

# Guide to Performance Standards for Instructors of Crew Resource Management (CRM) Training in Commercial Aviation



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### How to read this guide

This Guide describes, in detail, the knowledge and skills required for competence in the instruction of Crew Resource Management (CRM).


**Part 1** is general background and overview. It should be read by everyone who has any reason to be aware of and is interested in Instructor competence in this field, whether or not they are Instructors themselves (eg, Training Managers, aspiring CRM Instructors, existing CRM Instructors, Training Pilots/Ground School Instructors in other areas of instruction, and Trainers of CRM Instructors).


**Part 2** describes what needs to be known (Background Knowledge) and what needs to be shown (Performance Elements) to be considered competent, in each of 3 different Contexts: Simulator, Aircraft training and Line Oriented Flight Training (LOFT); Base and Line Checks; and Ground School/Classroom training. Material in these 3 sub-sections overlaps considerably, but is laid out separately to avoid the need to cross-refer between Contexts.

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Then

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Aircraft, simulator & LOFT training **PART 2**  
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## Foreword

Crew Resource Management training (CRM) was introduced by the CAA (AIC 143/1993 [Pink 90]) in 1993 for the practical application of Flight Deck Management techniques. This was reinforced in 1995 (AIC 37/1995 [Pink 110]) for recurrent training.

Among the key elements in the successful application of Human Factors and CRM in flight operations are:

- 1) the competency of the instructors who prepare and deliver the training to flight crews; and
- 2) the eventual total integration of proficient instruction of CRM into all aspects of crew training.

**This Guide therefore is relevant to all trainers.**

There is evidence, which is of concern to the regulatory authority, that standards of CRM instruction vary widely between and within organisations providing CRM training. In order for flight crews to benefit from instruction in CRM, and thereby to satisfy the aspirations of the regulator, it is of paramount importance that standards of competence for instructors are well-defined and consistently applied. Otherwise, crews' understanding and acceptance of the concepts will be variable and incomplete, and they will be unable to apply them.

**The purpose of this Guide is to establish industry standards for trainer performance in relation to CRM. It gives guidance and information to operators, providers of CRM training and CRM instructors, on the necessary standards of competence, as well as on how to achieve these standards.**

There are 2 Parts to the Guide:

**Part 1** outlines the overall architecture of the Guide, explaining the competency profiles and how they were derived. It describes what should be achieved by prospective instructors of CRM to satisfy the competency standards. Part 1 is directed towards those people who wish to understand the overall concepts but not necessarily the detail.

**Part 2** describes the detailed Performance and Knowledge requirements for instructor competence in 3 instructional contexts. Part 2 is a 'living' document which is intended to be amended and amplified as experience of its use is gained within the industry. It is intended to be used in conjunction with Part 1 as a framework for standardisation, by specialists responsible for Human Factors and CRM training, including assessors of instructors, instructors and trainee instructors.

This Guide has been researched by the Human Factors Group of the Royal Aeronautical Society (RAeS) in concert with the Aviation Training Association (ATA) and the UK Civil Aviation Authority (CAA) and in consultation with the industry. It was part-funded by the Department for Education and Employment and the CAA and represents a consensus view by industry of the standards required. The product of a 2-year research programme which included two industry workshops, the Guide is supported and recommended by the CAA Safety Regulation Group (SRG) as an advisory document.

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## Definitions

A number of terms are used repeatedly in this Guide which require definition in this context:

- **CRM:-** The term **CRM** is a shorthand for Crew Resource Management and human factors knowledge and skills which contribute to optimal individual and crew performance while on duty;
- **Instructor:-** The term **Instructor** is used in a generic sense, and the competency profile itself reflects sensitivity to the distinction between traditional instructional techniques and facilitation skills which are more often required in CRM settings;
- **Trainee and Learner:-** The terms, **Trainee** and **Learner** refer to those under instruction, irrespective of their seniority, rank or experience - recognising that in many cases the Trainees are in fact already qualified Type Rating Instructors (TRIs) and/or Type Rating Examiners (TREs);
- **Assess:-** The term **Assess** is used to refer to the process of observing, recording, interpreting and evaluating pilots' performance and knowledge against a required standard in the context of overall performance. It includes the concept of self-critique. It is used in preference to the term **Test**, which has the connotation of a black-and-white pass/fail assessment against a set of precise quantitative standards where specific responses can be judged categorically as right or wrong. The only place where the term **Test** is a more accurate description for CRM assessment is where knowledge and memory of fact are assessed on the basis of a paper-and-pencil test, as is the case, for example, with the Human Performance and Limitations element of professional pilot licensing in the UK.
- **Behavioural Markers:-** The term, **Behavioural Markers**, is adopted to refer to indicators of the core competencies of good CRM which would be expected of all pilots, and role-modelled by CRM instructors in their words and actions. It is used in preference to the similar term, **Performance Indicator**.

Without getting too preoccupied here in the discussion about exactly what and how many they are, a recent project commissioned by the European Commission and the UK CAA indicates that good CRM can be specified under 4 broad categories of behaviour:

- **Co-operation** - teambuilding, consideration, supporting, conflict resolution;
- **Leadership/Managerial Skills** - assertiveness, providing & maintaining standards, planning & coordination, workload management;
- **Situational Awareness** - anticipation, awareness of system, environment;
- **Decision Making** - problem definition & diagnosis, generation of options, risk assessment, choice of options, review of outcome.

These are not offered as a definitive list, but merely as a reminder that at minimum, CRM Instructors must have an understanding of recognised behavioural markers and the ability to apply that understanding in a balanced way to assist crew members to make **assessments of their own behaviour**. It is not intended that behavioural markers should be used to detect numbers of events for each, by way of some quota. On the other hand, CRM training must entail the creation of opportunities for trainees to demonstrate their competence according to agreed assessment procedures, a responsibility which lies in part with the CRM instructor.

- **Formative Feedback:-** The term, **Formative**, is used to describe the monitoring of performance, review of progress and informal and/or formal feedback given continuously during training events with the objective of influencing the growth of the trainee's competence.
- **Summative Feedback:-** The term, **Summative**, is used to describe the **overall** assessment (defined above) of individual candidate performance by providing feedback of "competent" or "not yet competent". In the LOFT context, this feedback remains "non-jeopardy" whilst in the base and line checks context it is given as part of the **overall** assessment of technical and non-technical skills.

## Introduction

Commercial aviation is a safety-critical industry. Safety is of paramount importance for the protection of passengers and airline crews, and for the health of this multi-billion £ sector of the world's economy.

Analysis of airline accidents and safety incidents over the past 30 years has led airlines, manufacturers and regulatory bodies to conclude that between 70% and 80% of accidents have a contributing human factor element.

Growing awareness of the importance of factors like communication, decision-making and behaviour in aviation safety cannot be ignored and they have been the subject of policy and action, much of it fragmented, since the 1970s.

Many regulatory authorities, following ICAO's mandate, require some form of CRM awareness training for all commercial air carriers. The industry also realised that awareness training is only a first step, and has to be supplemented with realistic exercises where CRM skills can be observed in action, and shortcomings addressed. Line Oriented Flight Training (LOFT) is the name that has been given to flight simulator exercises designed specifically to put the classroom knowledge into practice and improve pilots' CRM skills.

Most major carriers now have CRM and LOFT programmes to supplement their technical and flying training. Accident rates due to human factors appear to have stabilised in recent years, possibly due in part to CRM/LOFT. However the volume of commercial air traffic continues to grow rapidly - the number of commercial jets in operation is expected to double by the year 2015. Even if the accident rate remains stable the number of hull losses, airline fatalities, and associated costs will grow each year unless the accident rate can be brought down. It is a goal of the International Air Transport Association (IATA) to see a 50% reduction in accidents worldwide by the year 2004. Current trends are not on target to achieve this goal. Inroads into the accident rate worldwide appear to have stagnated.

Historically the relative novelty of CRM and LOFT programmes and the absence of well-defined and widely-accepted standards of CRM/LOFT knowledge and performance mitigated against the development of training standards. Airlines have fostered ownership and stewardship of the selection and training of instructors of CRM and LOFT, who vary widely in the breadth and depth of their training knowledge and skills. It is inappropriate for instructors to be expected to pass judgement on CRM performance in the absence of standards for CRM instructional skills and techniques for assessing trainee instructors. Rightly, instructors are reluctant to make assessments of CRM in the absence of having standards against which to measure and compare themselves.

Progress is being made towards the development of training and performance standards for CRM in the United Kingdom. The CAA has published guidelines in broad terms and supports individual carriers and industry workshops in the evolution of common standards. The Human Factors Group of the Royal Aeronautical Society (RAeS) published in 1996 an information and guidance paper based on the recommendations of a cross-industry working party. The paper, entitled Quality Crew Resource Management, sets forth proposals for maintaining quality standards in the content of CRM training, training methods and practices and CRM trainer competency standards.

These developments signal the recognition that performance standardisation and evaluation in this area are crucial. As consensus about CRM performance standards grows it has become increasingly obvious that the **weak link in the chain that leads to the development of these competencies is the absence of performance standards for the instruction of CRM**. The CAA is aware of large variations between, and even within, commercial companies, and the CAA Safety Regulation Group is actively supporting efforts in this area.

The RAeS Human Factors Group convened a group (The Accreditation Focus Group - AFG) with support and membership of the CAA, to provide a focal point for progress on this topic. The group has worked towards the establishment of competence and performance standards for instructors of CRM on the basis of consultation with providers of CRM instructor training to determine "best practices". This enables the CAA to offer guidance to operators and third party providers on these standards and flexible methods for achieving them.

## Aims and Objectives

The main aim is to establish an industry standard for the training and assessment of CRM instructors.

This is being achieved by:

- Determining existing practices in the selection and training of CRM instructors in the United Kingdom and elsewhere;
- Extracting and defining the competency standards guiding these practices;
- Producing competency profiles to guide the assessment and development of CRM instructors;
- Formulating training and development guidelines for CRM instructors.

The programme will continue by:

- Establishing a plan, together with the CAA, for instructor accreditation;
- Establishing the requirements for ongoing monitoring of the effectiveness of the accreditation scheme, and updating to keep pace with developments in the industry.

## The Competency Profile

### The National Standards Model

The profile follows a structure adapted from the United Kingdom National Standards for Training and Development, which was published in 1995, after extensive consultation across the spectrum of UK industry about what people involved in training should be able to do, and how to set standards and design qualifications. It is very comprehensive and only those aspects which pertain to CRM instruction have been used.

The National model describes a cascade of increasingly detailed levels of specification of the **Performance and Knowledge** requirements for **Competence** in the field of training and development.

### Areas of Competence

There are 4 applicable **Areas of Competence** for CRM training and instruction

- **Plan and Design Training & Development**
- **Deliver Training & Development**
- **Review Progress & Assess Achievement**
- **Continuously Improve the Effectiveness of Training & Development**

### Units of Competence

Each **Area of Competence** is sub-divided into **Units**. A total of 12 **Units** has been identified as relevant and applicable to CRM instruction: 6 **Units** are found in “Deliver Training & Development” and 2 **Units** in each of the other 3 Areas.

## Contexts

Each **Unit** is elaborated in 3 different **contexts**:

- **Simulator, Aircraft Training & LOFT**
- **Base & Line Checks (The Base Check is known in JAA as the Operator Proficiency Check)**
- **Ground School/Classroom Training**

The specific instructor competencies needed in each context differ, although there is some overlap. This model provides a framework for illustrating the differing competency requirements for instructors who deliver similar material in more than one context. It also allows for the possibility that instructors with different experience may be appropriate in each context; for instance:

- Classroom instructors who may or may not be pilots,
- Simulator & aircraft instructors who are pilots but may not be qualified TRIs,
- TRIs who may or may not have experience of classroom instruction.

The routes through which pilots and non-pilots become involved in CRM instruction in the future are likely to remain diverse. However, the most typical route through which pilots enter the instructional arena is via a generic simulator/aircraft instructors' role.

Thus the Competency Profile for **Simulator, Aircraft Training & LOFT** is presented first.

This is followed by **Base & Line Check Elements**. The least familiar instructional environment for pilots is likely to be the classroom, for which their training and experience may not have prepared them. Furthermore this is likely to be the area in which non-pilots continue to play a significant role in CRM instruction. So **Ground School/Classroom Training Elements** become the third facet of the competency profile.

