

## **Standards Document No. 29 Version 6**

Guidance on the requirements that pertain to Flightcrew for the training and testing of Human Factors under EASA Part - ORO and EASA Part - FCL

All amendments to this document will be completed electronically. The latest version of the document can be found on the CAA website.

[www.caa.co.uk/standardsdocuments](http://www.caa.co.uk/standardsdocuments)

## Table of Contents

<b>AMENDMENT SUMMARY</b>	<b>4</b>
<b>GLOSSARY</b>	<b>5</b>
<b>1 INTRODUCTION</b>	<b>6</b>
1.1 Origin	6
<b>2 THE REGULATORY FRAMEWORK</b>	<b>6</b>
2.1 Introduction	6
2.2 Training and Testing under Part FCL and Part ORO	7
2.3 Instructor, Trainer and Examiner Competence	8
<b>3 CRM TRAINING AND TESTING – AN ACCEPTABLE MEANS OF COMPLIANCE</b>	<b>8</b>
3.1 General Requirements	8
3.2 Use of Third-party Training Providers	9
<b>4 CRM TRAINERS – GENERAL</b>	<b>9</b>
4.1 Suitability	9
<b>5 CRM TRAINERS – GROUND SCHOOL</b>	<b>10</b>
5.1 Training	10
5.2 CRM Training Standards	10
<b>6 CRM TRAINER EXAMINERS – GROUND SCHOOL</b>	<b>11</b>
6.1 Suitability	11
6.2 Training	12
<b>7 INSTRUCTORS and EXAMINERS – SIMULATOR</b>	<b>12</b>
7.1 Requirements	12
<b>8 INSTRUCTORS and EXAMINERS - LINE FLYING</b>	<b>12</b>
8.1 Requirements	12
<b>9 NON-TECHNICAL SKILLS ASSESSMENT</b>	<b>13</b>
9.1 Introduction	13

<b>APPENDIX 1</b>		
<b>THE SHORT GUIDE TO PERFORMANCE STANDARDS FOR CRM TRAINERS</b>		<b>15</b>
<b>APPENDIX 2</b>		
<b>GUIDANCE FOR A CRM TRAINER EXAMINER CONDUCTING AN ASSESSMENT OF COMPETENCE</b>		<b>21</b>
1 Introduction		21
2 Documents		21
3 The Test		21
4 Briefing/Conducting the Test		22
5 Assessment Criteria		22
6 Examiner's Checklist for CRMT (Ground) Observations		23
7 Unacceptable Performance Indicators		24
8 Conducting the Debrief		26
<b>APPENDIX 3</b>		
<b>SPECIMEN CRM TRAINER ASSESSMENT FORM</b>		<b>28</b>
<b>APPENDIX 4</b>		
<b>GUIDANCE FOR A SENIOR EXAMINER CONDUCTING AN ASSESSMENT OF INSTRUCTOR/EXAMINER CRM/MCC COMPETENCE</b>		<b>30</b>
1 Introduction		30
2 Documents		30
3 The Test		30
4 Assessment Criteria		32
5 Unacceptable Performance Indicators		33
6 Conducting the Debrief		35
<b>APPENDIX 5</b>		
<b>SPECIMEN SIMULATOR/LINE FLYING ASSESSMENT FORM</b>		<b>36</b>
<b>APPENDIX 6</b>		
<b>EASA PART ORO CRM TRAINING SYLLABUS</b>		<b>38</b>
EASA Knowledge Requirements for CRM Training personnel		38
<b>APPENDIX 7</b>		
<b>TERMS OF REFERENCE OF THE CRM ADVISORY PANEL (CRMAP)</b>		<b>39</b>
1 Mission Statement		39
2 Purpose		39
3 Standards		39
4 Responsibilities		39
5 Resources		39
6 Personnel		40
6.1 Appointment to the Panel		40
6.2 Membership Criteria		40
Appendix 1 to Terms of Reference		41
Appendix 2 to Terms of Reference		42

## **AMENDMENT SUMMARY**

### **Version 6**

Standards Document 29 has been substantially re-written to provide guidance for individuals and Operators subject to the requirements of EASA Part FCL and Part ORO with regard to the training and testing of CRM, including recognisable human factors and behavioural markers.

## GLOSSARY

AMC	Acceptable Means of Compliance
AAMC	Alternative Acceptable Means of Compliance
AoC	Assessment of Competence
ATPL	Airline Transport Pilot Licence
CRE	Class Rating Examiner
CRI	Class Rating Instructor
CRM	Crew Resource Management
CRMT	Crew Resource Management Trainer
CRMT (E)	Crew Resource Management Trainer Examiner
FSTD	Flight Synthetic Training Device
GM	Guidance Material
HPL	Human Performance and Limitations
LPC	Licence Proficiency Check
LIFUS	Line Flying under supervision
MCC	Multi-Crew Co-operation
NOTECHS	Non-Technical Skills
NTS	Non-Technical Skills
OPC	Operator Proficiency Check
SAR	Search And Rescue
TOR	Terms of Reference
TRE	Type Rating Examiner
TRI	Type Rating Instructor

## 1 INTRODUCTION

### 1.1 Origin

This document has been developed in conjunction with the UK CRM Advisory Panel. The requirements and qualifications described relate to the rules and regulations for commercial flight operations under EASA Part ORO and EASA Part FCL.

