Session 6

Transitioning from Traditional
to
Competency-based Training

Overview

- What it means for operator to transition

- Role of State CAA in transition to CBTA

- Implementation plan

- Link to operator's SMS

- Importance of scenario-based training

- Developing scenarios for training

- Q&A

- Practical exercise #1

What it Means for Operator to Transition

- Why transition?
  – tailored to operator's needs / issues
  – not "*one size fits all*" approach

- Work involved
  – transition planning
  – resources

- Importance of ISD methodology

- Challenges
  – instructor/evaluator reliability
 – data collection and analysis, etc.

Role of the State (CAA)

- State & operator should have discussion & consultation
  - regarding transition to CBTA

- Formally agree to transition process
  - define steps to follow to maintain regulatory compliance

- Transition should be conducted with approval and in collaboration with State

Implementation Plan

- Operators need to develop transition plan
  - What? Who? Why? When? Where?

- Defines series of steps to maintain regulatory compliance during transition

- Include availability & allocation of resources needed for transition

- Address challenges associated with CBTA
  - such as instructor/evaluator reliability and data collection & analysis

- Plan can become basis for surveillance
  - spells out operator's processes and commitments
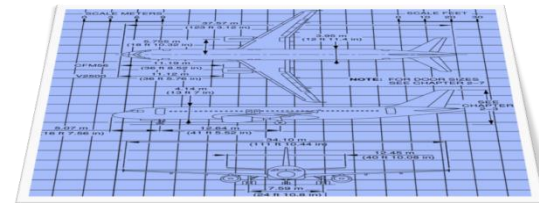
Phased Implementation

- Transitioning to competency-based training is resource intensive
  - operator must develop & implement programme
  - State needs to approve & oversee

- Phased approach is recommended
  - clear deliverables at end of each phase
  - approval of phase before progressing to next

- Initial transition may be limited
  - operators may start with recurrent training programme
    - based on resources available
    - then gradually expand to other types of training
  - other operators may find it easier to start with initial training
    - JTA needs to be done in both cases

CBTA & Performance-based Regulations

- Foundation of CBTA is performance-based regulations
  - which differ from traditional, prescriptive approach
  - specify "what" to achieve but not "how"

- Main shifts
  - regulations as risk controls
  - teaching (hours) vs. learning (competencies)

- Programmed (prescriptive) vs. planned hours

Link to Operator's SMS

Safety Risk Management

"Design"

Safety Assurance

"Evaluation"

Link to Operator's SMS (2)

- SMS should be pre-requisite for CBTA transition

- Data-driven approach
  - data from operations, training, etc.
  - auditing
  - continuous improvement

- State should require operator to adequately document training programme
  - in line with SMS requirements
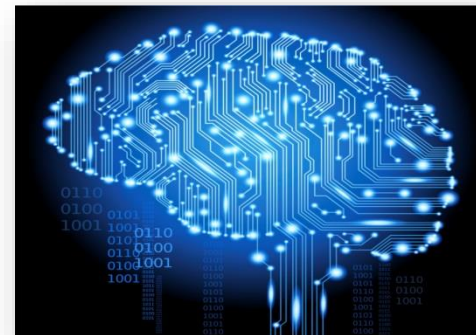
Communicating the Transition

- As part of transition, develop communication plan
  - explains what is CBTA
  - how it differs from traditional approach
  - what to expect

- Disseminated formally to all cabin crew
  - crew memos on communication boards
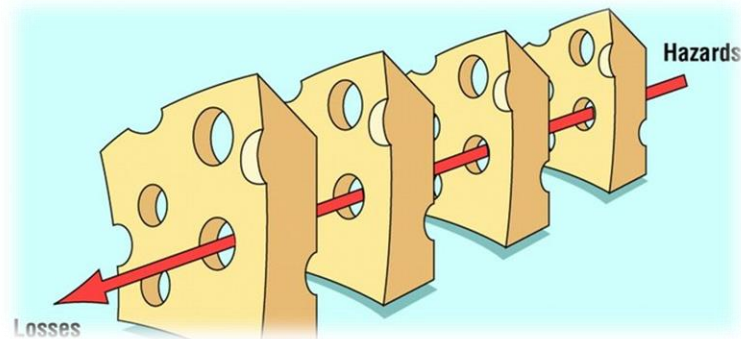 - recurrent training
  - etc.