**In the overview which follows, the Guide describes the Performance and Knowledge Elements of Competence for each of the 12 Units in each of the 3 contexts.**

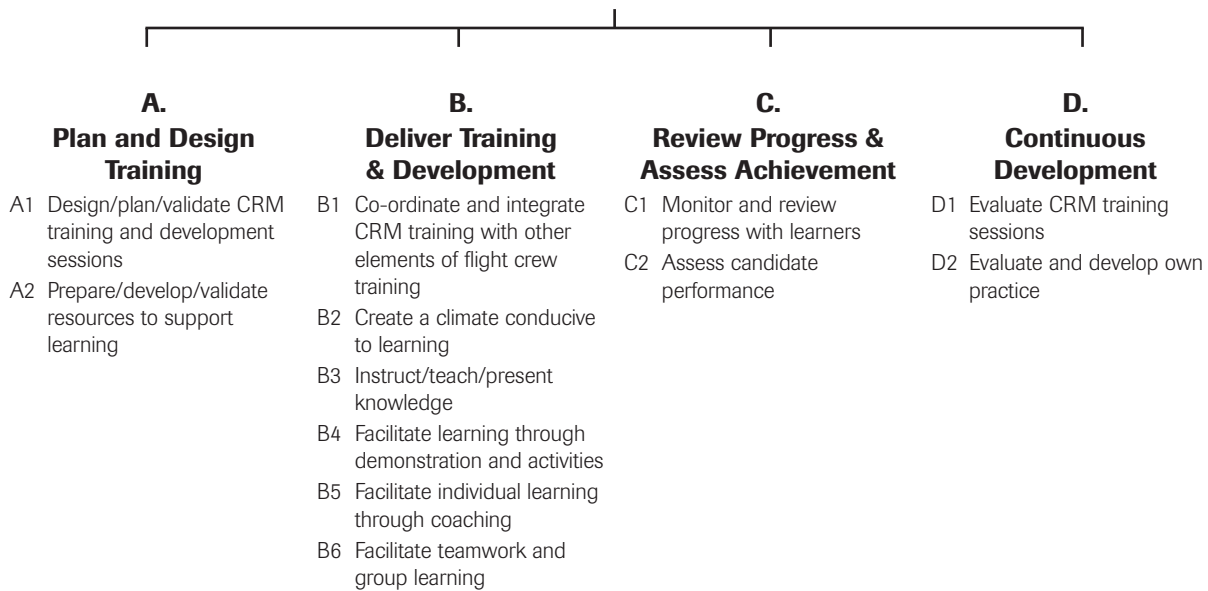
**Part 2** of the Guide elaborates the profile by providing guidance for trainers of instructors and assessors of instructor competence. It also forms the basis for training and development courses/programmes for CRM instructors.

The National Standards model can be adapted to any kind of training/development in any vocational context. It is therefore an ideal framework for instructors who deliver similar training material in more than one setting. Thus the competency profile outlined here provides the basis for developing a generic competency profile for all flight crew instruction and stimulates a seamless approach to flight crew training in which CRM and technical training are integrated.



## Competency Profile for Instructors of CRM

### 4 Areas of Competence



### These 12 Units are each in 3 Contexts

Simulator Aircraft & LOFT

Base & Line Checks

Ground School

### The Elements of which are

Performance

and

Knowledge

for which Evidence of Competence is required

## Context 1 - Simulator, Aircraft Training & Line Oriented Flight Training (LOFT) Elements

UNIT	PERFORMANCE	KNOWLEDGE
<b>Competence Area A: Plan and Design Training</b>		
<b>A1. Design - plan - validate CRM training &amp; development sessions.</b>	<ul style="list-style-type: none"> <li>Identifies LOFT training requirements</li> <li>Identifies design &amp; delivery resources</li> <li>Ensures facilities meet requirements</li> <li>Incorporates variety of activities in design (eg, aircraft systems, Flight Management Systems, Air Traffic Control (ATC), weather, aids, radar, cabin crew, public address)</li> <li>Involves other people (eg, trainers, subject experts, regulator, trainees) in design</li> <li>Builds in methods of evaluating training effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Understanding of LOFT concepts and objectives</li> <li>Company &amp; industry LOFT requirements, content, standards</li> <li>LOFT resources &amp; operating procedures</li> <li>Training techniques &amp; methods and their relative advantages</li> <li>Relevant regulatory requirements (eg, JAA, CAA, Equal Opportunities)</li> </ul>
<b>A2. Prepare - develop - validate resources to support learning.</b>	<ul style="list-style-type: none"> <li>Identifies and selects behavioural markers relevant to LOFT</li> <li>Assists in the preparation of LOFT briefing materials</li> </ul>	<ul style="list-style-type: none"> <li>Understanding of LOFT concepts and objectives</li> <li>Simulator procedures and resources</li> <li>Company &amp; industry LOFT requirements, content, standards</li> <li>LOFT resources &amp; operating procedures, including use of video in simulators, where applicable</li> <li>CRM behavioural markers/team skills</li> </ul>
<b>Competence Area B: Deliver Training &amp; Development</b>		
<b>B1. Co-ordinate &amp; integrate CRM training with other elements of flight crew training.</b>	<ul style="list-style-type: none"> <li>Clarifies LOFT in the context of overall training environment</li> <li>Makes links with technical training &amp; Standard Operating Procedures (SOPs) where appropriate</li> <li>Makes links with flight safety, customer service, company policy and other interfaces where appropriate</li> <li>Makes links with similar training in other industries where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>Company &amp; industry &amp; legal CRM training requirements and standards</li> <li>Company technical and operational training procedures and requirements</li> <li>CRM application in other industries using simulation where appropriate</li> </ul>
<b>B2. Create a climate conducive to learning.</b>	<ul style="list-style-type: none"> <li>Establishes CRM credentials (experience, qualifications, reputation, connections), rapport with learners and maintains confidentiality</li> <li>Clarifies training objectives &amp; methods</li> <li>Ascertains &amp; support learners' needs</li> <li>Continuously monitors and responds to changes in climate</li> </ul>	<ul style="list-style-type: none"> <li>Trainees' experience level &amp; expectations</li> <li>Methods of giving information/adult learning styles</li> <li>Potential barriers to learning, including awareness of cross-cultural issues</li> <li>How to put learners at ease</li> </ul>
<b>B3. Instruct - teach - present knowledge.</b>	<ul style="list-style-type: none"> <li>Uses LOFT exercises designed to maximise CRM training objectives</li> <li>Encourages trainees to get involved</li> <li>Clarifies roles, rules and expectations</li> <li>Creates and sustains realism in the detail</li> <li>Gives timely feedback to trainees on outcomes and progress</li> </ul>	<ul style="list-style-type: none"> <li>Adult learning styles</li> <li>Teaching methods</li> <li>Distinguish between process and content outcomes</li> <li>Role modelling/skills modelling techniques</li> <li>Ways to elicit participation in debrief</li> <li>Performance standards</li> <li>Standard operating procedures</li> <li>Use of behavioural markers</li> </ul>
<b>B4. Facilitate learning through demonstration and activities.</b>	<ul style="list-style-type: none"> <li>Uses LOFT exercises designed to maximise CRM training objectives</li> <li>Encourages trainees to get involved</li> <li>Clarifies roles, rules and expectations</li> <li>Gives timely feedback to trainees on outcomes and progress</li> </ul>	<ul style="list-style-type: none"> <li>Adult learning styles</li> <li>Teaching methods</li> <li>Distinguish between process and content outcomes</li> <li>Role modelling/skills modelling techniques</li> <li>Ways to elicit participation in debrief</li> </ul>

## Context 1 - Simulator, Aircraft Training & Line Oriented Flight Training (LOFT) Elements (Cont'd)

UNIT	PERFORMANCE	KNOWLEDGE
<b>Competence Area B: Deliver Training &amp; Development (Cont'd)</b>		
<b>B5. Facilitate individual learning through coaching.</b>	<ul style="list-style-type: none"> <li>Occasionally conducts one-to-one coaching/debrief of crew member as appropriate</li> </ul>	<ul style="list-style-type: none"> <li>How to give constructive debriefing &amp; feedback</li> <li>The difference between coaching and demonstration/instruction</li> </ul>
<b>B6. Facilitate teamwork &amp; group learning.</b>	<ul style="list-style-type: none"> <li>Overtly supportive of CRM principles in word &amp; deed (ie, role models good CRM)</li> <li>Motivating, patient, confident and assertive manner</li> <li>Encourages mutual support and teamwork among trainees</li> <li>Ensures learning opportunities for all trainees</li> <li>Includes teamwork exercises &amp; demonstrations</li> <li>Encourages sharing of individual learning experiences</li> </ul>	<ul style="list-style-type: none"> <li>Group dynamics</li> <li>Group facilitation techniques</li> <li>CRM behavioural markers, team skills</li> <li>How to give constructive debriefing &amp; feedback to teams</li> </ul>
<b>Competence Area C: Review Progress &amp; Assess Achievement</b>		
<b>C1. Monitor &amp; review progress (formative feedback) with learners.</b>	<ul style="list-style-type: none"> <li>Tracks trainees' progress against formal benchmarks</li> <li>Reviews progress with trainees' (individually and/or collectively)</li> <li>Sets new/additional learning objectives</li> <li>Keeps attendance records</li> </ul>	<ul style="list-style-type: none"> <li>CRM behavioural markers, team skills</li> <li>Methods of tracking performance in the simulator</li> <li>How to give constructive feedback to individuals and teams</li> </ul>
<b>C2. Assess candidate performance (summative feedback).</b>	<ul style="list-style-type: none"> <li>Informally (ie, non-evaluative, non-jeopardy) assesses performance against appropriate behavioural markers</li> <li>Assists trainees to assess own individual and team performance</li> </ul>	<ul style="list-style-type: none"> <li>CRM behavioural markers, team skills</li> <li>Methods of tracking performance in the simulator</li> <li>How to give constructive feedback to individuals and teams</li> <li>Uses video playback &amp; debriefing to facilitate learning</li> </ul>
<b>Competence Area D: Continuous Development</b>		
<b>D1. Evaluate CRM training sessions.</b>	<ul style="list-style-type: none"> <li>Tracks trainee performances against agreed criteria</li> <li>Tracks training session processes (punctuality, equipment, met objectives, etc.) against agreed criteria</li> <li>Elicits informal, ongoing feedback from trainees</li> <li>Elicits formal course evaluation from trainees</li> </ul>	<ul style="list-style-type: none"> <li>Methods of assessing and improving LOFT session effectiveness</li> </ul>
<b>D2. Evaluate &amp; develop own practice.</b>	<ul style="list-style-type: none"> <li>Regularly reviews own performance, strengths &amp; development needs</li> <li>Collects feedback about performance from others (trainers, trainees)</li> <li>Attends CRM training conferences &amp; workshops where appropriate</li> <li>Keeps abreast of developments from Regulator, trade press, etc.</li> <li>Maintains a written development record against a development plan</li> </ul>	<ul style="list-style-type: none"> <li>Methods of assessing own performance</li> <li>Methods of improving own performance</li> </ul>

## Context 2 - Base &amp; Line Check Elements

UNIT	PERFORMANCE	KNOWLEDGE
<b>Competence Area A: Plan and Design Training</b>		
<b>A1.</b> <b>Design - plan - validate CRM training &amp; development sessions.</b>	<ul style="list-style-type: none"> <li>Identifies CRM components of competent check performance</li> <li>Provides opportunity for display/demonstration of CRM competency</li> <li>Identifies opportunities for learning from check details</li> <li>Integrates Human Factors principles in check requirements</li> </ul>	<ul style="list-style-type: none"> <li>CRM behavioural markers, team skills</li> </ul>
<b>A2.</b> <b>Prepare - develop - validate resources to support learning.</b>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>Competence Area B: Deliver Training &amp; Development</b>		
<b>B1.</b> <b>Co-ordinate &amp; integrate CRM training with other elements of flight crew training.</b>	<ul style="list-style-type: none"> <li>Reinforces training objectives and behavioural markers of Ground School &amp; LOFT</li> <li>Uses all available resources (other crew members, equipment, ATC, Cabin Crew)</li> <li>Integrates Human Factors issues with technical performance</li> </ul>	<ul style="list-style-type: none"> <li>Company, industry &amp; legal CRM training requirements and standards</li> <li>Company technical training procedures and requirements</li> </ul>
<b>B2.</b> <b>Create a climate conducive to learning.</b>	<ul style="list-style-type: none"> <li>Relevant only to debrief/try again phase of Base Check</li> <li>Establishes CRM credentials (experience, qualifications, reputation, connections), rapport with learners and maintains confidentiality</li> <li>Ensures trainees' awareness of criteria &amp; consequences of CRM assessment</li> </ul>	<ul style="list-style-type: none"> <li>Trainees' experience level, expectations &amp; training records</li> </ul>
<b>B3.</b> <b>Instruct - teach - present knowledge.</b>	<ul style="list-style-type: none"> <li>Provides teaching opportunity during debriefing of check</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>B4.</b> <b>Facilitate learning through demonstration and activities.</b>	<ul style="list-style-type: none"> <li>Relevant only to debrief/try again phase of Base Check</li> <li>Demonstrates CRM skills, knowledge, attitudes during debrief</li> </ul>	<ul style="list-style-type: none"> <li>CRM behavioural markers, team skills</li> <li>How to give constructive debriefing &amp; feedback</li> <li>How to encourage trainees to ask questions &amp; seek advice</li> </ul>
<b>B5.</b> <b>Facilitate individual learning through coaching.</b>	<ul style="list-style-type: none"> <li>Relevant only to debrief phase of checks</li> <li>Conducts a learning orientated debrief, sets learning targets &amp; objectives</li> <li>Coaches trainees in attainment of objectives</li> </ul>	<ul style="list-style-type: none"> <li>How to give constructive debriefing &amp; feedback</li> <li>The difference between coaching &amp; demonstration/instruction</li> </ul>
<b>B6.</b> <b>Facilitate teamwork &amp; group learning.</b>	<ul style="list-style-type: none"> <li>Relevant only to debrief phase of Base Check</li> <li>Debriefs on practical applications of CRM teamwork concepts and skills</li> </ul>	<ul style="list-style-type: none"> <li>CRM behavioural markers, team skills</li> <li>How to encourage trainees to ask questions &amp; seek advice</li> </ul>