Safety research has shown human error to be a prime contributing factor in many aviation incidents and accidents; mandatory Crew Resource Management (CRM)/Multi-crew Cooperation (MCC) training was therefore introduced over 20 years ago to support safer flight operations. Early courses drew heavily on existing management training approaches and focused upon individual behaviour in an attempt to drive out the ‘wrong stuff’, but often met with little success as a strong and relevant link to flight operations was frequently lacking. Non-technical training has developed considerably since these early iterations and is now much more operationally focused. The principle that human error is ubiquitous and inevitable is widely accepted. Furthermore, safety is enhanced considerably when an Operator and its Flightcrew are able to demonstrate consistently effective ‘Threat and Error Management’, or TEM as it is widely known.

The implementation by Operators of training programs which focus upon and support the development of their Flightcrew’s non-technical skills (CRM/MCC) enhance the efficacy of the TEM process. Effective threat and error management is the goal; effective CRM/MCC is the means by which it is achieved. The regulatory requirements have been written to support this.

## 2 THE REGULATORY FRAMEWORK.

### 2.1 Introduction

The regulatory framework acknowledges the significant safety benefits accrued from an integrated approach to the training and testing of both technical and non-technical skills (NOTECHS). The concepts and competencies which underpin the core non-technical elements of performance are defined in the EASA Regulations, and while these may appear at first glance to be labeled and described differently by Part FCL and Part ORO, in reality, Part FCL and Part ORO require exactly the same competencies (knowledge, skills and behaviours) to be trained, and then tested.

MCC concept (Part-FCL)	CRM concept (Part-ORO)
<p>‘Multi-crew cooperation’ (MCC) means the functioning of the flight crew as a team of co-operating members led by the pilot-in-command.</p> <p>The objectives of MCC training are to develop the technical and non-technical components of the knowledge, skills and attitudes (competencies) required to operate a multi-crew aircraft.”</p>	<p>‘Crew Resource Management (CRM) is the effective utilisation of all available resources (e.g. crewmembers, aeroplane systems, supporting facilities and persons) to achieve a safe and efficient operation.</p> <p>The objective of CRM is to enhance the communication, human factors and management skills of the crewmembers concerned. The emphasis is placed on the non-technical aspects of the crew performance.’</p>

From AMC FCL.735:

MCC Competency Requirements	MCC Knowledge Requirements
<ul style="list-style-type: none"> <li>• Communication</li> <li>• Leadership and teamwork</li> <li>• Situation Awareness</li> <li>• Workload Management</li> <li>• Problem Solving and Decision Making</li> <li>• Monitoring and Crosschecking</li> <li>• Task Sharing</li> <li>• Briefing</li> <li>• Flight Management</li> </ul>	<ul style="list-style-type: none"> <li>• Human Factors</li> <li>• Threat and Error Management</li> <li>• Crew Resource Management</li> <li>• Application of Threat and Error Management and CRM principles.</li> <li>• SOPs</li> <li>• Aircraft systems</li> <li>• Undesired aircraft states</li> <li>• PF and PNF roles</li> <li>• Emergency and abnormal procedures</li> </ul>

From AMC ORO.115, 215:

CRM Competency Requirements	CRM Knowledge Requirements
<ul style="list-style-type: none"> <li>• Communication</li> <li>• Application of Threat and Error Management and CRM principles.</li> <li>• Threat and Error Management</li> <li>• Leadership and teamwork</li> <li>• Situation Awareness</li> <li>• Workload Management</li> <li>• Problem Solving and Decision Making</li> <li>• Use of Automation</li> <li>• Task Sharing</li> <li>• Stress, Stress management</li> </ul>	<ul style="list-style-type: none"> <li>• Error detection, error prevention</li> <li>• Application of Threat and Error Management and CRM principles.</li> <li>• Information acquisition, processing and Situation Awareness</li> <li>• SOPs</li> <li>• Human Performance and Limitations</li> <li>• Automation Philosophy</li> <li>• SOPs</li> <li>• Operator Safety Culture</li> </ul>

## 2.2 Training and Testing under Part FCL and Part ORO

The training and testing of Non-technical Skills (CRM, MCC, TEM) is integral to both Part FCL and Part ORO. Part FCL stipulates the training/testing requirements for the initial issue and maintenance of validity of licence and type/class rating privileges; additional training and testing in MCC is a prerequisite before those privileges may be extended to the multi-crew environment. The regulations governing CRM training/testing for an Operator are described in Part-ORO and apply equally to both multi-crew and single-pilot Operators.

Part FCL and Part ORO mandate CRM/MCC training for Flightcrew as follows:

- Initial Training: A Flight Crew member may not commence unsupervised Line Flying until they have completed the Operator's Initial CRM training course.
- Conversion Training and Checking: CRM/MCC/TEM training may be integrated into all Operator's type conversion training and checking.
- Recurrent Training and Checking: Elements of CRM may be integrated into all appropriate phases of recurrent training. Flight Crew may undergo specific modular CRM training in all of major topics of CRM training to the depth specified in AMC1 ORO.FC.115&215 Crew resource management (CRM) training. All topics may be covered over a three-year period. Modular training sessions may be distributed as evenly as possible

- Command Training: An operator's Command Course may include specific CRM Training
- 2.3 Instructor, Trainer, and Examiner Competence

CRM/MCC training and testing takes place in three distinct contexts, namely Ground School, Simulator, and Line Operations.

