-Committee comprising the Panel Chair, Panel Vice Chair and the CAA Representative(s).
- 2) The Panel membership philosophy is to secure an active, appropriately knowledgeable and independent group with numbers limited to achieve effective progress of the Panel business and skills diversity to ensure balanced advice.
- 3) Prospective new members of the CRM Advisory Panel will either be nominated, be invited or make direct application. In every case applicants will submit, in the first instance to the Panel Chair, a CV and briefly justify in writing their application, addressing the Terms of Reference (TOR) criteria.
- 4) Provided the Membership Sub-Committee find the application acceptable, and a vacancy is identified within the TOR membership criteria, the application will be circulated or tabled to establish acceptance by the full Panel on the basis of a simple majority of responses.
- 5) An invitation to attend a meeting as a Guest will follow a majority approval.
- 6) An opportunity for subsequent discussion of the application will be made during or after this meeting as necessary. A simple majority vote of those responding will determine the outcome of a contested decision.
- 7) A successful applicant will be offered full membership to fill the identified vacancy.
- 8) The Membership Sub-Committee will:
  - periodically review all membership and individual contributions; and
  - when necessary, using the above consultative mechanism, seek Panel approval for membership cancellation or replacement if suitable explanations for ineffective contribution are not forthcoming.

## **APPENDIX 9 CRM KNOWLEDGE REQUIREMENTS AND THE EU-OPS/JAR-OPS CRM TRAINING SYLLABUS**

### **Knowledge Requirements for Instructors of CRM Training**

- 1 Human Performance and Limitations (as detailed in AMC FCL 1.470 and 2.470 – Theoretical knowledge requirements for the issue of a Commercial Pilot Licence).
  - EU-OPS/JAR-OPS core CRM elements (see TGL No. 44 for EU-OPS 1.943, 1.945, 1.955 and 1.965).
  - Human error and reliability, error chains, error prevention and detection.
  - Company safety culture, SOPs and organisational factors.
  - Stress, stress management, fatigue and vigilance.
  - Information acquisition and processing, situation awareness and workload management.
  - Decision-making.
  - Communication and co-ordination inside and outside the flight deck.
  - Leadership and team behaviour.
  - Automation and automation philosophy (as required).
  - Specific type-related differences (as required).
- 2 Case-Based Studies
  - 2.1 Knowledge and application of the Company Behavioural Marker System/CRM Standards, e.g. NOTECHS with regard to case-based studies.
  - 2.2 Knowledge of the relevant parts of the “Short Guide”.