**Context 2 - Base & Line Check Elements (Cont'd)**

UNIT	PERFORMANCE	KNOWLEDGE
<b>Competence Area C: Review Progress &amp; Assess Achievement</b>		
<b>C1. Monitor &amp; review progress (formative feedback) with learners.</b>	<ul style="list-style-type: none"> <li>• Tracks trainees' progress against formal benchmarks</li> <li>• Conducts formative assessments based clearly on training objectives</li> <li>• Keeps appropriate records</li> <li>• Reviews progress with trainees (individually and/or collectively)</li> <li>• Sets new/additional learning objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Principles &amp; purposes of reviews</li> <li>• What constitutes valid &amp; reliable information</li> </ul>
<b>C2. Assess candidate performance (summative feedback).</b>	<ul style="list-style-type: none"> <li>• Collects and judges performance evidence against criteria</li> <li>• Collects and judges knowledge evidence</li> <li>• Makes assessment decision and provides feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Company &amp; industry CRM training requirements and standards</li> <li>• Sources of reliable &amp; valid evidence</li> <li>• Methods of collecting evidence</li> <li>• How to give constructive debriefing &amp; feedback</li> <li>• How to encourage trainees to ask questions &amp; seek advice</li> </ul>
<b>Competence Area D: Continuous Development</b>		
<b>D1. Evaluate CRM training sessions.</b>	<ul style="list-style-type: none"> <li>• Where Base Check results in invitation to "try again", relevant formative feedback on CRM at examiner's discretion</li> <li>• Confirms integration of Human Factors and technical objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Methods of assessing and improving Base Check effectiveness</li> </ul>
<b>D2. Evaluate &amp; develop own practice.</b>	<ul style="list-style-type: none"> <li>• Regularly reviews own performance, strengths &amp; development needs</li> <li>• Collects feedback about performance from others (trainers, trainees)</li> <li>• Attends CRM training conferences &amp; workshops where appropriate</li> <li>• Keeps abreast of developments from Regulator, trade press, etc.</li> <li>• Maintains a written development record against a development plan</li> </ul>	<ul style="list-style-type: none"> <li>• Methods of assessing own performance</li> <li>• Methods of improving own performance</li> </ul>

## Context 3 - Ground School/Classroom Training Elements

UNIT	PERFORMANCE	KNOWLEDGE
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**Competence Area A: Plan and Design Training**

<p><b>A1.</b> Design - plan - validate CRM training &amp; development sessions.</p>	<ul style="list-style-type: none"> <li>Identifies ground school training requirements</li> <li>Identifies design &amp; delivery resources</li> <li>Ensures facilities meet requirements</li> <li>Incorporates variety of media, techniques &amp; activities in design</li> <li>Involves other people (eg, trainers, subject experts, regulator, trainees) in design</li> <li>Builds in methods of evaluating training effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Company &amp; industry CRM ground school requirements, content and standards</li> <li>Ground school resources &amp; operating procedures (eg, Overhead Projectors (OHPs), video, projectors)</li> <li>Training techniques &amp; methods and their relative advantages</li> <li>Relevant regulatory requirements (eg, JAA, CAA, Equal Opportunities)</li> <li>Evaluation techniques</li> </ul>
<p><b>A2.</b> Prepare - develop - validate resources to support learning.</p>	<ul style="list-style-type: none"> <li>Identifies &amp; selects CRM learning support material suitable for objectives and for learners (experience, operational environment)</li> <li>Ensures written &amp; visual support materials are clear, accurate, practical &amp; user-friendly</li> <li>Ensures activity &amp; exercise materials are practical &amp; realistic</li> <li>Prepares &amp; presents durable support materials</li> <li>Promptly identifies and rectifies problems</li> </ul>	<ul style="list-style-type: none"> <li>Libraries, databases &amp; repositories of existing materials</li> <li>Copyright/patent legislation</li> <li>Subject experts &amp; networks</li> <li>Company training documentation, standards and protocol</li> </ul>

**Competence Area B: Deliver Training & Development**

<p><b>B1.</b> Co-ordinate &amp; integrate CRM training with other elements of flight crew training.</p>	<ul style="list-style-type: none"> <li>Clarifies CRM in the context of overall training environment</li> <li>Makes links with technical training, SOPs &amp; operating environment where appropriate</li> <li>Makes links with flight safety, customer service, company policy and other interfaces where appropriate</li> <li>Makes links with similar training in other industries where appropriate</li> </ul>	<ul style="list-style-type: none"> <li>Company &amp; industry &amp; legal CRM ground school requirements, content, standards</li> <li>Company technical and operational training procedures and requirements</li> <li>CRM application in other industries where appropriate</li> </ul>
<p><b>B2.</b> Create a climate conducive to learning.</p>	<ul style="list-style-type: none"> <li>Establishes CRM credentials (experience, qualifications, reputation, connections), rapport with learners and maintains confidentiality</li> <li>Clarifies training objectives &amp; methods</li> <li>Ascertains &amp; supports learners' needs</li> <li>Continuously monitors and responds to changes in climate</li> </ul>	<ul style="list-style-type: none"> <li>Trainees' experience level, preferences &amp; expectations</li> <li>Methods of giving information/adult learning styles</li> <li>Potential barriers to learning, including awareness of cross-cultural issues</li> <li>How to put learners at ease</li> </ul>
<p><b>B3.</b> Instruct - teach - present knowledge.</p>	<ul style="list-style-type: none"> <li>Clear, persuasive communicator</li> <li>Good manner &amp; appearance</li> <li>Good presentation skills</li> <li>Organised, systematic lesson plans</li> <li>Clear, accurate presentation materials</li> <li>Actively clarifies understanding with learners</li> </ul>	<ul style="list-style-type: none"> <li>Adult learning styles</li> <li>Teaching methods</li> <li>Distinguish between process and content outcomes</li> <li>How to adapt materials to support learning</li> <li>Presentation techniques</li> <li>Questioning techniques</li> <li>How to use visual aids</li> </ul>
<p><b>B4.</b> Facilitate learning through demonstration and activities.</p>	<ul style="list-style-type: none"> <li>Uses exercises and activities designed to maximise CRM training objectives</li> <li>Encourages trainees to get involved</li> <li>Clarifies roles, rules and expectations</li> <li>Gives timely feedback to trainees on outcomes and progress</li> </ul>	<ul style="list-style-type: none"> <li>Adult learning styles</li> <li>Teaching methods</li> <li>Distinguish between process and content outcomes</li> <li>Role modelling/skills modelling techniques</li> <li>Ways to elicit participation</li> </ul>

## Context 3 - Ground School/Classroom Training Elements (Cont'd)

UNIT	PERFORMANCE	KNOWLEDGE
<b>Competence Area B: Deliver Training &amp; Development (Cont'd)</b>		
<b>B5. Facilitate individual learning through coaching.</b>	<ul style="list-style-type: none"> <li>Recognises and responds to individual differences and problems; persuasive and authoritative</li> </ul>	<ul style="list-style-type: none"> <li>Adult learning styles</li> </ul>
<b>B6. Facilitate teamwork &amp; group learning.</b>	<ul style="list-style-type: none"> <li>Overtly supportive of CRM principles in word &amp; deed (ie, role models good CRM)</li> <li>Motivating, patient, confident and assertive manner</li> <li>Encourages mutual support and teamwork among trainees</li> <li>Ensures learning opportunities for all trainees</li> <li>Includes teamwork exercises &amp; demonstrations</li> <li>Encourages sharing of individual learning experiences</li> </ul>	<ul style="list-style-type: none"> <li>Group dynamics</li> <li>Group facilitation techniques</li> <li>CRM behavioural markers, team skills</li> <li>How to give constructive debriefing &amp; feedback to groups</li> </ul>
<b>Competence Area C: Review Progress &amp; Assess Achievement</b>		
<b>C1. Monitor &amp; review progress (formative feedback) with learners.</b>	<ul style="list-style-type: none"> <li>Tracks trainee progress against formal benchmarks</li> <li>Conducts formative assessments based clearly on training objectives</li> <li>Reviews progress with trainees' (individually and/or collectively)</li> <li>Sets new/additional learning objectives</li> <li>Keeps appropriate records</li> </ul>	<ul style="list-style-type: none"> <li>CRM behavioural markers, team skills</li> <li>How to give constructive debriefing &amp; feedback to individuals &amp; groups</li> </ul>
<b>C2. Assess candidate performance (summative feedback).</b>	<ul style="list-style-type: none"> <li>Agrees &amp; reviews plan for assessing performance</li> <li>Collects and judges performance evidence against criteria</li> <li>Collects and judges knowledge evidence</li> <li>Makes assessment decision and provides feedback</li> </ul>	<ul style="list-style-type: none"> <li>Methods of assessing knowledge and achievement to agreed standards</li> <li>How to give constructive debriefing &amp; feedback to individuals</li> </ul>
<b>Competence Area D: Continuous Development</b>		
<b>D1. Evaluate CRM training sessions.</b>	<ul style="list-style-type: none"> <li>Tracks trainee performances against agreed criteria</li> <li>Tracks training session processes (punctuality, equipment, met objectives, etc.) against agreed criteria</li> <li>Elicits informal, ongoing feedback from trainees</li> <li>Elicits formal course evaluation from trainees</li> </ul>	<ul style="list-style-type: none"> <li>Methods of assessing and improving training session effectiveness</li> </ul>
<b>D2. Evaluate &amp; develop own practice.</b>	<ul style="list-style-type: none"> <li>Regularly reviews own performance, strengths &amp; development needs</li> <li>Collects feedback about performance from others (trainers, trainees)</li> <li>Attends CRM training conferences &amp; workshops where appropriate</li> <li>Keeps abreast of developments from Regulator, trade press, etc.</li> <li>Maintains a written development record against a development plan</li> </ul>	<ul style="list-style-type: none"> <li>Methods of assessing own performance</li> <li>Methods of improving own performance</li> </ul>





Part 2

**Illustrative Outline Guidance Manual for Instructors and Trainees**

**Context 1 - Simulator, Aircraft and LOFT Instructors**

The Following pages elaborate on the Competency Profile for Simulator, Aircraft and LOFT Instructors by describing the Performance and Knowledge requirements in more detail.

For each Performance Element, the required behaviour is described in one or more bullet points, and a brief description is given of the kind of Evidence needed to satisfy a Trainer of Trainers that the Trainee Instructor is competent.

For the Knowledge requirements, descriptions are given of the range of Knowledge required.



## Competence Area: A - Plan & Design Training

### Unit A1: Design/plan/validate CRM training & development sessions.

This unit covers the planning, design and testing (in the sense of a trial or pilot test) of CRM training sessions for pilots as individuals and crews. It focuses particularly on the planning, design and validation of simulator LOFT sessions. These require the co-ordination of a number of different kinds of resources and activities into a realistic scenario which gives the pilot(s) the opportunity to practise their CRM skills. Although most such training will tend to occur in flight simulators, similar training may be designed for pilots during aircraft flying training, in which case aircraft flying instructors will also need these competencies.

#### Performance Elements:

This unit consists of 6 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element A1.1 Identifies LOFT training requirements:-

Plans, designs and tests simulator and/or aircraft training sessions which reflect the training outcomes required by the Regulator and Company

**Evidence:** *Training session plans, description of how they meet requirements.*

#### Element A1.2 Identifies design & delivery resources:-

Thoroughly explores the availability of suitable design aids and resources, including physical equipment, audio-visual, computer-based and textual learning aids, additional human resources, and other resources which may be in the public domain

**Evidence:** *List of resources available for training development.*

#### Element A1.3 Ensures facilities meet requirements:-

Demonstrates that the training facilities fulfil the training objectives described by the Regulator and the Company

**Evidence:** *Resource use plan for training, and description of how training objectives are met.*

#### Element A1.4 Incorporates variety of activities in design (eg, aircraft systems, flight management systems, air traffic control, weather, aids, radar, cabin crew, public address):-

Incorporates a range of inputs ancillary to simulator/aircraft operation which emulate the full range and complexity of the operating environment

**Evidence:** *Plan for session emulates the full range of normal operational complexity.*

#### Element A1.5 Involves other people (e.g., trainers, subject experts, regulator, trainees) in design:-

Involves other people in the design of training sessions who can enhance the professionalism, realism and effectiveness of training

**Evidence:** *Plan for involving others, and reasons for doing so.*

**Element A1.6 Builds in methods of evaluating training effectiveness:-**

Builds in methods of evaluating the effectiveness of their training against accepted criteria, which may include:

- Subjective feedback from trainees
- Assessments of performance against accepted behavioural markers
- Feedback from the line training community, the Company and the Regulator

**Evidence:**

*Plan and materials for evaluating training effectiveness which meet the requirement for regular, methodical evaluation on relevant criteria.*

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Understanding of LOFT concepts and objectives:-**

- Requires a thorough understanding of the aims and objectives of LOFT training as a form of guided self-discovery in solving problems which are only partially reliant on Standard Operating Procedures (SOPs), as opposed to training the SOPs themselves. They must understand both the learning objectives of LOFT and the conditions under which these objectives are most likely to be achieved, insofar as these are different from other forms of training.

**Company & industry LOFT requirements, content, standards:-**

- Should be familiar with both the Company's and the Regulator's philosophy and requirements for LOFT training, including guidance and advice on training content, behavioural markers and performance standards.

**LOFT resources & operating procedures:-**

- Needs to know the kinds of resources that are needed to support the aims and objectives of LOFT training and how to assemble these in professional, realistic and effective training scenarios which mirror the operating environment.

**Training techniques & methods and their relative advantages:-**

- Should understand the differences between instruction, demonstration, facilitation and coaching, how and when to apply them in the interests of the learning objectives of LOFT training.

**Relevant regulatory requirements (eg, JAA, CAA, Equal Opportunities):-**

- Must keep abreast of the changing Regulatory environment and its effect on the place of LOFT in the overall pilot training environment, along with attendant objectives and requirements.

## Competence Area: A - Plan & Design Training

### Unit A2: Prepare/develop/validate resources to support learning

This unit covers the preparation of materials, equipment and locations used for training. In interpreting this unit, it must be borne in mind that different operators have different levels of resource. However Instructors need to ensure that they have sufficient resources at their disposal to create realistic and professional scenarios and meet LOFT training objectives. No assumptions are made here about the minimum level of resource required. Elements of LOFT are currently run successfully in training environments which range from very high technology flight simulators to very low technology classroom and tabletop settings.