Part FCL:

MCC training and testing is required by Part FCL regulation for the initial issue and maintenance of validity of a type-rating. Authorised Examiners and rated Instructors (i.e. Type/Class Rating Examiners (TREs/CREs) and Type/Class Rating Instructors (TRIs/CRIs) must comply with the requirements of Part FCL and Part ORO and demonstrate their ability to integrate and where applicable, assess MCC/CRM and TEM - see pertaining AMC/GM and Standards Documents 14, 24, 28 and 29, as applicable.

Part ORO:

CRM training and testing is required by Part ORO regulation for both multi-crew and single-pilot Operators. The UK CAA ceased to administer a formal scheme of accreditation for those personnel involved in the delivery of CRM Training for Flightcrew following the introduction of Part ORO in October 2014.

Part ORO requires an Operator to ensure that the CRM Trainers it employs (or contracts) are 'suitably qualified', and must be able to demonstrate to the Competent Authority (the UK CAA) how this requirement is achieved. The UK CAA remains responsible under Part ORO for the maintenance of standards of CRM Training and Examining in the UK. Inspectors from the CAA will therefore observe ground school training, simulator training/testing and training/testing in an aircraft including Line Checks on an opportunity basis.

Detailed performance standards exist for TRIs and TREs. Performance standards for CRM Trainers are under development by EASA and it is expected that these will be issued as revised AMC and Guidance material. In the interim, compliance with the Basic Regulation, published UK CAA AltMOC CRM and the guidance included in this document will be deemed to constitute an acceptable means of compliance under Part FCL and Part ORO.

### **3 CRM TRAINING AND TESTING – AN ACCEPTABLE MEANS OF COMPLIANCE**

#### **3.1 General Requirements**

Operators are required to be able to demonstrate how they comply with the Part ORO requirements and how they ensure their CRM Trainers are suitably qualified, in accordance with the regulation for both flight and cabin crew. Operators will therefore need to develop and publish procedures within Part D of their Operations Manual that describe the selection, training and assessment of all personnel involved in the training and testing of CRM/MCC, regardless of the context in which the training takes place (Ground School, Simulator, or Line Operations.)

Operators are expected to nominate a person to act as a single point of contact responsible for managing CRM training under the oversight of the UK CAA. This person may develop and maintain CRM training programs in accordance with present regulation.

Operators will also need to establish a process whereby all CRM Trainers (CRMTs) are assessed and standardised; this assessment may be conducted by an 'Operator appointed' CRMT Examiner (CRMTE). This assessment will be undertaken every three years and records maintained to confirm the activity.

An Operator's Part D must also include the processes by which a CRMTE is selected, trained and assessed in the role. An Assessment of the CRMTE may be completed by a nominated person acceptable to the UK CAA.

### 3.2 Use of Third-party Training Providers

Operators who utilise the services of a third-party CRM Training provider remain responsible under Part ORO for ensuring that the CRMTs employed are suitably qualified, and must establish and publish a process which ensures this in their Part D.

## 4 CRM TRAINERS - GENERAL

### 4.1 Suitability

CRM Trainers have a pivotal role to play within the Operator's safety system and are an important means by which high CRM/MCC standards are developed and maintained. In addition, it is a specific requirement of Part-ORO that all of the personnel who conduct CRM Training are 'suitably qualified' as a CRM trainer.'

In order to be suitably qualified, a CRM Trainer must:

(1)

- (i) have adequate knowledge of the relevant flight operations, preferable through current experience as flight crewmember;
- (ii) have adequate knowledge of human performance and limitations (HPL), whilst:
  - (A) having obtained a commercial pilot licence in accordance with Commission Regulation (EU) No 1178/2011, or
  - (B) having followed a theoretical HPL course covering the whole syllabus of the HPL examination;
- (iii) have completed initial flight crew CRM training;
- (iv) have received training in group facilitation skills;
- (v) have received additional training in the fields of group management, group dynamics and personal awareness; and
- (vi) have demonstrated the knowledge, skills and credibility required to train the elements specified in AMC1 ORO.FC.115 (repeated in AMC1 ORO.FC.115&215 Crew resource management (CRM) training )

(2)

The following qualifications and experience are also acceptable:

- (i) A flight crew member holding a recent qualification as a CRM trainer may continue to be a CRM trainer after the cessation of active flying duties if he/she maintains adequate knowledge of the relevant flight operations.
- (ii) A former flight crew member having adequate knowledge of HPL may become a CRM trainer if he/she maintains adequate knowledge of the relevant flight operations and meets the provisions of paragraph (1)(iii) to (1)(vi).
- (iii) An experienced non-flight crew CRM trainer having adequate knowledge of HPL may become a flight crew CRM trainer if he/she meets the provisions of paragraph (1)(i) and (1)(iii) to (1)(vi).

