



ICAO

SAFETY

Session 6

Transitioning from Traditional to
Competency-based Training



Overview

- What it means for operator to transition
- Communicating the transition
- Prescriptive vs. performance-based regulations
- Link to operator's SMS
- Importance of scenario-based training
- Developing scenarios for training
- Practical exercise #1
- Q&A



What it Means for Operator to Transition

- Why transition?
 - Tailored to operator’s needs
 - Targets operational issues
 - Not “*one size fits all*” approach
- Work involved
 - Transition planning
 - Resources
- Importance of ISD methodology
 - Analysis
 - Design and Production
 - Evaluation
- Challenges
 - Instructor/examiner reliability
 - Data collection and analysis
 - etc.





Communicating the Transition

- As part of transition, operator should develop a communication plan
 - Explains what is competency-based training
 - How it differs from traditional approach
 - What to expect
- Disseminated formally to all cabin crew
 - Crew memos on communication boards
 - Recurrent training
 - etc.





Prescriptive vs. Performance-based Regulations

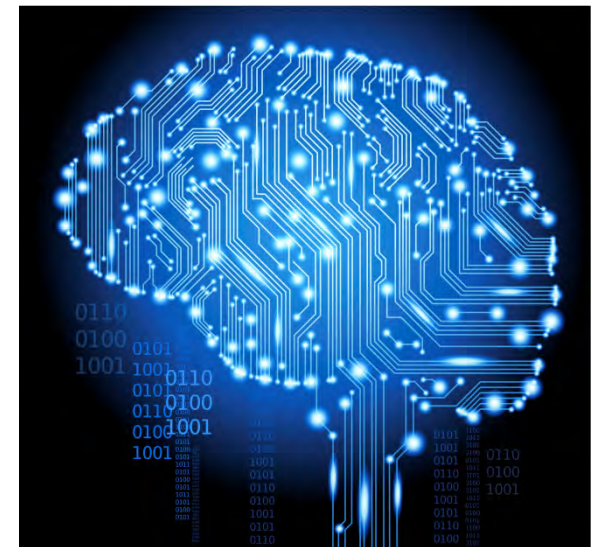
- Main shifts
 - Regulations as risk controls
 - Teaching (hours) vs. learning (competencies)
- Programmed (prescriptive) vs. planned hours





Link to operator's SMS

- Safety risk management and safety assurance
 - Design vs. evaluation
- Data-driven approach
 - Data from operations, training, etc.
 - Auditing
 - Continuous improvement
- Well documented





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 skills
 - Performing as a team vs. an 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
 - Similar aircraft type
 - Occurrence location
 - Type of operation
 - etc.





Developing scenarios for training

- 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
 - Location
 - Training aids
 - Conditions
 - Triggers
 - Distracters
- Incorporating skills (e.g. CRM)
- Capturing different roles
- Guidance for instructors/examiners
- Focus testing scenario





Defining Objectives

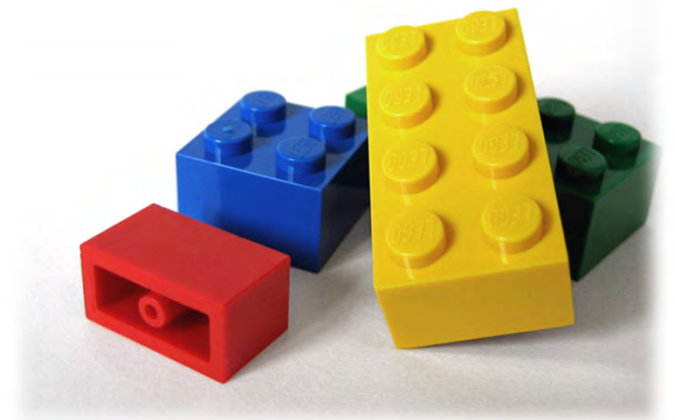
- What will be trained or evaluated?
 - Application of operator procedures
 - Operation of equipment or systems
 - Application of skills
 - Communication, team work, etc.
 - Understanding of Operations Manual
 - e.g. emergency checklist use
- If all of the above are selected
 - All need to occur during the scenario
 - Applying SOP, using checklist, applying CRM skills, etc.