#### Performance Elements:

This unit consists of 2 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element A2.1 Identifies and selects behavioural markers relevant to LOFT:-

Shows the links between training session activities and the behavioural markers of CRM which are appropriate to the LOFT environment

**Evidence:** *Creates training opportunities for demonstration of co-operation & teamwork, leadership & management, situational awareness, decision making; lists resources available for training development.*

#### Element A2.2 Assists in the preparation of LOFT briefing materials:-

Shows that they can contribute to the preparation of realistic and professional briefing materials for use before and during the training session

**Evidence:** *One or more examples of briefing materials prepared by Trainee.*

## **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

### **Understanding of LOFT concepts and objectives:-**

- Covered in Unit **A1**

### **Simulator procedures and resources:-**

- Where training involves the use of a flight simulator, must know how to operate the simulator

### **Company & industry LOFT requirements, content, standards:-**

- Covered in Unit **A1**

### **LOFT resources & operating procedures, including use of video in simulators, where applicable:-**

- Covered in Unit **A1**

### **CRM behavioural markers, team skills:-**

- Familiar with the full spectrum of behavioural markers
- Familiar with the uses to which behavioural markers can be put (eg, improve instruction, course content and student performance)
- How to observe others' behaviours
- How to develop active listening skills
- Familiar with principles of group dynamics, including group decision making, problem solving and influence in groups, leadership qualities/styles and followership and the process of team formation

## Competence Area: B - Deliver Training

### Unit B1: Co-ordinate and integrate CRM training with other elements of flight crew training

This unit draws attention to the need for simulator, aircraft and LOFT instructors actively to co-ordinate and integrate LOFT development and delivery, keeping in mind the broader context of flight crew training overall.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element B1.1 Clarifies LOFT in the context of overall training environment:-

Makes explicit the role and purpose of LOFT training within the overall training environment

Explains areas of overlap and non-overlap with other aspects of training (eg, classroom training, recurrent training, line and base checks), with a view to creating an integrated understanding in the minds of trainees

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

#### Element B1.2 Makes links with technical training & Standard Operating Procedures (SOPs) where appropriate:-

Where possible and appropriate, uses LOFT to reinforce the aims and objectives of technical and procedural training

Does not use LOFT training in any way which undermines or conflicts with the employer's technical and procedural training policies and practices

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

#### Element B1.3 Makes links with flight safety, customer service, Company policy and other interfaces where appropriate:-

Where possible and appropriate, uses LOFT training to reinforce links with related parts of the organisation, including flight safety, customer service, Company policy on commercial and other matters.

Does not use LOFT training in any way which undermines or conflicts with the employer's policies and practices in related areas

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

**Element B1.4 Makes links with similar training in other industries where appropriate:-**

Where possible and appropriate, make reference to Human Factors and Crew Resource Management programmes in other safety-critical industries (eg, public transport, power generation) in order to broaden pilots' comprehension of the range and applicability of these concepts and practices

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

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**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Company & industry & legal CRM training requirements and standards:-**

- Thoroughly familiar with Company and industry CRM requirements generally, in order to place LOFT training in its proper context. These requirements change regularly, necessitating that Instructors upgrade their knowledge frequently.

**Company technical and operational training procedures and requirements:-**

- Thoroughly familiar with Company technical and operational training procedures in order that their LOFT training is consistent with, and reinforces, them.

**CRM application in other industries using simulation where appropriate:-**

- Be able to describe one or two illustrations of similar training approaches, preferably in public transport.

## Competence Area: B - Deliver Training

### Unit B2: Create a climate conducive to learning

This unit captures some of the core values of training and development, emphasising interaction with and support for trainees. It pertains to the creation of a climate in which the relationship between Instructors and trainees is conducive to learning.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B2.1 Establishes CRM credentials (experience, qualifications, reputation, connections), rapport with learners and maintains confidentiality:-**

Establishes rapport with trainees by:

- Presenting credentials and experience which earn credibility in the eyes of trainees
- Creating an atmosphere of trust and mutual respect
- Undertaking to preserve the confidentiality of the session
- Creating an environment free of unwanted interruption and distraction (eg, no phones, pagers, unexpected visitors, etc)

**Evidence:** *Reputation in company/industry; CRM pedigree; training materials (speaker's notes, course notes, handouts or overheads) which illustrates these points; performance evidence from training sessions.*

#### **Element B2.2 Clarifies training objectives & methods:-**

Explains the aims and objectives of the session, the training procedure, briefing and debriefing processes

Points out distinctive features of LOFT training compared to other training activities

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points; performance evidence from training sessions.*

#### **Element B2.3 Ascertains & supports learners' needs:-**

Be familiar with trainees' background, experience level and training record

Where appropriate, inquires about individuals specific expectations, development objectives, training needs

Where appropriate, sets specific goals and objectives to meet trainees' goals and expectations

**Evidence:** *Performance evidence from role-play or actual training practice, demonstrating interest and ability in supporting individual and team needs.*



**Element B2.4 Continuously monitors and responds to changes in climate:-**

Monitors trainees' behaviour and comments for any changes in climate which signal obstacles to learning, such as breakdown in trust, misunderstandings, anxiety about assessment, digressions or diversions away from training aims, etc.

Responds to adverse changes in climate by re-establishing trust, re-focusing on learning objectives and methods, addressing anxieties, etc.

**Evidence:** *Performance evidence from role-play or actual training practice, demonstrating sensitivity to changes in climate and ability to influence it beneficially.*

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Trainees' experience level & expectations:-**

- Knowledgeable about trainees' general experience level and their prior expectations based on Company and industry communication

**Methods of giving information/adult learning styles:-**

- Understands the different ways of communicating information and their applicability. Understands adult learning styles and methodologies. (See also Unit **B3**).

**Potential barriers to learning, including awareness of cultural issues:-**

- Appreciates the reasons why learners may not be motivated to learn and the effect the training may have on different cultures.

**How to put learners at ease:-**

- Can recognise when learners are uncomfortable with the training and demonstrates the ability to create an appropriate learning environment.

## Competence Area: B - Deliver Training

### Unit B3: Instruct/teach/present knowledge

This unit is about Instructors' competence in the more direct, "show and tell" methods of instruction, in which the Instructor presents knowledge and information for trainees to assimilate and remember. These skills are more relevant to classroom settings than to LOFT instruction, which is primarily guided self-discovery, but may occasionally be needed to reinforce learning points, and to support the links with technical and procedural training. It contrasts with other instructional styles described in Units **B4** and **B5**.

#### Performance Elements:

This unit consists of 5 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element B3.1 Uses LOFT exercises designed to maximise CRM training objectives:-

Covered in Units **A1** and **A2**

Chooses LOFT scenarios which provide maximum opportunity for CRM learning

Actively reviews learning opportunities and trainees' responses during debriefing

**Evidence:** *Performance evidence from practice training session or role-play.*

#### Element B3.2 Encourages trainees to get involved:-

Invites full and active participation by trainees during session and debrief

Clarifies any uncertainties which may act as an obstacle to participation

**Evidence:** *Performance evidence from practice training session or role-play.*

#### Element B3.3 Clarifies roles, rules and expectations:-

Checks trainees' understanding of the aims of the session and their roles

Clarifies misunderstandings

**Evidence:** *Performance evidence from practice training session or role-play.*

#### Element B3.4 Creates and sustains realism in the session:-

Adopts a serious, professional and relaxed approach to introducing and briefing the session

Reinforces training objectives and stresses the realism of the processes and interactions under training, irrespective of the level of technical realism of the physical training environment

**Evidence:** *Performance evidence from practice training session or role-play.*

#### Element B3.5 Gives timely feedback to trainees on outcomes and progress:-

Avoids unnecessary interruption of LOFT session

Offers comment and observation on performance at end of session, linked to CRM behavioural markers.

**Evidence:** *Performance evidence from practice training session or role-play.*

## Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

### Adult learning styles:-

- Familiar with the concept and identification of adult learning styles and preferences for different forms of instruction (in the event of questionnaires and/or psychometric tests being used, instructors must ensure that they are appropriately qualified to administer, interpret and use them)
- Knowledge of how to meet the practical, action-oriented learning style needs of pilots

### Teaching methods:-

- For LOFT instructors, includes the need to be aware of best practice advice in the areas of:
- Presentation skills
- Demonstration skills
- Supervision of learning activities (including but not confined to the LOFT session itself)
- Coaching
- Giving formative feedback and
- Promoting individual development

### Distinguish between process and content outcomes:-

- Understand the need to observe and assess both **what** was done (by reference to Standard Operating Procedures (SOPs) and other performance guidelines) and **how** it was done (by reference to behavioural markers and other sources of good CRM practice)

### Role modelling/skills modelling techniques:-

- Understand the concepts of role and skills modelling and the influence of good role modelling on trainees

### Ways to elicit participation in debrief:-

- Techniques of questioning and inviting comment/observation on trainees' own performance and outcomes

### Performance standards:-

- Must be knowledgeable about Company and Regulatory standards related to handling performance, SOPs, public address and any other areas in which performance standards serve as a benchmark against which to assess trainees' overall performance, including CRM behavioural markers, team skills and so on.

### Standard Operating Procedures:-

- Covered under previous section

### Use of behavioural markers:-

- Covered in Unit **A2**

## Competence Area: B - Deliver Training

### Unit B4: Facilitate learning through demonstration and activities

This unit concerns the ability to demonstrate/model skills, and to arrange and supervise activities aimed at drawing out learning points from trainees. LOFT training by definition relies heavily on the latter set of skills for its success, although the role of demonstration and modelling of skills is typically confined to the post-LOFT session debrief.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B4.1 Uses LOFT exercises designed to maximise CRM training objectives:-**

Covered in Units **A1**, **A2** and **B3**

Where appropriate, demonstrates alternative actions and responses to reinforce learning points

**Evidence:** *Performance evidence from practice training session or role-play.*

#### **Element B4.2 Encourages trainees to get involved:-**

Covered in Element **B3.2**

#### **Element B4.3 Clarifies roles, rules and expectations:-**

Covered in Element **B3.3**

#### **Element B4.4 Gives timely feedback to trainees on outcomes and progress**

Covered in Element **B3.5**

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Adult learning styles; Teaching methods; Distinguish between process and content outcomes; Role modelling/skills modelling techniques; Ways to elicit participation in debrief:-**

- All covered in Unit **B3**

## Competence Area: B - Deliver Training

### Unit B5: Facilitate individual learning through coaching

Occasionally a LOFT instructor may feel that one-to-one coaching and debriefing of a particular skill or process will facilitate learning in a way that has not been achieved by other means. This is entirely at the discretion of the Instructor, but Instructors should only attempt to coach a trainee when they have been assessed for competence in this area.

#### Performance Elements:

This unit consists of 1 **Performance Element**, which describes what Instructors need to **SHOW** (Performance Criterion):

#### Element B5.1 Conducts one-to-one coaching/debrief of crew member as appropriate:-

Reviews specific aspects of individual trainee's performance using coaching as an additional method of guided self-discovery

Guides trainee to explore different options and draw own conclusions

During coaching, avoids explicit instruction and demonstration

Avoids overt evaluation of trainee's thinking and evaluation processes; guides trainee self-evaluation

**Evidence:** *Performance evidence from practice training session or role-play.*

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### How to give constructive debriefing & feedback:-

- Understands the principles of formative feedback and its role in learning
- Understands the principles of guided self-assessment
- Understands the factors which contribute to the internalisation of and memory for learning points, and the implications of these for giving feedback

#### The difference between coaching and demonstration/instruction:-

- Knows the distinction between directive and non-directive techniques of instruction and the factors which contribute to effective coaching

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## Competence Area: B - Deliver Training

### Unit B6: Facilitate teamwork and group learning

This is one of the most critical units for LOFT instructors, since good teamwork and learning from group experiences underpin much of the CRM concept. LOFT sessions are by definition practice in the fundamentals of teamwork in simulated but realistic operational environments, and Instructors must be able to supervise LOFT sessions in ways which maximise learning on behalf of all participants.