CRM Trainers must also be able 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 instruction and facilitation skills;
- c) they are able to assess Non-Technical Skills where required; and
- d) they are able to facilitate a constructive debrief of the above.

## 5 CRM TRAINERS – GROUND SCHOOL

### 5.1 Training

A well-defined minimum standard of CRM Trainer competency is essential if high standards of CRM instruction, and the effective integration of CRM and Threat and Error Management strategies are to be achieved in accordance with the requirements of Part FCL and Part ORO.

ICAO PANS-TRG states that:

*“In competency-based programs, Instructor competencies are made explicit, and instructors have to demonstrate their instructional skills and their knowledge of the subject matter and training course content.”*

The training course for a CRM Trainer may be both theoretical and practical. Practical elements may include the development of specific trainer skills, and how to integrate CRM/MCC into line operations in particular.

CRM Trainer competency can be subdivided into ‘Units of Competence’, each containing a number of performance elements and background knowledge requirements, as detailed in Appendix A.

- (1) The training duration for CRM trainers may be a minimum of:
  - (i) 24 hours for trainees holding an instructor certificate, as specified in Commission Regulation (EU) No 1178/2011, which includes a training of 25 hours in teaching and learning; or
  - (ii) 40 hours for trainees who do not hold an instructor certificate as specified in (i).
- (2) This training may be conducted by CRM trainers with a minimum of three years' experience or by CRM Trainer Examiners. Assistance may be provided by experts in order to address specific areas.

### 5.2 CRM Trainer Standards

CRM Trainer requirements are described in AMC/GM ORO.FC.115, 215 and expanded in Appendix 2 of this document. They mirror the competence standards for an Instructor described in Part-FCL Subpart J, and pertaining AMC/GM. Guidance on a means of assessing a CRM Trainer against these standards is given in appendix 2.

An operator may ensure that the process for CRM Trainer assessment is described in their Operations Manual, and that it includes the methodology by which the CRM Trainer is observed.

The assessment is valid for a period of three years and subject to the following provisions:

- (1) A CRM Trainer may be assessed by a CRM Trainer Examiner nominated by the operator. All personnel involved in assessing standards must be credible and competent in their role.
- (2) A CRM Trainer may have conduct at least two CRM training courses in the last 12 months.
- (3) For continued validity, the CRM Trainer may be re-assessed within the last 12 months of

the three-year validity period by.

- (4) The next three-year validity starts at the end of the previous three-year period.
- (5) Renewal: If no assessment or training was conducted over the 3-year period, a CRM Trainer may comply with the qualification provisions of paragraph 5.2 (1) and (2) before resuming CRM instruction.

## 6 CRM TRAINER EXAMINERS – GROUND SCHOOL

### 6.1 Suitability

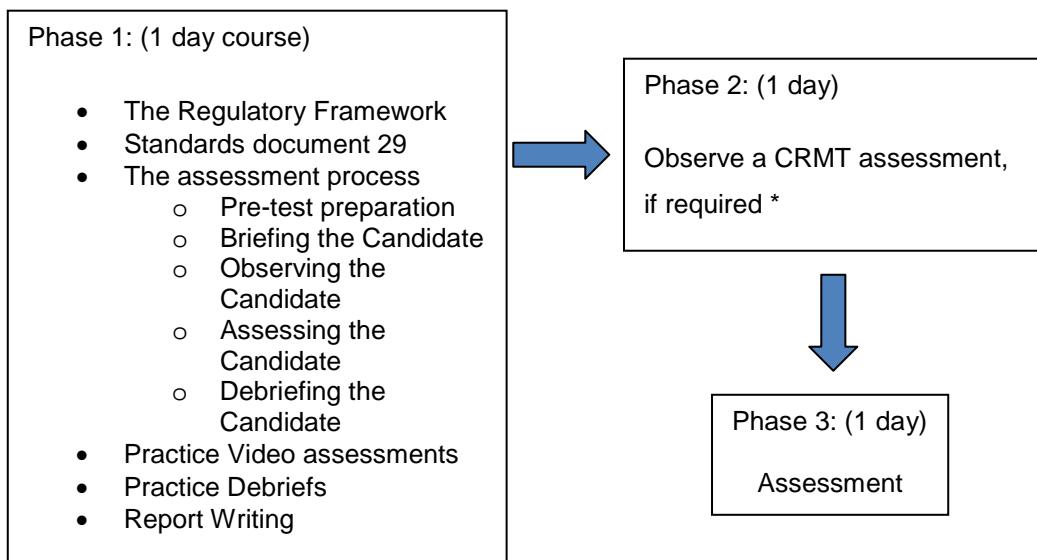
An Operator may nominate suitably experienced CRM Trainers to act as Examiners. Operators who do not have sufficient in-house resources may utilise a third-party, however, the standard and validity of the external CRM Trainer Examiner utilised may be confirmed by the Operator.

Continued suitability in the role of CRM Trainer Examiner may be subject to the following provisions:

- (i) The Examiner may demonstrate continued compliance with the provisions for a CRM trainer and may demonstrate capability in that role.
- (ii) The Examiner may have conducted at least two CRM Trainer assessments in the previous 12 months.
- (iii) Within the last 12 months of the three-year validity period the examiner may be observed conducting an assessment of a CRM Trainer by the nominated person or Training Post Holder.
- (iv) The next three-year validity starts at the end of the previous three-year period.
- (v) Renewal: If the examiner has not maintained activity in the role, he/she may be supervised by a valid CRMTE until recency is achieved or comply with the provisions of (III) before resuming activities as an examiner.

