

The air traffic controller's perspective on runway excursion hazards and mitigation options

Session 2 Presentation 3



Runway excursion hazards associated the ATCs are generally related to:

1. Contributions to unstable approaches
2. Inaccurate surface/meteorological information
3. ATC actions that are incompatible with prevailing conditions

Communication Hazards

- Failure to provide timely, accurate and complete information :
 - runway condition and braking action reports
 - weather information
 - surface wind data
 - winds in magnetic in order to be consistent with runway headings
- **Establish a manual outlining**
 - information requirements
 - Reporting criteria
 - Updating criteria
- **Establish checklist processes**

Operational Hazards

- ATC factors that contribute to unstable approaches
 - Airspace constraints
 - Not fit for purpose e.g. airspace size, complexity of procedures
 - ATC provides approach profile that is incompatible w/ prevailing conditions
 - Vectoring to short final
 - Vectors above the glide slope
 - Speed control
 - High speed approaches
 - Speed vs. configuration requirements
 - Last minute approach/runway clearance changes
 - Inadequate distance from touchdown information
 - Insufficient traffic flow management
 - Pressure to meet performance targets, i.e., reduce delays/increase capacity
 - Inadequate training
 - Failure of approach aids
- **Establish policy and procedures to mitigate each factor**
- **Provide initial and recurrent training**
- **Establish awareness campaigns**
- **Implement a notification process for any system failure**
- **Utilize SMS prior to implementing any operational change**

Operational Hazards

- Not using actual winds on the ATIS
 - Update manual to require use of actual winds
- Lack of procedures for operations on complex runways
 - Identify hazards
 - Establish mitigation options



Operational Hazards (cont.)

- Runway selection
 - Incompatible aircraft type
 - **Establish a procedure for runway selection based on aircraft type**
 - Late changes
 - **Establish runway change cut-off points**
 - Runway selection based on ATC preferences or noise abatement requirements.
 - **Base runway selection on technical best practices**

Meteorological Hazards

- Meteorological/runway condition information systems not available
- Meteorological information not available or conflicts with conditions experienced by aircraft
- **Inform the operating crew that the information system is not available**
- **Establish a system to manage the risk associated with the system failure**

Construction Hazards

- Crews not aware of revised take-off/landing distance
 - Establish procedures for operations on shortened runways
 - ATIS
 - Verbal reminder

Airport Design Hazards

- Tower location that prevents the monitoring of multiple runway operations
 - Inability to detect confusion events
- **Additional runway/taxiway signage**
- **Utilize technology such as**
 - **Airport Surface Detection Equipment (ASDE-X)**
 - **Precision Radar Monitoring (PRM)**
- **Specific procedures to address the blind spots**

THANK YOU

