



Weather risk management

Through a systematic approach
to the investigation of weather events





Course delivered by:



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Course objectives ...

- Developing an investigative weather risk management program that will reduce Company incident and accident rates.
- Enable organisations to develop a more robust system to make their operations more “Weather Tolerant” and enhance operational efficiencies.
- Learn from recent Aviation incidents caused by significant Weather conditions.



The Cost of an Accident ?



11
Killed



Damaged reputation



Airline ceased operations



Aircraft written off

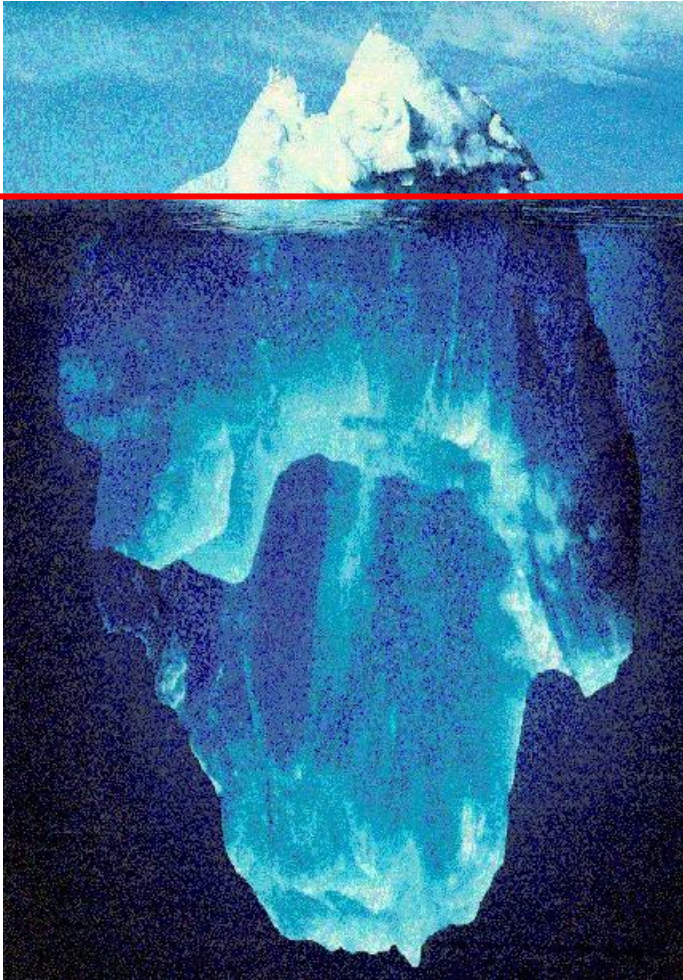


Repairs bring new configurations resulting in higher fuel consumption, etc

(Adapted from Flight Safety Foundation, 2002)



Cost of weather accidents/incidents



Direct Cost

- Equipment, injuries, and fatalities

Indirect Cost

- Restoring Order
- Loss of equipment and personnel
- Cost of Recovery
- Delay in Doing Business
- Corporate Reputation
- Investigation Costs
- Litigation

Source: U.S. Naval Safety Center



Summary of the “Weather Problem”

- Weather has a major impact on the safety, efficiency, and capacity for aviation operations.
- Accidents and incidents continue to be caused by adverse weather.
- Passengers are inconvenienced by:
 - Delays,
 - Flight cancellations or diversions due to weather,
 - Uncomfortable or may even be injured when turbulence is encountered during a flight



The Cost of Injuries

- Turbulence is leading cause of injury to cabin crew and passengers in non-fatal accidents.
- Cabin crew account for majority of serious injuries.
- IATA estimates 18 cabin crew are injured in turbulence per every million flight hours.





Flight Diversions

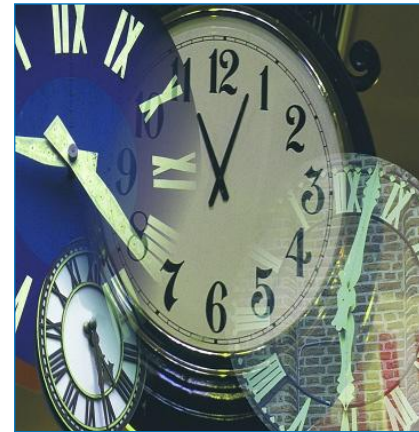
- 25% of serious injuries in turbulence result in diversions
- Flight diversions can also incur other costs:
 - Flight cancellation.
 - Meals and/or accommodations for passengers.
 - Negative impact on productivity, schedule efficiency and operations.





Impact on Operations

- Injured cabin crew are unable to continue working on a pairing if the injury is serious.
- Scheduling must find other cabin crew to work on remaining flight legs or pairing.
- This can result in delays.





Negative Public Perception

- Turbulence events attract media attention.
- Negative impact on passenger's view of the airline's safety record.





Damage to Cabin Interior

- Turbulence can cause damage to cabin interior.
- Unrestrained equipment can damage panels, seats and other equipment.





Industry-wide Costs

- IATA estimates the cost to airlines of turbulence-related injuries to cabin crew (including lost workdays and medical bills) at more than \$65.8 million USD per year.



Weather Management System (WMS)

- ‘Big Picture’ approach to managing the impact of weather
- Comprised of a series of Weather Risk Control Systems (Wx-RCSs) designed to manage the impact of weather hazards (e.g., thunderstorms, turbulence, reduced visibility, LLWS) on safety and operations.
- Effective Weather tools for Dispatch Ops.
- Effective Pre-Flight Briefing Packages





Evaluate Operational Weather Data

- Quality/Availability of Destination Weather Services
- Limitations of ATC – Airport Weather Radar
- Collection/Dissemination of:
 - Pilot Weather Reports (PIREPS)
 - Weather Specials (TAF/METAR)
- Quality of CRM Training (Decision Making)
- Knowledge of Weather Threats
- Time required to Analyze these Threats
- Level of Awareness



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Thank you