Defining Objectives

- A single scenario can be developed to evaluate multiple items
 - To a certain extent
 - e.g. Fire fighting and injury treatment





Defining the Location

- What type of training will be utilized?
 - Classroom training
 - Hands-on exercise
 - Simulated exercises
- What does the operator's training model look like?
 - One single training center
 - Multiple training centers with different training devices
 - E.g. one training center has hydraulic CTD, others do not
- Why?
 - Need to create a fair training environment across centers
 - Ensure consistency in training
 - Particularly for simulated exercises





Use of Training Devices

- Training programme needs to consider consistency in training devices used
 - Across training locations and within same location
- If capabilities differ:
 - Need to consider CTD with most basic features
 - For consistency
- Establish contingency plan
 - In case device breaks down
 - To prevent rescheduling training





Use of Training Aids

- Define what training aids are needed
 - Operator should create list of all training aids required for exercise
- Training aids include:
 - Equipment
 - Props
 - E.g. portable smoke simulator
 - Briefing cards
 - etc.





Use of Training Aids

- Training aids need to be consistent and reliable
- Operator can only build scenarios based on available training aids
- Lack of training aids during simulated exercise can result in trainees performing inadequately
 - e.g. is equipment that should be in CTD missing?
- Operator should reset equipment after exercise





Defining Conditions

- Operator should define conditions pertinent to exercise
- Operator should produce outline of conditions:
 - Aircraft type
 - Assigned crew positions
 - Phase of flight
 - etc.
- Description of flight
 - e.g. wide body aircraft, 3 hrs. in flight, crew is in aisle picking up after service
- Training device and aids must support conditions:
 - To provide a realistic environment for trainees
 - Gives a full context to trainees so that conditions make sense
 - e.g. if occurrence is in cruise flight, doors are armed...





Determining Participation

- Class size is key in developing scenario
- How many trainees can actively participate?
 - **Active**: trainees as operating crew members
 - **Passive**: trainees acting as passengers or observing exercise
- Scenario should be built to match operator's typical minimum crew requirements
 - e.g. 3 or 4 cabin crew members
- Evaluate how many people are needed to support the scenario
 - Active participants must have clear tasks to accomplish
 - There should be a comparable amount of activity for each trainee
 - Fair amount of work for each active participant



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





Defining Triggers & Distracters

- Consistency is needed for both triggers and distracters
- Instructor or trainee selected to act scenario must know:
 - **What** to do
 - **When** to do it
- Clear instructions should be provided for each participant playing a 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





Focus Testing Scenario

- Operator should focus test the 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 improvements/modifications





Useful Tips

- A scenario should last 10-15 min
- An 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 the entire session





Points to Remember

- 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



ICAO

SAFETY





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 3 cabin crew members



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 Task

1. Develop a training scenario using brainstorming techniques:
 - a) Describe a scenario used to train cabin crew members on the competency element
 - Appendix A (use a flip chart)
2. Complete attached log (Table 01) as follows for the scenario:
 - a) Objectives of scenario
 - b) Location (including cabin training devices) of the training
 - c) Training aids required
 - d) Conditions
 - e) Triggers
 - f) Distracters



Your Task (Cont'd)

- When defining objective, include the specific information of what will be evaluated:
 - Application of operator procedures
 - Operation of equipment or systems
 - Application of skills
 - Communication, team work, etc.
 - Understanding of Operations Manual (e.g. checklists)
 - etc.



Your Task (Cont'd)

- Define following as part of scenario description:
 1. Number of cabin crew members (trainees) that will participate in scenario
 2. Expected distribution of tasks among cabin crew members during the scenario
 3. Number and role of instructors in scenario
 4. 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



Table 01 – Scenario Log

Objectives	
Location	
Training aids	
Conditions (of the flight)	
Triggers	
Distracters	