## 6.2 Training

All prospective CRMTEs may undergo training designed to equip them with the relevant Examiner competencies prior to being assessed as a CRMTE. A suggested methodology is as follows:



## 7 INSTRUCTORS and EXAMINERS - SIMULATOR

### 7.1 Requirements

Part ORO requires elements of CRM be integrated into all appropriate phases of recurrent training. Whenever it is practicable, parts of the CRM practical training may be conducted in FSTDs that reproduce a realistic operational environment and permit interaction.

Rated Instructors and Authorised Examiners (TRIs/CRIs and TREs/CREs) must comply with the requirements of Part FCL Sub-Parts J, K, Part ORO, and CAA Standards Doc 24A, and AMC1 ORO.FC.115&215 - Crew resource management (CRM) training in particular. They must be able to train to the required depth, all of the relevant CRM training topics in Appendix 6 – EASA Part ORO CRM Training Syllabus. Authorised Examiners must also comply with the requirements of section 8 – Non-technical Skills assessment.

Appendix 5 of this document includes a ‘specimen Assessment Form’ which Senior Examiners and TRI Examiners may use to assess the CRM/MCC elements of Instructor/Examiner competence.

## 8 INSTRUCTORS and EXAMINERS - LINE FLYING

### 8.1 Requirements

Part ORO states that: ‘CRM/MCC/TEM training may be integrated into all Operators’ type conversion training and checking’; this includes Line Flying under Supervision (LIFUS). Line flying under supervision provides the opportunity for a flightcrew member to practice and consolidate the procedures and techniques he/she has been made familiar with during the ground and flight training of an operator conversion course.

This is accomplished under the supervision of a commander specifically nominated and trained for the task. All personnel involved in LIFUS training must comply with the requirements of AMC1 ORO.FC.115&215 Crew resource management (CRM) training and must be able to train to the required depth, all of the relevant CRM training topics in Appendix 6 – EASA Part ORO CRM Training Syllabus. Operators must be able to show how this is achieved and how standards are maintained in their Part D.

Appendix 5 of this document includes a ‘specimen Assessment Form’ which may be used by a Senior Examiner or Commander nominated by the Operator for the task of assessing the competence of personnel involved in LIFUS training.

Line Checks are conducted by a suitably qualified commander nominated by the Operator. The nominated commander may be trained in CRM concepts and the assessment of CRM skills and must comply with the requirements of section 9 - Non-technical Skills assessment.

## **9 NON-TECHNICAL SKILLS ASSESSMENT**

### **9.1 Introduction**

The training and testing of Non-technical Skills is integral to Part-FCL and Part-ORO. There are five occasions during which CRM/MCC competence is specifically assessed: the Licence Skill Test (LST); the Licence Proficiency Check (LPC); the Operator’s Proficiency Check (OPC); the Line Check and for ATQP fleets, the Line Orientated Evaluation (LOE). The same technical and non-technical pass/fail criteria may apply to all of these events. The purpose of the assessment is to provide feedback to the individual/crew and to identify any retraining requirements. An applicant may be failed for CRM/MCC alone; however, it may normally be linked with a technical failure.

In the past, the assessment of NTS lacked formal measurements of competence, potentially leading to a subjective and extremely variable application of standards. Research into a 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”.

Assessment of CRM skills is the process of observing, recording, interpreting and debriefing crews and crewmember’s performance using a validated and generally accepted methodology in the context of overall performance.

The non-technical skills (NOTECHS) framework is one such method. The flightcrew member’s CRM skills may be assessed in the operational environment, but not during CRM training in the non-operational environment. Nevertheless, during training in the non-operational environment, feedback from the CRM trainer or from trainees on individual and crew performance may be given during training to the individuals concerned.

Assessment of CRM skills may:

- (i) include debriefing the crew and the individual and serve to identify additional training where needed for the crew or the individual crew member; and
- (ii) be used to improve the CRM training system by evaluating summaries of all CRM assessments.

Prior to the introduction of CRM skills assessment, a detailed description of the CRM methodology, including the terminology used for the assessment may be published in the Operators Part D. This must also include the process by which Examiners are trained to undertake NTS assessment, including those commanders nominated to undertake Line Checks who are not Authorised Examiners (CRE and TREs).

Methodology of CRM skills assessment

The assessment may be based on the following principles:

- (i) only observable behaviours are assessed;
- (ii) the assessment may positively reflect any CRM skills that result in enhanced safety;
- (iii) assessments may include behaviour that contributes to a significant reduction in safety margins.

Operators may establish procedures, including additional training, to be applied in the event that flight crew members do not achieve or maintain the required CRM standards.

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

- 1 The purpose of this short guide is to establish industry standards for CRMTs. This guide is designed to give guidance and information to operators, providers of CRM training and CRMTs 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 may 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 CRMT in each of the following contexts:
  - Simulator/FSTD
  - Line Flying
  - Ground School .
- 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 CRMT, candidates must be able show that they fulfill all the mandatory elements plus five optional elements.