Scenario-based Training

Importance of Scenario-based Training

- **Why?**
  - simulate realistic flight conditions when human error occurs
  - look at chain of errors that can cause accidents
  - builds cabin crew confidence

- **Integration of competencies**
  - performing as team vs individual

Developing Scenarios for Training

- Operator should use its own occurrences to build scenarios
  - important link with SMS and data-driven approach

- As an alternative, operator should look to occurrences from Industry
  - same or similar aircraft type
  - occurrence location
  - type of operation
  - significance of event

Developing Scenarios for Training (2)

- Using operator's own occurrences adds value to training experience
  - occurred on operator's aircraft
  - based on actual events

- Cabin crew will feel connection to training
  - becomes more meaningful

Developing scenarios for training

- **Defining key elements**
  - objectives of exercise
  - location where training will be conducted
  - all training aids required during scenario
  - conditions of scenario communicated to trainees
  - participation in scenario
  - trigger(s) of scenario
  - distracter(s) to increase its complexity

Other Points to Consider

- Incorporating competencies (e.g. CRM)

- Capturing different roles

- Guidance for instructors/evaluators

- Focus testing scenario

Defining Objectives

- **What will be trained or assessed?**
  - applying operator procedures
  - operating equipment or systems
  - applying of competencies
    - communication, workload management, etc.
  - demonstrating understanding of CCOM
    - e.g. use of emergency checklist

- **If all of the above are selected**
  - all need to occur during the scenario

- **To enable instructor/evaluator to assess if objectives & PC are met**

Defining Objectives

- Single scenario can be used to evaluate multiple items
  - to a certain extent
  - e.g. fire fighting and injury treatment

- Avoid overloading scenario with too many objectives
  - difficult to execute and assess

Defining the Location

- Once objectives of scenario have been defined, decide where exercise will take place

  – Can scenario be executed in classroom?

  – Does it involve hands-on exercise?

  – Will it be simulated exercise in cabin training device?

  – Will it take place on board a actual aircraft?

Defining the Location (2)

- Select preferred training media used to execute scenario

- Consideration should be given to operator's facilities
  - to ensure equivalent standard of delivery in any simulated environment
  - including
    - training aids
    - training devices

- Establish contingency plan
  - in case cabin training devices become inoperative
  - to prevent rescheduling training sessions

Use of Training Aids

- ## Define what training aids are needed
  - create list of all training aids required for exercise

- ## Training aids include
  - safety and emergency equipment
  - props (e.g. portable smoke simulator, infant dolls)
  - briefing cards
  - service equipment

Use of Training Aids (2)

- Training aids need to be consistent and reliable

- Operator can only build scenarios based on available training aids

- Ensure all necessary training aids are available and functional prior to commencing exercise

- Lack of training aids during exercise can result in trainees performing inadequately
  - e.g. is equipment that should be in CTD purposely missing?

- Instructors/evaluators should reset equipment after exercise

Defining Conditions of Scenario

- Define conditions pertinent to scenario

- Produce outline of conditions
  - aircraft type in which scenario is taking place
  - route (departure & destination cities)
  - assigned crew positions
  - phase of flight at time simulation begins

- Provide description of flight to trainees prior to commencing
  - e.g. wide body aircraft, 3 hrs. in flight, crew is in aisle picking up after service

- Training device & aids should support conditions to provide realistic environment
  - provides full context to trainees so that conditions make sense
  - e.g. if occurrence is in cruise flight, doors are armed…

Important Notes on Conditions

- Conditions at beginning of scenario are only information that should be shared with trainees

- They should not be informed of rest of the scenario

- Element of surprise is meant to create realistic scenario
  - in normal line ops, crew will face unexpected situations
  - and will need to react adequately

Determining Participation

- How many trainees can actively participate?
  - Active: trainees as operating crew members
  - Passive: trainees acting as passengers or observing exercise

- Evaluate how many people are needed to support scenario
  - active participants must have clear tasks to accomplish
  - comparable amount of activity for each trainee

- Class size is key in developing scenario

- Scenario should be built to match operator's typical minimum crew
  - Consider how many people need to support scenario (e.g. firefighting SOP)

Defining Triggers & Distracters

- **Trigger** is method by which scenario begins
  - e.g. passenger alerts crew of another passenger being ill

- **Distracters** are planned actions by "passengers" that distract crew from performing specific tasks
  - e.g. passenger is concerned over missing connection due to medical diversion and becomes unruly

- Do not incorporate excessive or multiple related variables distracters
  - to create realistic training scenario without overloading trainee

Defining Triggers & Distracters (2)

- Distracters can allow for increased workload
  - and better distribution of tasks among trainees

- Distracters allow operator can combine occurrences
  - e.g. in-flight smoke and anxious "passengers" due to it

- They also allow for additional tasks
  - set of trainees fight fire, while another manages anxious passengers