#### Performance Elements:

This unit consists of 6 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B6.1 Overtly supportive of CRM principles in word & deed (ie, role models good CRM):-**

Actively supportive (ie, not cynical) of CRM concept

Integrates CRM principles into training methods, attitudes and values

Shows awareness of how to interpret and demonstrate CRM behavioural markers as an Instructor

**Evidence:** *Performance evidence from practice training session or role-play.*

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#### **Element B6.2 Motivating, patient, confident and assertive manner:-**

Encourages and supports all trainees

Responds to trainees with patience and tolerance even in difficult situations

Confident and self-assured with CRM and LOFT subject matter, Company and Regulatory policy and so on

Communicates clearly and authoritatively his/her role, duties and responsibilities, and carries them out

**Evidence:** *Performance evidence from practice training session or role-play.*

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#### **Element B6.3 Encourages mutual support and teamwork among trainees:-**

Encourages mutual trust and respect among trainees of different backgrounds

Sets out principles of constructive feedback for trainees to follow

Reinforces the fundamental principles of teamwork in the CRM context, and the behavioural markers which identify it

**Evidence:** *Performance evidence from practice training session or role-play.*

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**Element B6.4 Ensures learning opportunities for all trainees:-**

Distributes time and attention fairly among trainees

Uses LOFT scenarios which create opportunities for all trainees

Actively draws out low contributors; actively manages domineering contributors

**Evidence:** *Performance evidence from practice training session or role-play.*

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**Element B6.5 Includes teamwork exercises & demonstrations:-**

Covered in Units **A1** and **A2**

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**Element B6.6 Encourages sharing of individual learning experiences:-**

Covered in Unit **B2**

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**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Group dynamics:-**

- A basic understanding of the principles of group decision making, problem solving, communication, power and influence in groups, leadership and the process of team formation

**Group facilitation techniques:-**

- Knowledge of techniques for facilitating group activity and group learning including but not restricted to knowledge elements in Units **B3**, **B4** and **B5**

**CRM behavioural markers, team skills:-**

- Covered in Unit **A2**

**How to give constructive debriefing and feedback to teams:-**

- Covered in Unit **B5**

## Competence Area: C - Review Progress/Assess Achievement

### Unit C1: Monitor and review progress (formative feedback) with learners

This unit covers the formative assessment of trainees and reviewing their performance with them. It is not about summative (competent/not yet competent) assessment. The monitoring and review of performance is an essential part of the learning process - without it trainees do not learn to distinguish among not yet competent, competent and outstanding performances. Instructors must feel confident of their abilities to accurately and fairly monitor and review trainees' performance.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element C1.1 Tracks trainees' progress against formal benchmarks:-

Accurately observes and records changes in trainees' performance against benchmarks of CRM behavioural markers, within and between LOFT sessions

**Evidence:** *Forms and procedures for tracking performance; evidence from practice training session or role-play.*

#### Element C1.2 Reviews progress with trainees' (individually and/or collectively):-

Covered in Units **B3**, **B4** and **B5**

#### Element C1.3 Sets new/additional learning objectives:-

Translates performance experience and formative feedback into learning aims for the future

Prioritises learning aims with reference to their impact on operational competence and confidence

**Evidence:** *Evidence from practice training session or role-play.*

#### Element C1.4 Keeps attendance records:-

Monitors and records trainee attendance, keeps attendance records

**Evidence:** *Evidence from practice training session or role-play.*

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### CRM behavioural markers, team skills:-

- Covered in Unit **A2**

#### Methods of tracking performance in the simulator:-

- Where appropriate, is knowledgeable about the simulator technology available and how to use it (eg, data capture and audio-visual equipment)

#### How to give constructive feedback to individuals and teams:-

- Covered in Unit **B5**



## Competence Area: C - Review Progress/Assess Achievement

### Unit C2: Assess candidate performance (summative feedback)

This unit must be cautiously interpreted in the Regulatory environment in which the Company operates. At the time of writing this document, LOFT training is a purely instructional exercise, for the purposes of training, not testing. Hence, summative assessment in LOFT settings must be interpreted from the point of view of giving the trainee information on the standard of their performance which will be of assistance in planning their development, not from the point of view of holding them formally accountable for their individual performance. Pilots currently expect that these observations and assessments are confidential, and not a matter of Company record.

#### Performance Elements:

This unit consists of 2 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element C2.1 Informally (ie, non-evaluative, non-jeopardy) assesses performance against appropriate behavioural markers:-**

Interprets and evaluates trainee performance against CRM behavioural markers performance standards in the context of overall performance

Seeks to relate CRM performance to operational safety, effectiveness and efficiency

**Evidence:** *Performance evidence of feedback and assessment skills from practice training session or role-play.*

#### **Element C2.2 Assists trainees to assess own individual and team performance:-**

Covered in Unit **B6**

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**CRM behavioural markers, team skills; Methods of tracking performance in the simulator; How to give constructive feedback to individuals and teams; Uses video playback & debriefing to facilitate learning:-**

- Covered in Units **A2, B5** and **C1**

## Competence Area: D - Continuous Improvement

### Unit D1: Evaluate CRM training sessions

This unit is about ensuring that training and development sessions are systematically reviewed in order to identify potential improvements.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element D1.1 Tracks trainee performances against agreed criteria:-

Covered previously, for the purpose here of ensuring the effectiveness of training content and style

Monitors and responds to data indicating improvements or deterioration in training effectiveness

Takes measures to ensure that the causes of performance enhancement are retained as a standard part of training

Takes measures to ensure that the causes of downward trends in performance standards are corrected

**Evidence:** *Evidence of observation, recording, interpretation and evaluation of performance evidence from CRM trainees during practice training session or role-play.*

#### Element D1.2 Tracks training session processes (punctuality, equipment, met objectives, etc.) against agreed criteria:-

Monitors trends in training session delivery and performance standards other than those directly related to trainee performance, and takes measures to enhance performance

**Evidence:** *Formal procedure and criteria for tracking training session processes.*

#### Element D1.3 Elicits informal, ongoing feedback from trainees:-

Regularly and systematically encourages and registers informal reactions and responses to the quality of the training experience

**Evidence:** *Performance evidence from practice training sessions or role-play.*

#### Element D1.4 Elicits formal course evaluation from trainees:-

Designs, develops and/or adopts some formal method of collecting trainees evaluations of training session and experience (eg, questionnaires)

Regularly analyses formal feedback, interprets it and acts on it to enhance training effectiveness

**Evidence:** *Course evaluation form or process, evidence of ability to analyse and interpret evaluation data.*

### **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### **Methods of assessing and improving LOFT session effectiveness:-**

- Knowledge of various methods for assessing training effectiveness (eg, subjective and objective trainee responses, management/customer/peer evaluation of enhancements to operational performance, questionnaires, focus groups etc).

## Competence Area: D - Continuous Improvement

### Unit D2: Evaluate and develop own practice

This unit pertains to self-improvement, another fundamental value of CRM generally. Instructors in most organisations will have to bear a large proportion of the responsibility for the continuing development of their expertise, credibility and effectiveness, keeping up with developments and seeking to improve their skills and knowledge as authoritative, trustworthy practitioners.

#### Performance Elements:

This unit consists of 5 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element D2.1 Regularly reviews own performance, strengths & development needs:-

Obtains systematic feedback on trainees' perceptions of Instructor effectiveness from trainees and other relevant sources (eg, those who work with trainees, managers) & accepts constructive criticism

Incorporates into personal feedback process and development plan, relevant performance elements from this competency profile

**Evidence:** *Evidence of observation, recording, interpretation and evaluation of evidence of own performance from CRM trainees during practice training sessions or actual training sessions.*

#### Element D2.2 Collects feedback about performance from others (trainers, trainees):-

Covered in Element **D2.1**

#### Element D2.3 Attends CRM training conferences & workshops where appropriate:-

Shows interest in keeping up to date with CRM developments, practices in other Companies, Regulator and industry views

**Evidence:** *Personal portfolio of professional enhancement activities and up to date literature, notices and so on.*

#### Element D2.4 Keeps abreast of developments from Regulator, trade press, etc.:-

Covered in Element **D2.3**

#### Element D2.5 Maintains a written development record against a development plan:-

Keeps a documentary personal development plan based on feedback in Elements **D2.1** and **D2.2**

Keeps a logbook of efforts and activities matched to development needs, with progress and outcomes noted

**Evidence:** *Personal portfolio of activities and achievements relating to development plan.*

## Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

### Methods of assessing own performance

- Methods and rationale for writing a personal development plan based on performance feedback
- Knows how to observe, record, interpret and evaluate evidence on own performance against a competency profile
- Knows how to prioritise and set realistic development objectives

### Methods of improving own performance:-

- Knows how to co-ordinate and prioritise development opportunities with development plan
- Tracks changes in own performance and measures progress in development plan



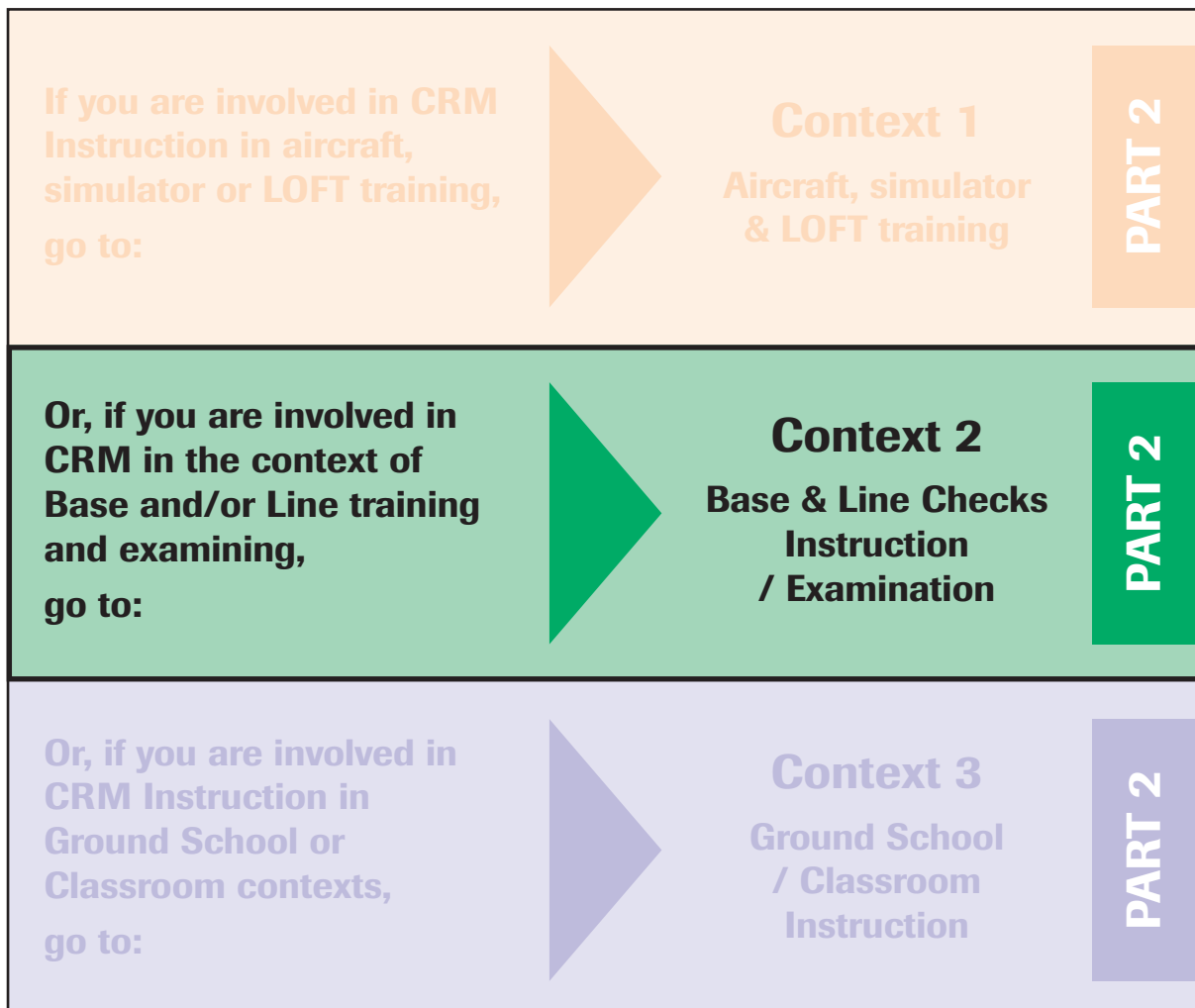
## Context 2 - Base & Line Checks Instructors/Examiners

The following pages elaborate on the Competency Profile for Base & Line Check Instructors/Examiners by describing the Performance and Knowledge requirements in more detail.

**Note that the Base check is the same as the Proficiency check in ICAO/JAR-OPS.**

For each Performance Element, the required behaviour is described in one or more bullet points, and a brief description is given of the kind of Evidence needed to satisfy a Trainer of Trainers that the Trainee Instructor/Examiner is competent.

For the Knowledge requirements, descriptions are given of the range of Knowledge required.



## Competence Area: A - Plan & Design Training

### Unit A1: Design/plan/validate CRM training & development sessions.

This unit covers the planning, design and validation (in the sense of a trial or pilot evaluation) of CRM training sessions for flight crew. It focuses particularly on the planning, design and validation of base and, where appropriate, line checks. Although the base check can take place in a flight simulator, the line check will always be completed in the aircraft; thus, both simulator and aircraft flying instructors/examiners will need these competencies.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element A1.1 Identifies CRM components of competent check performance:-

Plans, designs and validates simulator and/or aircraft check sessions which reflect the training outcomes and proficiencies required by the Regulator and Company, where applicable

**Evidence:** *Check session plans, description of how they meet requirements. Record outcomes.*

#### Element A1.2 Provides opportunity for display/demonstration of CRM competency:-

During brief and debrief of base and/or line checks

**Evidence:** *Plan for check emulates the full range of normal operational complexity (in simulator or aircraft) and emergencies.*

#### Element A1.3 Identifies opportunities for learning from check details:-

During debrief of base and/or line checks

**Evidence:** *Performance during debrief of checks candidates.*

#### Element A1.4 Integrates Human Factors principles in check requirements:-

Plans, designs and validates HF principles in check details where appropriate

**Evidence:** *Performance during debrief of checks candidates; encourages self-critique of CRM issues.*

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

#### CRM behavioural markers, team skills:-

- Familiar with the full spectrum of behavioural markers
- Familiar with the uses to which behavioural markers can be put (eg, improve instruction, course content and student performance)
- How to observe others' behaviours
- How to develop active listening skills
- Familiar with principles of group dynamics, including group decision making, problem solving and influence in groups, leadership qualities/styles and followership and the process of team formation



**Competence Area: A - Plan & Design Training**

**Unit A2: Prepare/develop/validate resources to support learning**

This unit is not applicable in the Base & Line Checks context.

## Competence Area: B - Deliver Training

### Unit B1: Co-ordinate and integrate CRM training with other elements of flight crew training

This unit draws attention to the need for base and line checks instructors/examiners to keep in mind the broader context of flight crew training overall.