### Simulator/FSTD

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

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
B2 Creates a climate conducive to learning	<p><b>1) Establishes CRM credentials and rapport with trainees, and clarifies roles.</b></p> <p><b>2) Clarifies training objectives and methods.</b></p> <p><b>3) Ascertains and supports trainees' needs.</b></p>	<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	<p><b>1) Communicates clearly, accurately and adequately.</b></p> <p>2) Creates and sustains realism in the detail.</p>	<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	<p><b>1) Encourages trainees to get involved.</b></p> <p><b>2) Focus is on trainees, not themselves.</b></p> <p><b>3) Overtly supportive of CRM principles in word and deed (i.e. role models good CRM).</b></p> <p><b>4) Motivating, patient, confident and assertive manner.</b></p> <p>5) Conducts one-to-one coaching/debrief of crew members as appropriate.</p> <p>6) Encourages mutual support, teamwork and sharing of individual learning experiences.</p>	<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	<p><b>1) Continuously monitors and responds flexibly to the training session.</b></p> <p><b>2) Ensures objectives are achieved.</b></p> <p>3) Reviews progress with trainees.</p>	<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	<p><b>1) Assists trainees to assess own individual and team performance against CRM standards.</b></p> <p>2) Sets new/additional learning objectives.</p>	<ul style="list-style-type: none"> <li>Uses of video playback and debriefing to facilitate learning.</li> </ul>
D1 Evaluates CRM training sessions	<p><b>1) Elicits feedback from trainees.</b></p> <p>2) Tracks training session processes against agreed criteria.</p> <p>3) Keeps appropriate records.</p>	<ul style="list-style-type: none"> <li>Methods of assessing and improving session effectiveness.</li> </ul>

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

### Line Flying

UNIT	PERFORMANCE ELEMENT	KNOWLEDGE
A1 Designs CRM training sessions	<p>1) Identifies training requirements.</p> <p>2) Selects CRM components of line check.</p> <p>3) Provides opportunities for demonstrating CRM competency.</p>	<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	<p>1) Makes CRM links with technical training and SOPs where appropriate.</p> <p>2) Makes links with flight safety, customer service, company policy.</p>	<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	<p>1) Establishes CRM credentials and rapport with trainees, and clarifies roles.</p> <p>2) Clarifies training objectives and consequences.</p> <p>3) Ascertsains and supports trainees' needs.</p>	<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	<p>1) Communicates clearly, accurately and adequately.</p> <p>2) Looks for training opportunities.</p>	<ul style="list-style-type: none"> <li>• Ways to elicit participation.</li> <li>• Methods of giving information.</li> </ul>

**Line Flying**

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

**Ground School Training**

<b>UNIT</b>	<b>PERFORMANCE ELEMENT</b>	<b>KNOWLEDGE</b>
A1 Designs CRM training sessions	<p><b>1) Identifies training requirements and delivery resources.</b></p> <p><b>2) Sets objectives.</b></p> <p>3) Builds in methods of evaluating training effectiveness.</p> <p>4) Incorporates a variety of activities in design.</p>	<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	<p><b>1) Ensures activities are practical and realistic.</b></p> <p>2) Ensures facilities meet requirements.</p> <p>3) Assists in the preparation of briefing materials.</p> <p>4) Ensures materials are adequate and clear.</p>	<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	<p><b>1) Makes CRM links with technical training and SOPs where appropriate.</b></p> <p>2) Makes links with flight safety, customer service, company policy.</p>	<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	<p><b>1) Establishes CRM credentials and rapport with trainees, and clarifies roles and confidentiality.</b></p> <p><b>2) Clarifies training objectives and methods.</b></p> <p><b>3) Ascertains and supports trainees' needs.</b></p>	<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	<p><b>1) Communicates clearly, accurately and adequately.</b></p> <p>2) Creates and sustains realism in the detail.</p> <p>3) Maintains interest.</p>	<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	<p><b>1) Encourages trainees to get involved.</b></p> <p><b>2) Focus is on trainees, not themselves.</b></p> <p><b>3) Overtly supportive of CRM principles in word and deed (i.e. role models good CRM).</b></p> <p><b>4) Motivating, patient, confident and assertive manner.</b></p> <p>5) Uses exercises and activities to maximise learning.</p> <p>6) Recognises and responds to individual needs.</p> <p>7) Encourages mutual support, teamwork and sharing of individual learning experiences.</p>	<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	<p><b>1) Continuously monitors and responds flexibly to the training session.</b></p> <p><b>2) Ensures objectives are achieved.</b></p> <p>3) Reviews progress with trainees against formal benchmarks.</p>	<ul style="list-style-type: none"> <li>• Methods of tracking performance.</li> </ul>
C2 Assesses trainees' performance	<p><b>1) Assists trainees to assess own individual and team performance against CRM standards.</b></p> <p>2) Sets new/additional learning objectives.</p>	<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	<p><b>1) Elicits feedback from trainees.</b></p> <p>2) Tracks training session processes against agreed criteria.</p> <p>3) Elicits formal course evaluation from trainees.</p> <p>4) Keeps appropriate records.</p>	<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	<p><b>1) Regularly reviews own performance, strengths and development needs.</b></p> <p><b>2) Collects feedback about performance from others.</b></p> <p>3) Keeps abreast of developments from Regulator, trade press, etc.</p> <p>4) Maintains a written development record against a development plan.</p>	<ul style="list-style-type: none"> <li>• Methods of assessing own performance.</li> <li>• Methods of improving own performance.</li> </ul>

