A Risk-Based Approach to Runway Incursion Analysis

Chris Devlin
The MITRE Corporation
Portfolio Manager, Safety, Standards, and Training
September 2017
Trends in Category A & B Runway Incursions

FAA Adopts ICAO Definition
Since 2008, depending on which methodology you choose, one could come to different conclusions on effectiveness of runway incursion activates.
With inconclusive data, and only a few high-risk events each year, How do we continue to remove risk from the system?
FAA Adopts ICAO Definition
Many different risk-scenarios all get counted as the same event
Applying Risk Framework to Runway Overflights

- Runway Not Occupied
- Runway Occupied
- Combined

Aircraft on Runway is Departure

Takeoff - Missed Approach (Operational Scenario 8A)

© 2017 The MITRE Corporation. All rights reserved. For Internal MITRE Use.

Approved for Public Release; Distribution Unlimited. Case Number 17-3570
Take-Aways
MITRE is a not-for-profit organization whose sole focus is to operate federally funded research and development centers, or FFRDCs. Independent and objective, we take on some of our nation's—and the world’s—most critical challenges and provide innovative, practical solutions.

Learn and share more about MITRE, FFRDCs, and our unique value at www.mitre.org
NOTICE

This is the copyright work of The MITRE Corporation, and was produced for the U. S. Government under Contract Number DTFAWA-10-C-00080, and is subject to Federal Aviation Administration Acquisition Management System Clause 3.5-13, Rights In Data-General, Alt. III and Alt. IV (Oct. 1996). No other use other than that granted to the U. S. Government, or to those acting on behalf of the U. S. Government, under that Clause is authorized without the express written permission of The MITRE Corporation. For further information, please contact The MITRE Corporation, Contracts Management Office, 7515 Colshire Drive, McLean, VA 22102-7539, (703) 983-6000.

© 2017 The MITRE Corporation. All Rights Reserved.