Risk Mitigation Blog

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Assignment

Blog task #4 Choose one risk strategy (mitigation, avoidance, etc.) and discuss your personal use or your organization's use of the chosen strategy

Introduction

There are two forms of risk mitigation, “one, reducing the likelihood that the event will occur and/or two, reducing the impact that the adverse event would have....(Larson & Gray, 2014, p214). Most aviation activity is fraught with risk; using mechanical means to defy gravity is an accident waiting to happen. There are few ways to reduce the impact so we try to reduce the likely hood. Each organization has their own ways of mitigating these risk factors that never go away. In the aircraft, engineering and mechanical up keep redundancy, constant inspections, and testing are the key. Personnel constantly have to meet qualifications, requalification, proficiency, annual reviews and training requirements. This helps mitigate the human factors

Personal Experience

Myself as an Air traffic control attempt to mitigate the risk of aircraft colliding with other aircraft or objects. In our mitigation activity we are challenged by the need of effectively using airspace to increase mission efficiency. Spacing minimums are applied for aircraft vertically, horizontally, and by timed clearances to help keep them separated. Minimum altitude assignments avoid ground objects.

During departures, aircraft spread out most often proceeding to different destinations. When aircraft are departing on the same routes timing, altitude assignment and temporary diversions routes are used. Airspeeds are also an effective tool to help achieve spacing minimums. The challenge comes during the arrival portion of flight operations.

All aircraft have to land sometime; hopefully in a safe orderly fashion. By its very nature arriving aircraft are converging with other aircraft and ground obstacles. As multiple aircraft attempt to land on the same 200 foot wide 2 mile long hunk of asphalt within a relatively short period of time, applying the minimum spacing mitigations techniques becomes more challenging. Greater attention is needed to ensure that aircraft meet the minimum spacing requirements. This is partly accomplished by dividing the airspace and providing jurisdiction and responsibilities to different people based upon the type of operation. Tower, Departure control, Arrival control, Approach control and Enroute control. Coordination between the levels is constant and crucial.

Redundant oversight is keener the closer you get to the airport. There are more people assisting the person with overall responsibility of the controlling operation. In a terminal radar environment there is an assigned assist controller and coordinator whose jobs are to provide extra situational awareness, coordination and proper documentation of the operation to the approach, departure and arrival controllers. In the tower you have similar assistance for the controller responsible for runway activities and ground control. Also, in US Air Force towers the Supervisor has direct override of the radio frequencies to provide additional backup for unforeseen events.

Conclusion

Engaging in flight operations negates the ability to completely avoid a collision risk but all of these factors, minimum spacing, minimum altitudes, responsibility division, coordination, direct assistance and supervisory oversight combine to provide the best possible mitigation of colliding aircraft. There is however one last and most important mitigation factor, the pilots themselves. They have the overriding right to deviate from ATC instruction to keep their aircraft

safe. We only ask that they keep us informed when that need arise so we can keep others out of their way.

References:

Larson, E. W., & Gray, C. F. (2014). Project management: The managerial process. New York, NY: McGraw-Hill Educational.