#### Performance Elements:

This unit consists of 3 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B1.1 Reinforces training objectives and behavioural markers of Ground School & LOFT:-**

During the checks briefing and debriefing, demonstrates awareness of Company training (e.g., classroom training, recurrent training, LOFT), with a view to creating an integrated understanding in the minds of check candidates

**Evidence:** *Material used in preparing for checking candidates which illustrates these points. Behaviours that are discussed in classroom are actually demonstrated.*

#### **Element B1.2 Uses all available resources (other crew members, equipment, ATC, Cabin Crew):-**

Where feasible and appropriate, uses the checks regime to reinforce the aims and objectives of technical and procedural training

**Evidence:** *Material used in preparing for checking candidates which illustrates these points. Behaviours that are discussed in classroom are actually demonstrated.*

#### **Element B1.3 Integrates Human Factors issues with technical performance:-**

Where possible and appropriate during the debrief, uses the checks regime to show the links between technical and non-technical skills performance

**Evidence:** *Material used in preparing for checking candidates which illustrates these point. Behaviours that are discussed in classroom are actually demonstrated.*

### **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### **Company, industry & legal CRM training requirements and standards:-**

- Thoroughly familiar with Company and regulator CRM requirements. These requirements can change in response to critical areas in HF identified by Company or industry research, necessitating that Instructors/Examiners upgrade their knowledge frequently.

#### **Company technical and operational training procedures and requirements:-**

- Thoroughly familiar with Company technical and operational training procedures, including those in LOFT (if used), in order that the Base and Line Checks are consistent with, and reinforce, them.

## Competence Area: B - Deliver Training

### Unit B2: Create a climate conducive to learning

This unit is relevant only to the briefing and debriefing/try again phase of the Base Check and captures some of the core values of training and development, emphasising interaction with and support for trainees. It pertains to the creation of a climate in which the relationship between Instructors/Examiners and trainees/checks candidates is conducive to learning.

#### Performance Elements:

This unit consists of 2 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B2.1 Establishes CRM credentials (experience, qualifications, reputation, connections), rapport with learners and maintains confidentiality:-**

Establishes rapport with trainees by:

Presenting credentials and experience which establish credibility in the eyes of checks candidates

Creating an atmosphere of trust and mutual respect

Integrating CRM principles into training methods, attitudes and values

Undertaking to preserve the confidentiality of the behavioural issues raised so that candidate reputation is not damaged by rumour or hearsay

**Evidence:** *Reputation in company/industry; CRM pedigree. Also checks preparation which illustrates these points, including the trainer's manner in establishing rapport and creating empathy with checks candidates. Actual behaviour of candidate indicates acceptance of instructor's credibility.*

#### **Element B2.2 Ensures trainees' awareness of criteria & consequences of CRM assessment:-**

Be familiar with candidates' background, experience level and training record

Ensures candidates are aware that non-technical skills performance contributes to the **overall** assessment and hence poor CRM performance could lead to further training before returning to line flying

Ensures candidates are familiar with the behavioural markers with which they will be assessed

Where appropriate, inquires about individuals specific expectations, development objectives, training needs

Where appropriate, sets specific goals and objectives to meet checks candidates' goals and expectations

**Evidence:** *Performance evidence from debriefs, demonstrating interest and ability in supporting individual and team needs.*

### **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

#### **Trainees' experience level, expectations & training records:-**

- Knowledgeable about candidates' general experience level and their prior expectations based on Company and industry communication. Familiarity with checks candidates' training records and previous performances.

## Competence Area: B - Deliver Training

### Unit B3: Instruct/teach/present knowledge

This unit is about Instructors/Examiners competence in the more direct, “show and tell” methods of instruction (which may be necessary during the base check in the context of recurrent training), in which the Instructor/Examiner presents knowledge and information for candidates to assimilate and remember. These skills are more relevant to classroom settings than to Base and Line Checks, but may occasionally be needed to reinforce learning points made during the briefing and debriefing of either check, and to support the links with technical and procedural training. It contrasts with other instructional styles described in Units **B4** and **B5**.

#### Performance Elements:

This unit consists of 1 **Performance Element**, which describes what Instructors need to **SHOW** (Performance Criteria):

#### Element B3.1 Provides teaching opportunity during debriefing of check:-

Covered in Unit **A1**

Actively seeks learning opportunities provided by checks candidates’ responses during briefing and debriefing

**Evidence:** *Performance evidence from check briefing and/or debriefing, as appropriate .*

#### Background Knowledge:

**Background knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** is not applicable.

## Competence Area: B - Deliver Training

### Unit B4: Facilitate learning through demonstration and activities

This unit is relevant only to the briefing and debriefing/try again phase of the Base Check and concerns the ability to demonstrate/model skills, and to arrange and supervise activities aimed at drawing out learning points from checks candidates.

#### Performance Elements:

This unit consists of 1 **Performance Element**, which describes what Instructors need to **SHOW** (Performance Criteria):

#### Element B4.1 Demonstrates CRM skills, knowledge, attitudes during debrief:-

Covered in Units **A1** and **B3**

Where appropriate, demonstrates alternative actions and responses to reinforce learning points

**Evidence:** *Performance evidence from debriefing.*

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

#### CRM behavioural markers, team skills:-

- All covered in Unit **A1**

#### How to give constructive debriefing & feedback:-

- Understands the principles of formative feedback and its role in learning
- Understands the principles of guided self-assessment
- Understands the factors which contribute to the internalisation of and memory for learning points, and the implications of these for giving feedback

#### How to encourage trainees to ask questions & seek advice:-

- Techniques of questioning and inviting comment/observation on checks candidates' own performance and outcomes

## Competence Area: B - Deliver Training

### Unit B5: Facilitate individual learning through coaching

**This unit is only relevant to the debrief phase of checks.** A checks instructor/examiner may feel that one-to-one coaching and debriefing of a particular skill or process will facilitate learning in a way that has not been achieved by other means. This is entirely at the discretion of the instructors/examiners who should have been assessed for competence in this area, before attempting to coach checks candidates.

#### Performance Elements:

This unit consists of 2 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element B5.1 Conducts a learning-orientated debrief, sets learning targets & objectives:-

Guides checks candidates to explore different options and draw own conclusions

Avoids overt evaluation of checks candidates' thinking and evaluation processes; guides candidate self-evaluation

**Evidence:** *Performance evidence from base or line check debriefing.*

#### Element B5.2 Coaches trainees in attainment of objectives:-

Reviews specific aspects of individual checks candidate performance using coaching as an additional method of guided self-discovery

During coaching, avoids explicit instruction and demonstration

**Evidence:** *Performance evidence from base or line check debriefing.*

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

#### How to give constructive debriefing & feedback:-

- All covered in Unit **B4**

#### The difference between coaching and demonstration/instruction:-

- Knows the distinction between directive and non-directive techniques of instruction and the factors which contribute to effective coaching



## Competence Area: B - Deliver Training

### Unit B6: Facilitate teamwork and group learning

**This unit is relevant only to the debriefing phase of the Base Check, and to the briefing in certain recurrent training scenarios,** and is one of the most critical units for checks instructors, since good teamwork and learning from group experiences underpin much of the CRM concept. Flight operations, whether in simulated environments or in the aircraft, are by definition practice in the fundamentals of teamwork in operational environments, and Instructors/Examiners must be able to maximise learning on behalf of all participants.

#### Performance Elements:

This unit consists of 1 **Performance Element**, which describes what Instructors need to **SHOW** (Performance Criteria):

#### **Element B6.1 Debriefs on practical applications of CRM teamwork concepts and skills:-**

Integrates CRM principles into operational team environment of base checks

**Evidence:** *Performance evidence from base check.*

---

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

#### **CRM behavioural markers, team skills:-**

- Covered in Unit **A1**

#### **How to encourage trainees to ask questions & seek advice:-**

- Covered in Unit **B4**

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## Competence Area: C - Review Progress/Assess Achievement

### Unit C1: Monitor and review progress (formative feedback) with learners

This unit covers the formative assessment of checks candidates and reviewing their performance with them. It is not about summative (competent/not yet competent) assessment. The monitoring and review of performance is an essential part of the learning process - without it trainees do not learn to distinguish between not yet competent, competent and outstanding performances. Instructors/Examiners must feel confident of their abilities to monitor and review, accurately and fairly, checks candidates' performance.

#### Performance Elements:

This unit consists of 5 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element C1.1 Tracks trainees' progress against formal benchmarks:-

Accurately observes and records changes in candidates' performance against benchmarks of CRM behavioural markers

**Evidence:** *Evidence from forms and procedures for tracking performance, e.g., behavioural markers benchmarks and base or line check documentation; also evidence of observation, recording, interpretation and evaluation of performance evidence from checks candidates.*

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#### Element C1.2 Conducts formative assessments based clearly on training objectives:-

Encourages candidates full and active participation during debriefing

Provides accurate feedback of checks candidates' performance and progress against company training objectives

**Evidence:** *Performance evidence from base or line check debriefing.*

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#### Element C1.3 Keeps appropriate records:-

Monitors candidates' attendance, keeps attendance records

**Evidence:** *From base or line check documentation.*

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#### Element C1.4 Reviews progress with trainees (individually and/or collectively):-

Covered in Elements **B3.1**, **B5.1** & **B5.2**

Encourages candidates

Full and active participation during debriefing

**Evidence:** *Performance evidence from base or line check debriefing.*

---

**Element C1.5 Sets new/additional learning objectives:-**

Translates performance experience and formative feedback into learning aims for the future

Prioritises learning aims with reference to their impact on operational competence and confidence

**Evidence:** *Evidence from base or line check debriefing and records/documentation.*

---

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

**Principles and purposes of reviews:-**

- To ensure candidates understanding
- To elicit candidates knowledge of regulatory and company CRM requirements
- To ensure candidates ability to learn from the experience for future operations and checks

**What constitutes valid and reliable information:-**

- Performance against behavioural markers
- Performance against other performance indicators
- Performance against company Standard Operating Procedures (SOPs)

## Competence Area: C - Review Progress/Assess Achievement

### Unit C2: Assess candidate performance (summative feedback)

This unit must be cautiously interpreted in the Regulatory environment in which the Company operates. Summative assessment must be interpreted from the point of view of giving the checks candidates information on the standard of their performance which will be of assistance in planning their development.

#### Performance Elements:

This unit consists of 3 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element C2.1 Collects and judges performance evidence against criteria:-

Interprets and evaluates checks candidate performance against CRM behavioural markers performance standards in the context of overall performance

Seeks to relate CRM performance to operational safety, effectiveness and efficiency

**Evidence:** *Performance evidence of feedback and assessment skills from checks debriefing.*

#### Element C2.2 Collects and judges knowledge evidence:-

Assesses checks candidates' CRM knowledge as appropriate to the actual check events

**Evidence:** *Performance evidence of feedback and assessment skills from checks debriefing.*

#### Element C2.3 Makes assessment decision and provides feedback:-

Seeks to justify assessment decision by giving examples of good and poor CRM performance, as appropriate.

**Evidence:** *Performance evidence of feedback and assessment skills from checks debriefing.*

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

#### Company and industry CRM training requirements and standards

- Covered in Unit **B1**

#### Sources of reliable and valid evidence

- Performance demonstrated by checks candidates against behavioural markers

#### Methods of collecting evidence

- Record against behavioural markers template
- Feedback from other crew members during checks debriefing

#### How to give constructive debriefing and feedback

- Covered in Unit **B4**

#### How to encourage trainees to ask questions and seek advice

- Covered in Unit **B4**

## Competence Area: D - Continuous Improvement

### Unit D1: Evaluate CRM training sessions

**This unit is only relevant where a base check results in an invitation to “try again”** and is about ensuring that training and development sessions are systematically reviewed in order to identify potential improvements.

#### Performance Elements:

This unit consists of 2 **Performance Elements**, which describe what Instructors/Examiners need to **SHOW** (Performance Criteria):

#### Element D1.1 Where the Base Check results in an invitation to “try again”, relevant formative feedback on CRM at examiner’s discretion:-

Ensures the effectiveness of training content and style

Monitors and responds to data indicating improvements or deterioration in training effectiveness

Takes measures to ensure that the causes of performance enhancement are retained as a standard part of training

Takes measures to ensure that the causes of downward trends in performance standards are corrected

**Evidence:** *Evidence from observation, recording, interpretation and evaluation of performance evidence from CRM trainees during base or line check.*

#### Element D1.2 Confirms integration of Human Factors and technical objectives:-

Monitors effectiveness of integrating human factors and technical issues during checks debriefs and takes measures to enhance performance where shortfalls identified

**Evidence:** *Evidence from checks debriefs, including those from other trainers, and data sources, such as company questionnaires, etc.*

#### Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:

#### Methods of assessing and improving Check effectiveness:-

- Knowledge of various methods for assessing training effectiveness (eg, subjective and objective checks candidates’ responses, management/customer/peer evaluation of enhancements to operational performance, questionnaires, focus groups, industry “best practice”, etc).

## Competence Area: D - Continuous Improvement

### Unit D2: Evaluate and develop own practice

This unit pertains to self-improvement, another fundamental value of CRM generally. Instructors/Examiners in most organisations will have to bear a large proportion of the responsibility for the continuing development of their expertise, credibility and effectiveness, keeping up with developments and seeking to improve their skills and knowledge as authoritative, trustworthy practitioners.

#### Performance Elements:

This unit consists of 5 **Performance Elements**, which describe what Instructors/Examiners need to **SHOW** (Performance Criteria):

#### **Element D2.1 Regularly reviews own performance, strengths & development needs:-**

Obtains systematic feedback on checks candidates' perceptions of Instructor/ Examiner effectiveness from candidates and other relevant sources (eg, those who work with trainees, managers) & accepts constructive criticism.