- Operator can cover more than one topic in exercise
  - may also result in reduction in time required for training

Defining Triggers & Distracters (3)

- Consistency is needed for both triggers & distracters

- Instructor or trainee selected to act scenario must know
  – **What** to do
  – **When** to do it

- Provide clear instructions to each participant playing role
  – e.g. use of cue cards with information

Triggers & Crew Responses

- Triggers must be very specific
  - require cabin crew to take action
  - define what happens and when

- Consistency of triggers is important to trigger same response when scenario is repeated with different participants
  - so every trainee's performance can be observed & assessed under same conditions

Focus Testing Scenario

- Operator should focus test scenario
  - prior to integrating it into training programme
  - to find potential problems

- Obtain volunteers to run through scenario
  - not knowing what to expect

- Determine potential improvement or modifications

Length of Scenario

- Time depends on time needed by cabin crew to carry out specific tasks
    - being trained or assessed

- Scenario should last 10-15 min

- Additional 15 min can be reserved for
    - setting up scenario
    - debriefing

- Participants should be given opportunity to conduct walk around in CTD
    - to familiarize themselves with environment

- Approximately 60 minutes in total time for entire session

Points to Remember

- Role of State CAA in transition to CBTA

- Data-driven approach and link to SMS

- Key elements to include in a scenario

- Importance of realism and using existing occurrences

- Benefits of focus testing scenarios

Practical Exercise #1

Developing a scenario for competency-based training

Context

- You are part of training programme developers' team at XYZ Airlines

- Operator conducts scheduled passenger flights
  - on both domestic and international routes

- Fleet is composed of A320 and B737-700 aircraft

- Both aircraft types are operated with minimum of 4 cabin crew

Context (Cont'd)

- Operator has two training centers (in different cities)
  - ABC and DEF

- Center at ABC
  - Emergency evacuation training device, capable to simulating smoke and motion
  - Static cabin training device, without smoke simulating capabilities

- Center at DEF
  - Static cabin training device, without smoke simulating capabilities
  - Classroom equipped with some rows aircraft seats and mock-ups of parts of aircraft galleys

- Both centers are equipped with portable smoke generators

Context (Cont'd)

- Operator is transitioning to competency-based training

- Will include scenario-based training during recurrent training next year

- Class sized will be 20 trainees

- Training department tasked with developing scenarios to complement classroom and computer-based training

Group Activity

- A facilitator will be appointed and will coordinate the discussion
    - Summary of discussion will be written on flip charts

- A member of the group will brief on their findings in a plenary session

Your Tasks

1. Develop summary of training scenario using brainstorming techniques
    a) describe scenario used to train cabin crew members
    b) incorporate sub-tasks & competencies
        • based on Appendix A (use flip chart)

2. Complete Summary Table (Appendix B, Table 01) for the scenario
    a) objectives of exercise
    b) location where training will be conducted
    c) all training aids required during scenario
    d) conditions of scenario communicated to trainees
    e) participation in scenario (active/passive)
    f) trigger(s) of scenario
    g) distracter(s) to increase its complexity

Your Task (Cont'd)

- When defining objective, include specific info of what will be evaluated
  - application of operator procedures (which ones?)
  - operation of specific equipment or systems (list them)
  - application of competencies (select 1 or 2)
    - communication, workload management, etc.
  - demonstration of understanding of CCOM or other docs

Your Task (Cont'd)

- Define following as part of scenario description

  1. expected distribution of tasks among cabin crew during scenario

  2. number and role of instructors in scenario

  3. for each trigger and distracter

     - who is it assigned to, how and when will they occur in scenario

     - what is desired crew response to each of them

     - how will consistency in triggers/distracters be provided when scenario is repeated by other trainees

- Complete Tables 02 to 04 in Appendix B

Table 01 – Summary Table

Objectives	
Location	
Training aids	
Conditions of Scenario	
Participation	
Triggers	
Distracters	

Table 02 – Details of Scenario

Positions of the cabin crew members (to be assigned by the instructor)	
Expected distribution of tasks amongst active participants	
Number and role of instructors in scenario	

Table 03 – Details of Trigger

Trigger	
Who is it assigned to?	
How will it occur in the scenario?	
When will it occur in the scenario?	
What is the desired cabin crew response?	
How will consistency in trigger be provided when the scenario is repeated by other trainees?	

Table 04 – Details of Distractor

Distractor	
Who is it assigned to?	
How will it occur in the scenario?	
When will it occur in the scenario?	
What is the desired crew response?	
How will consistency in trigger be provided when the scenario is repeated by other trainees?	