

# SINGLE PILOT CRM

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# Single Pilot CRM





# Single Pilot CRM Forum

- General Information.
- Why “Forum”
- Agenda

# Why?

- Statistics
  - ◆ The majority of accidents have human factors as a main causal or contributing factor.
  - ◆ The outcome of a technical failure can often be ameliorated by good CRM.

# Requirements

- JAR-OPS 1 Amendment 3 (NPA 16)
  - ◆ Initial training shall be conducted by at least one trainer acceptable to the Authority (1.943(c))
  - ◆ Personnel conducting recurrent training are suitably qualified to integrate elements of CRM into this training (1.965(a)(iv))

# Requirements

- JAR-OPS 1 Amendment 3 (NPA 16)
  - ◆ Flight crew must be assessed on their CRM skills in accordance with a methodology acceptable to the Authority and published in the Operations Manual. Appendix 1 to JAR-OPS 1.965(b)(3)-Line Checks)

# Requirements

- Similar requirements incorporated into JAR-OPS 3 for Helicopters on 1 April 2004 (NPA 27)
- NPA OPS 24 which includes CRM requirements for cabin crew now incorporated into JAR-OPS 1 (Amendment 7)

# Where are we now

- TRE/TRI(A) accreditation to be complete 30 September 04
- Ground School CRM Instructors – no grandfather rights after 30 September 04
- Aeroplane Operators to have an assessment system in place by 30 September 04



# Where are we now

- Requirements apply to SPA and MPA aeroplane operators but attention has been focused on MPA. SPA now being addressed.
- Requirements now apply to helicopters, both single and multi-pilot.
- As with aeroplanes, the CAA will give helicopter operators time for full compliance.

# Single Pilot CRM

- Does CRM apply to single pilot ops?
- If so-can we sell it?
- Ian Burns will attempt(!) to answer these questions.

# Single Pilot CRM

- The **language** may be new -  
but CRM is not!
- Aim is to develop good non-  
technical skills.
- CRM performance can now be  
measured against a recognised  
yardstick



# Single Pilot CRM

- CRM is not mumbo jumbo-it is about effective behaviour that enhances flight safety

# Single Pilot CRM

- A skilled CRM will effortlessly weave non-technical and technical feedback into an effective debrief
- Often the root cause of a technical error is actually a non-technical error.



# Single Pilot CRM

- Even when alone at the controls **we are not operating in isolation.**

# Single Pilot CRM

- Does CRM apply to single pilot ops?
  - ◆ Yes it does!!
- If so-can we sell it?
  - ◆ Yes we can-if we use it properly!!



# Single Pilot CRM

- CAP 737 Chapter 9



# Single Pilot CRM

- The CRM Advisory Panel formed a working group to look at the relevance of CRM to the single pilot.
- It looked at each category and element of CRM and concluded that most related equally to single and multi-pilot operations, and

# Single Pilot CRM

- That some elements were more critical for the single pilot operations than for multi-pilot operations.
- These are covered in the new chapter to CAP 737 and this is intended to be a brief summary.

# Communication

- Communication is vital single pilot operations.
- Not with other pilot but with
  - ◆ ATC
  - ◆ Passengers
  - ◆ Operations
  - ◆ Engineers

# Communication

- Factors affecting communication
  - ◆ High Workload
  - ◆ Fatigue
  - ◆ Distractions
  - ◆ Other priorities

# Workload Management

- Critical to single pilot operations.
- No opportunity to share tasks.
  - ◆ Pre-flight planning
  - ◆ Prioritisation
  - ◆ Anticipation to maintain situation awareness and an even workload.
  - ◆ Stick to SOPs

# Error Management

- Hot topic.
- No cross checking.
- Alert points
  - ◆ Distractions from normal operations
  - ◆ New and untried situations
  - ◆ Deviation from SOPs
  - ◆ Gut feeling.

# Decision Making

- This is the subject of a presentation by Tony Head from Cranfield University.
- Basically the same as multi-pilot but without the help of an additional crew member.

# Situation Awareness

- Also the subject of a later presentation.
- Statistics indicate that loss of situational awareness in departure and approach is a high risk area.



# Commercial Pressure

- Commercial pressures greater in single pilot operations because;
  - ◆ Operator may also be the owner and “boss”
  - ◆ No other crew member to share the responsibility.
  - ◆ Direct contact with passengers who may be persuasive.

# Implementation

- Instructors-Ground School
  - ◆ Requirements as Standards Document 29, but
    - ★ CRMIs can teach both aeroplane and helicopter crews provided they have the relevant experience.
    - ★ Helicopter operators may continue with present arrangements until May 2006.

# Implementation

- Instructors-Simulator/Base
  - ◆ Requirements as Standards Document 29, but
    - ★ Helicopter operators may continue with present arrangements until May 2006.
    - ★ The above will also apply to aeroplane operators of single engine piston aircraft.

# Implementation

- Instructors-Simulator/Base
  - ◆ Requirements as Standards Document 29, therefore
    - ★ All TRE/CREs revalidating their authority will have to be accredited as CRMIs as from 01 May 2005.

# Implementation

- Instructors-Line
  - ◆ Requirements as Standards Document 29, therefore
    - ★ All new Line Trainers will have to be accredited as CRMIs as from 01 May 2005.
    - ★ Existing trainers will have to be accredited by 1 May 2006
    - ★ This is a company appointment.



# Charges

# Thank you for your attention.

- ANY QUESTIONS?