Incorporates into personal feedback process and development plan, relevant performance elements from this competency profile

**Evidence:** *Evidence of observation, recording, interpretation and evaluation of evidence of own performance from CRM trainees' reactions during base or line check.*

#### **Element D2.2 Collects feedback about performance from others (trainers, trainees):-**

Covered in Element **D2.1**

#### **Element D2.3 Attends CRM training conferences & workshops where appropriate:-**

Shows interest in keeping up to date with CRM developments, practices in other Companies, Regulator and industry views

**Evidence:** *Personal portfolio of professional enhancement activities and up to date literature, notices and so on.*

#### **Element D2.4 Keeps abreast of developments from Regulator, trade press, etc.:-**

Covered in Element **D2.3**

**Element D2.5 Maintains a written development record against a development plan:-**

Keeps a documentary personal development plan based on feedback in Elements **D2.1** and **D2.2**

Keeps a logbook of efforts and activities matched to development needs, with progress and outcomes noted

**Evidence:** *Personal portfolio of activities and achievements relating to development plan.*

---

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors/Examiners need to **KNOW** in the following areas:-

**Methods of assessing own performance**

- Methods and rationale for writing a personal development plan based on performance feedback
- Knows how to observe, record, interpret and evaluate evidence on own performance against a competency profile
- Knows how to prioritise and set realistic development objectives

**Methods of improving own performance:-**

- Knows how to co-ordinate and prioritise development opportunities with development plan
- Tracks changes in own performance and measures progress in development plan





## Context 3 - Ground School/Classroom Training Instructors

The Following pages elaborate on the Competency Profile for ground school Instructors by describing the Performance and Knowledge requirements in more detail.

For each Performance Element, the required behaviour is described in one or more bullet points, and a brief description is given of the kind of Evidence needed to satisfy a Trainer of Trainers that the Trainee Instructor is competent.

For the Knowledge requirements, descriptions are given of the range of Knowledge required.



## Competence Area: A - Plan & Design Training

### Unit A1: Design/plan/validate CRM training & development sessions

This unit covers the planning, design and validation (in the sense of a trial or pilot evaluation) of CRM training sessions for pilots as individuals and crews. It focuses particularly on the planning, design and validation of ground school sessions. These require that pilots be given information on CRM theories, experiences and research; begin to develop CRM skills; and are encouraged to adopt appropriate attitudes to support their achievement of CRM standards.

#### Performance Elements:

This unit consists of 6 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element A1.1 Identifies ground school training requirements:-

Plans and designs ground school training sessions which reflect the training outcomes required by the Regulator and Company

**Evidence:** *Training session plans, description of how they meet requirements.*

#### Element A1.2 Identifies design & delivery resources:-

Thoroughly explores the availability of suitable design aids and resources, including physical equipment, audio-visual, computer-based and textual learning aids, additional human resources, and other resources which may be in the public domain

**Evidence:** *List of resources available for training development.*

#### Element A1.3 Ensures facilities meet requirements:-

Demonstrates that the training facilities fulfil the training objectives described by the Regulator and the Company

**Evidence:** *Resource use plan for training, and description of how training objectives are met.*

#### Element A1.4 Incorporates variety of media, techniques & activities in design:-

Ensures that an appropriate variety of activities to support trainees to learn effectively (eg, participative exercises, video recording of role plays) is incorporated in the design

**Evidence:** *Session plans use different techniques with description of how they achieve training objectives.*

#### Element A1.5 Involves other people (eg, trainers, subject experts, regulator, trainees) in design:-

Involves other people in the design of training sessions who can enhance the professionalism, realism and effectiveness of training

**Evidence:** *Plan for involving others, and reasons for doing so.*

**Element A1.6 Builds in methods of evaluating training effectiveness:-**

Builds in methods of validating the effectiveness of training against accepted criteria, which may include:

- Subjective feedback from trainees
- Assessments of performance against accepted behavioural markers
- Feedback from the line training community, the Company and the Regulator

**Evidence:**

*Plan and materials for evaluating training effectiveness which meet the requirement for regular, methodical evaluation on relevant criteria.*

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Company & industry CRM ground school requirements, content, standards:-**

- Should be familiar with both the Company's and the Regulator's philosophy and requirements for ground school training, including guidance and advice on training content, behavioural markers and performance standards.

**Ground school resources & operating procedures:-**

- Needs to know the kinds of resources (Overhead Projectors (OHPs), video, projectors) that are needed to support the aims and objectives of training and how to assemble these in professional, realistic and effective training scenarios which mirror the operating environment.

**Training techniques & methods and their relative advantages:-**

- Should understand the differences between instruction, demonstration, facilitation and coaching, how and when to apply them in the interest of the learning objectives.

**Relevant regulatory requirements (eg, JAA, CAA, Equal Opportunities):-**

- Must keep abreast of the changing Regulatory environment and its effect on the place of CRM ground school in the overall pilot training environment, along with attendant objectives and requirements.

**Evaluation techniques:-**

- Is aware of evaluation tools that accurately identify the effectiveness of training initiatives and are user-friendly and practical for use by both learners and trainers.

## Competence Area: A - Plan & Design Training

### Unit A2: Prepare/develop/validate resources to support learning

This unit covers the preparation of materials, equipment and locations used for training. In interpreting this unit, it must be borne in mind that different operators have different levels of resource. However Instructors need to ensure that they have sufficient resources at their disposal to create realistic and professional scenarios and meet ground school training objectives. No assumptions are made here about the minimum level of resource required.

#### Performance Elements:

This unit consists of 5 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element A2.1 Identifies & selects CRM learning support material suitable for objectives and for learners (experience, operational environment):-**

Identifies tools that achieve the training objectives which are appropriate for the learners' environment and experience.

**Evidence:** *Description of the purposes of training tools and their applicability.*

#### **Element A2.2 Ensures written and visual support materials are clear, accurate, practical and user friendly:-**

Shows that they can contribute to the preparation of realistic and professional training material for use before and during the training session

**Evidence:** *One or more examples of training materials.*

#### **Element A2.3 Ensures activity and exercise materials are practical and realistic:-**

Uses training materials that are simple to manage yet provide the environment for trainees to learn.

**Evidence:** *Experience of materials achieving the objectives.*

#### **Element A2.4 Prepares & Presents durable support materials:-**

Shows that they can contribute to the preparation of durable training material for use before and during the training session

**Evidence:** *One or more examples of training materials.*

#### **Element A2.5 Promptly identifies and rectifies problems:-**

When activities or materials are not working, shows that they can identify why and take action to improve the session.

**Evidence:** *Examples of where this had occurred, the identified cause and the resultant solution.*

## Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

### Libraries, databases and repositories of existing materials:-

- Is aware of where appropriate training materials for CRM training can be found and understands how to access them

### Copyright/patent legislation:-

- Understands intellectual property legislation and is familiar with what steps to take in order to use protected material

### Subject experts & networks:-

- Is aware of those who have the experience or knowledge of particular subject areas and is involved in communication with them.

### Company training documentation, standards and protocol:-

- Is familiar with the layout of company training documentation and procedures and methods of delivery.

## Competence Area: B - Deliver Training

### Unit B1: Co-ordinate and integrate CRM training with other elements of flight crew training

This unit draws attention to the need for ground school instructors actively to keep in mind the broader context of flight crew training overall.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element B1.1 Clarifies CRM in the context of overall training environment:-

Makes explicit the role and purpose of CRM training within the overall training environment

Explains areas of overlap and non-overlap with other aspects of training (eg, LOFT, recurrent training, line and base checks), with a view to creating an integrated understanding in the minds of trainees

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

#### Element B1.2 Makes links with technical training, SOPs & operating environment where appropriate:-

Where possible and appropriate, uses training to reinforce the aims and objectives of technical and procedural training

Does not use the training in any way which undermines or conflicts with the employer's technical and procedural training policies and practices

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

#### Element B1.3 Makes links with flight safety, customer service, Company policy and other interfaces where appropriate:-

Where possible and appropriate, uses the training to reinforce links with related parts of the organisation, including flight safety, customer service, Company policy on commercial and other matters.

Does not use the training in any way which undermines or conflicts with the employer's policies and practices in related areas

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

**Element B1.4 Makes links with similar training in other industries where appropriate:-**

Where possible and appropriate, makes reference to Human Factors and Crew Resource Management programmes in other safety-critical industries (eg, public transport, power generation) in order to broaden pilots' comprehension of the range and applicability of these concepts and practices

**Evidence:** *Training materials (speaker's notes, course notes, handouts or overheads) which illustrate these points.*

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Company & industry & legal CRM ground school training requirements, content and standards:-**

- Thoroughly familiar with Company and industry CRM requirements generally, in order to place the training in its proper context. These requirements change regularly, necessitating that Instructors upgrade their knowledge frequently.

**Company technical and operational training procedures and requirements:-**

- Familiar with Company technical and operational training procedures in order that their training is consistent with, and reinforces, them.

**CRM application in other industries where appropriate:-**

- Be able to describe one or two illustrations of similar training approaches, preferably in public transport.

## Competence Area: B - Deliver Training

### Unit B2: Create a climate conducive to learning

This unit captures some of the core values of training and development, emphasising interaction with and support for trainees. It pertains to the creation of a climate in which the relationship between Instructors and trainees is conducive to learning.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B2.1 Establishes CRM credentials (experience, qualifications, reputation, connections), rapport with learners and maintains confidentiality:-**

Establishes rapport with trainees by:

Presenting credentials and experience which earn credibility in the eyes of trainees

Creating an atmosphere of trust and mutual respect

Undertaking to preserve the confidentiality of the session

Creating an environment free of unwanted interruption and distraction (eg, no phones, pagers, unexpected visitors, etc)

**Evidence:** *Reputation in company/industry; CRM pedigree; performance evidence from training sessions.*

#### **Element B2.2 Clarifies training objectives & methods:-**

Explains the aims and objectives of the session, the training procedure, briefing and debriefing processes

Points out distinctive features of ground school training compared to other training activities

**Evidence:** *Performance evidence from training sessions.*

#### **Element B2.3 Ascertains & supports learners' needs:-**

Be familiar with trainees' background, experience level and training record

Where appropriate, inquires about individuals specific expectations, development objectives, training needs

Where appropriate, sets specific goals and objectives to meet trainees' goals and expectations

**Evidence:** *Performance evidence from role-play or actual training practice, demonstrating interest and ability in supporting individual and team needs.*



**Element B2.4 Continuously monitors and responds to changes in climate:-**

Monitors trainees' behaviour and comments for any changes in climate which signal obstacles to learning, such as breakdown in trust, misunderstandings, anxiety about assessment, digressions or diversions away from training aims, etc.

Responds to adverse changes in climate by re-establishing trust, re-focusing on learning objectives and methods, addressing anxieties, etc.

**Evidence:** *Performance evidence from role-play or actual training practice, demonstrating sensitivity to changes in climate and ability to influence it beneficially.*

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Trainees' experience level, preferences & expectations:-**

- Knowledgeable about trainees' general experience level and their prior expectations based on Company and industry communication

**Methods of giving information/adult learning styles:-**

- Understands the different ways of communicating information and their applicability. Understands adult learning styles and methodologies. (See also Unit **B3**).

**Potential barriers to learning, including awareness of cultural issues:-**

- Appreciates the reasons why learners may not be motivated to learn and the effect the training may have on different cultures.

**How to put learners at ease:-**

- Can recognise when learners are uncomfortable with the training and demonstrates the ability to create an appropriate learning environment.

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## Competence Area: B - Deliver Training

### Unit B3: Instruct/teach/present knowledge

This unit is about Instructors' competence in the more direct, "show and tell" methods of instruction, in which the Instructor presents knowledge and information for trainees to assimilate and remember. It contrasts with other instructional styles described in Units **B4** and **B5**.

#### Performance Elements:

This unit consists of 6 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element B3.1 Clear persuasive communicator:-

Presents material and thoughts clearly and understandably.

**Evidence:** *Performance evidence from training session.*

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#### Element B3.2 Good manner and appearance:-

Displays a manner and appearance that is appropriate for trainees.

**Evidence:** *Performance evidence from practice training session or role-play.*

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#### Element B3.3 Good presentation skills:-

Presents material in a manner that makes it easy to understand.

**Evidence:** *Performance evidence from practice training session or role-play.*

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#### Element B3.4 Organised, systematic lesson plans:-

Organises sessions so that objectives are achieved with a well thought out process.

**Evidence:** *Performance evidence from practice training session or role-play.*

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#### Element B3.5 Clear, accurate presentation materials:-

Materials presented in a manner that makes them easy to understand.

**Evidence:** *Performance evidence from practice training session.*

---

#### Element B3.6 Actively clarifies understanding with learners:-

Regularly checks understanding through open questioning and exercises.

**Evidence:** *Performance evidence from practice training session or role-play.*

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## Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

### Adult learning styles:-

- Familiar with the concept and identification of adult learning styles and preferences for different forms of instruction (in the event of questionnaires and/or psychometric tests being used, instructors must ensure that they are appropriately qualified to administer, interpret and use them)
- Knowledge of how to meet the practical, action-oriented learning style needs of pilots

### Teaching methods:-

- Includes the need to be aware of best practice advice in the areas of:
  - Presentation skills
  - Demonstration skills
  - Facilitation skills
  - Supervision of learning
  - Coaching
  - Giving formative feedback and
  - Promoting individual development

### Distinguish between process and content outcomes:-

- Understand the need to observe and assess both **what** was done (by reference to Standard Operating Procedures (SOPs) and other performance guidelines) and **how** it was done (by reference to behavioural markers and other sources of good CRM practice)

### How to adapt materials to support learning:-

- Understands that materials can be used in different ways to support the training objectives.