## APPENDIX 2 GUIDANCE FOR A CRMT EXAMINER CONDUCTING AN ASSESSMENT

### 1 Introduction

- 1.1 This brief has been written to assist a CRMTE undertaking a CRMT assessment in the class environment. It includes an easy to use checklist in the form of effective CRMT 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, Part ORO, and CAP 737. They are designed to help the CRMTE make and record an assessment of the CRMT's suitability. The form is also a useful reference for the Trainer, 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 required standard.
- 1.3 Examiners may remember that the tassessment is not just an opportunity for the Instructor to demonstrate proficiency. As the majority of assessments will be deemed successful, best practice demands that all CRMTEs 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 may also be familiar with the general content of the following documents:
  - The Short Guide to Performance Standards of Ground Instructors;
  - the relevant sections of EASA Part ORO
  - CAP 737 (available at [www.caa.co.uk/cap737](http://www.caa.co.uk/cap737));
  - this document
  - NOTECHS or Company behavioural markers;

### 3 The Test

- 3.1 Pre-Test Preparation:
  - ensure the candidate has completed any relevant company paperwork
  - agree a date/time, allowing for extra opportunity for briefing/debriefing of the candidate.
- 3.2 It is vital that the candidate is aware of the standards against which they are being assessed. They may be provided with a copy of the Short Guide and any Company Examiner Checklist prior to undertaking an assessment. The CRMTE 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.
- 3.3 The CRMTE 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 may 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 EASA flight crew CRM syllabus and confirm their ability to translate that knowledge into a facilitated discussion covering related operational issues.

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

- 4.1 The CRMTE 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 CRMTE 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 CRMT check is primarily based on observation, and it cannot be over-emphasised that the CRMTE **must have evidence** that supports their final assessment of the candidate's competence.

#### **5 Assessment Criteria**

- 5.1 The required CRM Trainer 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 CRM Trainer:

- 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 CRM Trainer 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 may 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 CRMTE 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 may 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 CRMTE has evidence that confirms **repetition** of any of the following (paragraphs 7.4 to 7.14) this may 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 may be used by the CRMTE 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 CRMTE 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 may 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 EASA 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. EASA Part ORO, 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 may be conducted as follows:

- The CRMTE may 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 CRMTE to role model an effective debriefing that ensures that the candidate makes the analysis of their own performance.
- The debriefing may 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 may reflect the content and key areas of performance debriefed.

8.2 Pass:

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

8.3 Fail:

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

- state the effect on the CRMT's training position - "I have to advise you that you will be unable to continue training as a CRMT 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 CRMT must leave the debrief knowing what their strengths are; and
- the candidate CRMT must leave the debrief knowing what, if anything, needs to change and how to change it.

**APPENDIX 3 SPECIMEN CRM TRAINER ASSESSMENT FORM**

NAME		Staff Number		Date	
------	--	--------------	--	------	--

**Date of last assessment (if applicable):**

To be completed by the Candidate under Assessment

**Session Description** (Provide a brief overview of the training you will be delivering – type and purpose of training / number and description of trainees)

**Training Objectives** (Provide a list of the key training objectives or desired outcomes from the training)

**To be completed by the Examiner**

**General Comments** (refer to areas identified in the checklist on the reverse side of this form)

**Result: PASS/FAIL**

**Examiner's Name and Signature**

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

## **APPENDIX 4 GUIDANCE FOR A SENIOR EXAMINER or TRAINING POST HOLDER CONDUCTING AN ASSESSMENT OF INSTRUCTOR/EXAMINER CRM/MCC COMPETENCE**

### **1 Introduction**

- 1.1 This brief has been written to assist in the following assessment scenarios:
- An SE undertaking an assessment in the simulator environment.
  - An SE or nominated Commander undertaking an assessment of a Training captain in the Line Flying environment
- It includes an easy to use checklist in the form of effective CRM knowledge, skills and behaviours to help the Examiner decide if the candidate has demonstrated the required standard. It also includes a sample 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 Part ORO and PART FCL. 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 requirements.
- 1.3 Examiners may 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.
- 1.4 A nominated Commanders already qualified as a TRI or TRE may not need to be separately assessed as competent in the Line Flying role.
- 1.5 CRM/MCC training competence for non-TRE/Is could either be assessed during a workshop or by observation of the candidate conducting actual LIFUS training.

### **2 Documents**

- 2.1 Examiners must be familiar with the following documents (in addition to company Operating Manuals/procedures and SE requirements if applicable):
- EASA Part ORO/FCL requirements for the testing and training of non-technical skills;
  - The Short Guide to Performance Standards;
  - CAP 737
  - this document and standards document 24A
  - the relevant Company Behavioural Marker System/CRM Standards, e.g. NOTECHS.