### Presentation techniques:-

- Techniques for delivering material using a wide range of media and in differing environments

### Questioning techniques:-

- Understands the different forms of questioning and when to use them

### How to use visual aids:-

- Knowledge of the range of visual aids and their applicability.

## Competence Area: B - Deliver Training

### Unit B4: Facilitate learning through demonstration and activities

This unit concerns the ability to demonstrate/model skills, and to arrange and supervise activities aimed at drawing out learning points from trainees.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B4.1 Uses exercises and activities designed to maximise CRM training objectives:-**

Covered in Units **A1**, **A2** and **B3**

Where appropriate, demonstrates alternative actions and responses to reinforce learning points

**Evidence:** *Performance evidence from practice training session or role-play.*

#### **Element B4.2 Encourages trainees to get involved:-**

Invites full and active participation by trainees during session and debrief

Clarifies any uncertainties which may act as an obstacle to participation

**Evidence:** *Performance evidence from practice training session or role-play.*

#### **Element B4.3 Clarifies roles, rules and expectations:-**

Checks trainees' understanding of the aims of the session and their role

Clarifies misunderstandings

**Evidence:** *Performance evidence from practice training session or role-play.*

#### **Element B4.4 Gives timely feedback to trainees on outcomes and progress:-**

Avoids unnecessary interruption of sessions

Offers comment and observation on performance at end of session, linked to CRM behavioural markers

**Evidence:** *Performance evidence from practice training session or role-play.*

## Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

### **Adult learning styles; Teaching methods; Distinguish between process and content outcomes:-**

- All covered in Unit **B3**

### **Role modelling/skills modelling techniques:**

- Understand the concepts of role and skills modelling and the influence of good role modelling on trainees

### **Ways to elicit participation in debriefing:-**

- Techniques of questioning and inviting comment/observation on trainees' own performance and outcomes

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## Competence Area: B - Deliver Training

### Unit B5: Facilitate individual learning through coaching

Occasionally an instructor may feel that one-to-one coaching and debriefing of a particular skill or process will facilitate learning in a way that has not been achieved by other means. This is entirely at the discretion of the Instructor, but Instructors should only attempt to coach a trainee when they have been assessed for competence in this area.

#### Performance Elements:

This unit consists of 1 **Performance Element**, which describes what Instructors need to **SHOW** (Performance Criterion):

#### **Element B5.1 Recognises and responds to individual differences and problems:-**

Reviews specific aspects of individual trainee performance using coaching as an additional method of guided self-discovery

Guides trainee to explore different options and draw own conclusions

During coaching, avoids explicit instruction and demonstration

Avoids overt evaluation of trainee's thinking and evaluation processes; guides trainee self-evaluation

Persuasive and authoritative

**Evidence:** *Performance evidence from practice training session or role-play.*

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### **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### **Adult learning styles:**

- Covered in Unit **B3**

## Competence Area: B - Deliver Training

### Unit B6: Facilitate teamwork and group learning

This is one of the most critical units for instructors, since good teamwork and learning from group experiences underpin much of the CRM concept. Ground school sessions can be used to run teamworking exercises, and Instructors must be able to supervise sessions in ways which maximise learning on behalf of all participants.

#### Performance Elements:

This unit consists of 6 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element B6.1 Overtly supportive of CRM principles in word & deed (ie, role models good CRM):-**

Actively supportive (ie, not cynical) of CRM concept

Integrates CRM principles into training methods, attitudes and values

Shows awareness of how to interpret and demonstrate CRM behavioural markers as an Instructor

Behaves in accordance with CRM behavioural standards

**Evidence:** *Performance evidence from practice training session or role-play.*

#### **Element B6.2 Motivating, patient, confident and assertive manner:-**

Encourages and supports all trainees

Responds to trainees with patience and tolerance even in difficult situations

Confident and self-assured with CRM subject matter, Company and Regulatory policy and so on

Communicates clearly and authoritatively his/her role, duties and responsibilities, and carries them out

**Evidence:** *Performance evidence from practice training session or role-play.*

#### **Element B6.3 Encourages mutual support and teamwork among trainees:-**

Encourages mutual trust and respect among trainees of different backgrounds

Sets out principles of constructive feedback for trainees to follow

Reinforces the fundamental principles of teamwork in the CRM context, and the behavioural markers which identify it

**Evidence:** *Performance evidence from practice training session or role-play.*



**Element B6.4 Ensures learning opportunities for all trainees:-**

Distributes time and attention fairly among trainees

Uses scenarios which create opportunities for all trainees

Actively draws out low contributors; actively manages domineering contributors

**Evidence:** *Performance evidence from practice training session or role-play.*

**Element B6.5 Includes teamwork exercises & demonstrations:-**

Covered in Units **A1** and **A2**

**Element B6.6 Encourages sharing of individual learning experiences:-**

Covered in Unit **B2**

**Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

**Group dynamics:-**

- A basic understanding of the principles of group decision making, problem solving, communication, power and influence in groups, leadership and the process of team formation

**Group facilitation techniques:-**

- Knowledge of techniques for facilitating group activity and group learning including but not restricted to knowledge elements in Units **B3** and **B4**

**CRM behavioural markers, team skills:-**

- Familiar with the full spectrum of behavioural markers
- Familiar with the uses to which behavioural markers can be put (eg, improve instruction, course content and student performance)
- How to observe others' behaviours
- How to develop active listening skills
- Familiar with principles of group dynamics, including group decision making, problem solving and influence in groups, leadership qualities/styles and followership and the process of team formation

**How to give constructive debriefing and feedback to groups:-**

- Understands the principles of formative feedback and its role in learning
- Understands the principles of guided self-assessment
- Understands the factors which contribute to the internalisation of and memory for learning points, and the implications of these for giving feedback

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**Competence Area: C - Review Progress/Assess Achievement**
**Unit C1: Monitor and review progress (formative feedback) with learners**

This unit covers the formative assessment of trainees and reviewing their performance with them. It is not about summative (competent/not yet competent) assessment. The monitoring and review of performance is an essential part of the learning process - without it trainees do not learn to distinguish between not yet competent, competent and outstanding performances. Instructors must feel confident of their abilities to monitor and review accurately and fairly trainees' performance.

**Performance Elements:**

This unit consists of 5 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

**Element C1.1 Tracks trainees' progress against formal benchmarks:-**

Accurately observes and records changes in trainees' performance against benchmarks of CRM behavioural markers, within and between sessions

**Evidence:** *Forms and procedures for tracking performance; evidence from practice training session or role-play.*

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**Element C1.2 Conducts formative assessments based clearly on training objectives:-**

Where appropriate assesses trainees' progress in order to adjust training process

**Evidence:** *Forms and procedures for tracking performance; evidence from practice training session or role-play.*

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**Element C1.3 Reviews progress with trainees (individually and/or collectively):-**

Covered in Elements **B3.6**, **B4.4** and Unit **B5**

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**Element C1.4 Sets new/additional learning objectives:-**

Translates performance experience and formative feedback into learning aims for the future

Prioritises learning aims with reference to their impact on operational competence and confidence

**Evidence:** *Evidence from practice training session or role-play.*

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**Element C1.5 Keeps appropriate records:-**

Monitors and records trainee attendance, keeps attendance records

**Evidence:** *Evidence from practice training session or role-play.*

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### **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### **CRM behavioural markers, team skills:-**

- Covered in Unit **B6**

#### **How to give constructive debriefing and feedback to individuals and groups:-**

- Covered in Unit **B6**

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**Competence Area: C - Review Progress/Assess Achievement**
**Unit C2: Assess candidate performance (summative feedback)**

This unit must be cautiously interpreted in the Regulatory environment in which the Company operates. At the time of writing this document, ground school training is a purely instructional exercise, for the purposes of training, not testing. Hence, summative assessment in ground school must be interpreted from the point of view of giving the trainee information on the standard of their performance which will be of assistance in planning their development, not from the point of view of holding them formally accountable for their individual performance. Pilots currently expect that these observations and assessments are confidential, and not a matter of Company record.

**Performance Elements:**

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

**Element C2.1 Agrees and reviews plan for assessing performance:-**

Clarifies with trainees how their progress will be reviewed

**Evidence:** *Performance evidence of feedback and assessment skills from practice training session or role play, including video playback, where available.*

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**Element C2.2 Collects and judges performance evidence against criteria:-**

Interprets and evaluates trainee performance against CRM behavioural markers performance standards in the context of overall performance

Seeks to relate CRM performance to operational safety, effectiveness and efficiency

**Evidence:** *Performance evidence of feedback and assessment skills from practice training session or role play, including video playback, where available.*

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**Element C2.3 Collects and judges knowledge evidence:-**

Establishes appropriate testing materials to confirm knowledge acquisition

**Evidence:** *Performance evidence of feedback and assessment skills from practice training session or role play, including video playback, where available.*

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**Element C2.4 Makes assessment decision and provides feedback:-**

Establishes trainee performance against tested criteria and provides appropriate feedback

Gives examples of good and poor CRM performance, as appropriate

**Evidence:** *Performance evidence of feedback and assessment skills from practice training session or role play, including video playback, where available.*

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### **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### **Methods of assessing knowledge and achievement to agreed standards:-**

- Is familiar with tools and techniques for assessing trainees that are clear, accurate, honest and consistent.

#### **How to give constructive debriefing and feedback to individuals:-**

- Covered in Unit **B6**.

## Competence Area: D - Continuous Improvement

### Unit D1: Evaluate CRM training sessions

This unit is about ensuring that training and development sessions are systematically reviewed in order to identify potential improvements.

#### Performance Elements:

This unit consists of 4 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### Element D1.1 Tracks trainee performances against agreed criteria:-

Covered previously, for the purpose here of ensuring the effectiveness of training content and style

Monitors and responds to data indicating improvements or deterioration in training effectiveness

Takes measures to ensure that the causes of performance enhancement are retained as a standard part of training

Takes measures to ensure that the causes of downward trends in performance standards are corrected

**Evidence:** *Evidence of observation, recording, interpretation and evaluation of performance evidence from CRM trainees during practice training session or role-play.*

#### Element D1.2 Tracks training session processes (punctuality, equipment, met objectives, etc.) against agreed criteria:-

Monitors trends in training session delivery and performance standards other than those directly related to trainee performance, and takes measures to enhance performance

**Evidence:** *Formal procedure and criteria for tracking training session processes.*

#### Element D1.3 Elicits informal, ongoing feedback from trainees:-

Regularly and systematically encourages and registers informal reactions and responses to the quality of the training experience

**Evidence:** *Performance evidence from practice training sessions or role-play.*

#### Element D1.4 Elicits formal course evaluation from trainees:-

Designs, develops and/or adopts some formal method of collecting trainees evaluations of training session and experience (eg, questionnaires)

Regularly analyses formal feedback, interprets it and acts on it to enhance training effectiveness

**Evidence:** *Course evaluation form or process, evidence of ability to analyse and interpret evaluation data.*

### **Background Knowledge:**

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

#### **Methods of assessing and improving training session effectiveness:-**

- Knowledge of various methods for assessing training effectiveness (eg, subjective and objective trainee responses, management/customer/peer evaluation of enhancements to operational performance, questionnaires, focus groups, etc)

## Competence Area: D - Continuous Improvement

### Unit D2: Evaluate and develop own practice

This unit pertains to self-improvement, another fundamental value of CRM generally. Instructors in most organizations will have to bear a large proportion of the responsibility for the continuing development of their expertise, credibility and effectiveness, keeping up with developments and seeking to improve their skills and knowledge as authoritative, trustworthy practitioners.

#### Performance Elements:

This unit consists of 5 **Performance Elements**, which describe what Instructors need to **SHOW** (Performance Criteria):

#### **Element D2.1 Regularly reviews own performance, strengths & development needs:-**

Obtains systematic feedback on trainees' perceptions of Instructor effectiveness from trainees and other relevant sources (eg, those who work with trainees, managers) & accepts constructive criticism

Incorporates into personal feedback process and development plan, relevant performance elements from this competency profile

**Evidence:** *Evidence of observation, recording, interpretation and evaluation of evidence of own performance from CRM trainees during practice training sessions or actual training sessions.*

#### **Element D2.2 Collects feedback about performance from others (trainers, trainees):-**

Covered in Element **D2.1**

#### **Element D2.3 Attends CRM training conferences & workshops where appropriate:-**

Shows interest in keeping up to date with CRM developments, practices in other Companies, Regulator and industry views

**Evidence:** *Personal portfolio of professional enhancement activities and up to date literature, notices and so on.*

#### **Element D2.4 Keeps abreast of developments from Regulator, trade press, etc.:-**

Covered in Element **D2.3**

#### **Element D2.5 Maintains a written development record against a development plan:-**

Keeps a documentary personal development plan based on feedback in Elements **D2.1** and **D2.2**

Keeps a logbook of efforts and activities matched to development needs, with progress and outcomes noted

**Evidence:** *Personal portfolio of activities and achievements relating to development plan.*



## Background Knowledge:

Competence in this unit also requires **Background Knowledge** (Knowledge Evidence) which describes what Instructors need to **KNOW** in the following areas:

### Methods of assessing own performance

- Methods and rationale for writing a personal development plan based on performance feedback
- Knows how to observe, record, interpret and evaluate evidence on own performance against a competency profile
- Knows how to prioritise and set realistic development objectives

### Methods of improving own performance:-

- Knows how to co-ordinate and prioritise development opportunities with development plan
- Tracks changes in own performance and measures progress in development plan



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