### **3 The Test**

- 3.1 SEs will already be familiar with the guidance for pre-test preparation, briefing, conducting tests and debriefing skills. The following notes may help them in planning the test to include the CRM/MCC elements.

3.2 Pre-Test Preparation:

- 3.2.1 If necessary, the Examiner may 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 may be provided with a copy of the Short Guide and any Company Examiner Checklist prior to undertaking an assessment.
- 3.2.2 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.

3.3 Briefing/Conducting the Test

- 3.3.1 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.
- 3.3.2 The test may be conducted according to the following principles:
- The Examiner may maintain an unobtrusive role during the session, leaving the candidate responsible for its conduct and timing.
  - The Examiner may bear in mind that the needs of the session's participants will take precedence over any other requirements.
  - Whereas the CRM Trainer 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.
- 3.3.3 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.

3.4 Debriefing/Report

3.4.1 The debrief may be conducted according to the following principles:

- Examiners may 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 may focus on the candidate's development and include an appropriate balance of positive and negative feedback; and
- the written report may reflect the debrief.

#### 4 Assessment Criteria

- 4.1 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.
- 4.2 A competent CRMT:
- 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.
- 4.3 Examiner's Assessment Checklist
- 4.3.1 The Examiner may find using this simple nine-point checklist as an easy way to check the appropriate CRM Trainer 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?
- 4.3.2 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 may 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.

- 4.3.3 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.

## 5 Unacceptable Performance Indicators

- 5.1 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 CRM Trainer? Were the training objectives met in spite of the candidate's CRMT, 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 may 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 CRMTE must still exercise his or her own judgement when assessing the candidate.

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

- 5.3 *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.

- 5.4 *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.

- 5.5 *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.

- 5.6 *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.

5.7 *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.

5.8 *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.

5.9 *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.

5.10 *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.

5.11 *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.

## **6 Conducting the Debrief**

6.1 CRMTEs who are not a SE may find the following guide to conducting the debrief useful:

- The CRMTE may 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 CRMTE to role model an effective debriefing that ensures that the CRM Trainer makes the analysis of their own performance.
- The debriefing may focus on the CRM Trainer'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 may reflect the content and key areas of performance debriefed.

6.2 Pass:

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

6.3 Fail:

- State the result, with the reasons and evidence in descending order of priority;
- state the effect on the Candidate's rating/authorisation
- state the areas where re-training is required.

6.4 Pass or Fail:

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

**APPENDIX 5 SPECIMEN TRI/TRE AND LIFUS ASSESSMENT FORM**

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

**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.**

Candidate's Signature		Date	
Examiner's Signature		Date	

Nine-Point Checklist for CRMT Performance	
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 CRMT 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 CRMT demonstrate the <b>CRM knowledge</b> required for the role?	
Did the CRMT demonstrate the <b>instructional skills</b> required for the role?	

**APPENDIX 6 EASA PART ORO CRM TRAINING SYLLABUS**

Supplementary document to ED Decision 2013/019/R

Table 1: Elements of CRM to be included in training

<b>Core Elements</b>	<b>Initial CRM Training</b>	<b>Operator conversion course when changing type</b>	<b>Operator conversion course when changing operator</b>	<b>Command course</b>	<b>Recurrent training</b>
Human error and reliability, error chain, error prevention and detection	In-depth	In-depth	Overview	Overview	
Operator safety culture, standard operating procedures (SOPs), organisational factors		Not required	In-depth		
Stress, stress management, fatigue & vigilance					
Information acquisition and processing situation awareness, workload management			Not required	In-depth	Overview
Decision making					
Communication and coordination inside and outside the flight crew compartment		Overview	Overview		
Leadership and team behaviour synergy					
Automation, philosophy of the use of automation (if relevant to the type)	As required	In-depth	In-depth	As required	As required
Specific type-related differences			Not required		
Case studies	In-depth	In-depth	In-depth	In-depth	In-depth

## **APPENDIX 7 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 standardisation of CRM Providers, Examiners and Trainers 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 Trainers taking account of the needs of the Industry.
- b) To propose amendments and updates to those standards.
- c) To promote a common understanding of EASA requirements.
- d) To advise and, when requested, to assist the CAA on the assessment of the performance of Examiners, Providers and individual Trainers 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 Trainers' techniques and standards.

### **3 Standards**

- a) The standards required of CRM Examiners, Providers and individual Trainers 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.

### **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 procedures to enable Industry to qualify CRM Examiners, Trainers and Providers to a consistent and acceptable standard.
  - 3) Be aware of and respond to all changes in CRM HF Legislation, particularly with respect to the training of CRM Examiners and Trainers.
  - 4) Provide qualified Assessors if required by the UK CAA to act as advisors/arbitrators if a dispute arises 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, may fill an appropriate vacancy, as indicated in Membership (Appendix 1 to Terms of Reference).
- b) All membership applications may 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 may be:

- a) actively involved, or show a proven track record, in the design, development, delivery, improvement or management of Human Factors CRM training;
- b) demonstrably interested in the cost-effective application of Human Factors CRM 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: *Corinne Baron-Morgan*

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 SE - nominated:
- j) CRMTE - nominated:
- k) CAA FCL member - nominated:
- l) CRMT - 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.