Runway Safety

Who is responsible?

Highest Risk in Aviation – Most Complex

Many people, processes, and systems

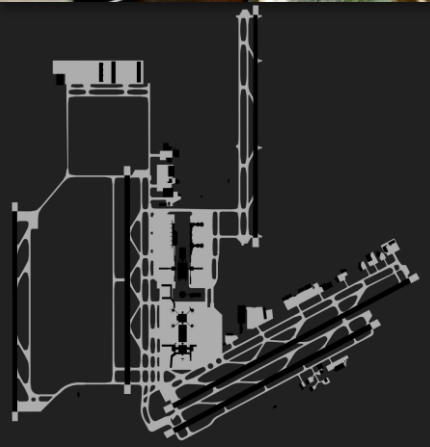
- ANSP's
- REGULATORS
- AIRPORTS
- AIRLINES
- GENERAL AVIATION
- ASSOCIATIONS

FAA established responsible office

- In 2002, FAA determined the ANSP (known as the ‘Air Traffic Organization’ or ’ATO’) was the responsible entity for runway safety in the USA
- They would be responsible for coordinating everyone's’ activities on the basis of risk management
- In response, the FAA established the Runway Safety Office to address runway safety risks

Internal Alignment

- Flight Standards Service (AFS)
  - FAA'S Operational Safety Regulator
  - Remedial Pilot Training, DPE & CFI Training, FAAST Team TV, Advisory Circulars
- FAA Airports Division (ARP):
  - Airport Geometry, Wildlife Hazards, Runway Safety Areas (RSA)



FAA Approach to External Alignment

- Collaboration Activities:
  - Commercial Aviation Safety Team (CAST)
  - Runway Safety Action Teams (RSAT)
  - Runway Incursion Assessment Team
  - Runway Safety Council
  - Root Cause Analysis Team
  - Airport Construction Advisory Council
  - Surface Safety Initiatives Team
  - Comprehensive Airport Review and Assessment

A Simple Strategy:

Collect.Find.Fix

There are four key elements to FAA's safety strategy:

1. Collect and value information from frontline employees
2. Deploy technology to gather relevant data
3. Analyze and identify risk
4. Take corrective action that removes risk from the National Airspace System (NAS).

A Comprehensive Plan

- The National Runway Safety Plan 2015-2017 contains input from FAA organizations
- The Plan provides:
  - a coordinated vision to achieve common goals and objectives,
  - identifies seven key ATO Safety initiatives and
  - a number of activities the FAA will pursue to improve runway safety

Communications -The Cornerstone for all Safety Initiatives

- Emphasize a collaborative, integrated communications strategy designed to convey the runway safety message effectively to the entire aviation community.
- A comprehensive, clear and convincing message reaching the largest number of aviation stakeholders is a major goal.
- Relationships and partnerships amongst the entire aviation community will make the message understandable at qll levels.

COLLABORATION

What does it look like

Commercial Aviation Safety Team (CAST)

Mission/Purpose:

Created in 1997 as an integrated, data-driven strategy to reduce fatality rates. It reduced the fatality risk in the US by 83% in 10 years

Participants:

- Airlines
- Aircraft Manufacturers
- Engine Manufacturers
- Governments/Regulators
- Unions
- Associations
- Observers: ICAO, IATA, EASA, NTSB, etc.

CAST Runway Excursion Safety Enhancements

- CAST Committed to Implementing Eight Runway Excursion Safety Enhancements, such as:
  - Improving Flight Crew Awareness of Their Landing Distance Margin

CAST Reducing Runway Excursion Risk

- Modify Policies, Procedures and Training such as:
  - Airport arrival and departure configuration based on wind conditions
  - Reporting wind measurement and use
  - Training of controllers on factors such as wind conditions, runway conditions and unstable approaches

CAST Reducing Consequences of Runway Excursion Events

- Modify Policies, Procedures and Training such as:
  - Improvement of runway safety areas, such as Engineered Materials Arresting System
  - Improved communication between air traffic control, flight crews, and ARFF personnel after an Runway Excursion event

Runway Safety Action Team (RSAT)

Cannot solve everything from HQ

- Mission/Purpose:

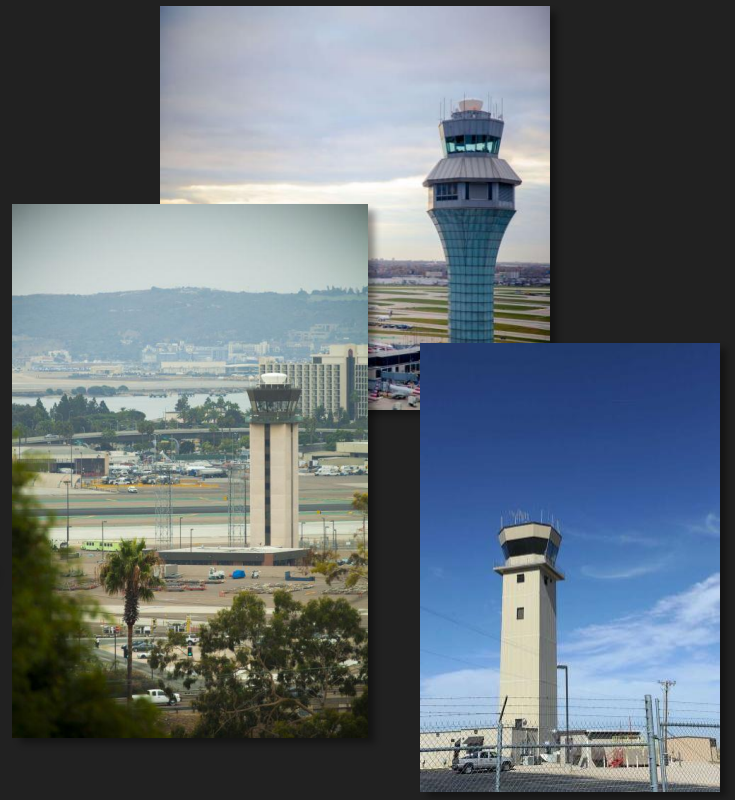
Local and Regional evaluations to identify and mitigate airport specific risks that lead to human error that results in runway incursions/excursions

- Participants:

- ANSP Representatives
- Flight Standards
- Airport Operations
- Airport Tenants/Users
- Technical Operations
- Others as appropriate

RSAT Activities

- RSATs convene annually to discuss surface movement issues and concerns at all FAA and federal contract-towered airports.
  - 1039 RSAT meetings in 2013 and 2014
  - 651 action items resulted from these meetings
  - RSATs have resulted in the identification and mitigation of safety issues at all FAA and federal contract-towered airports



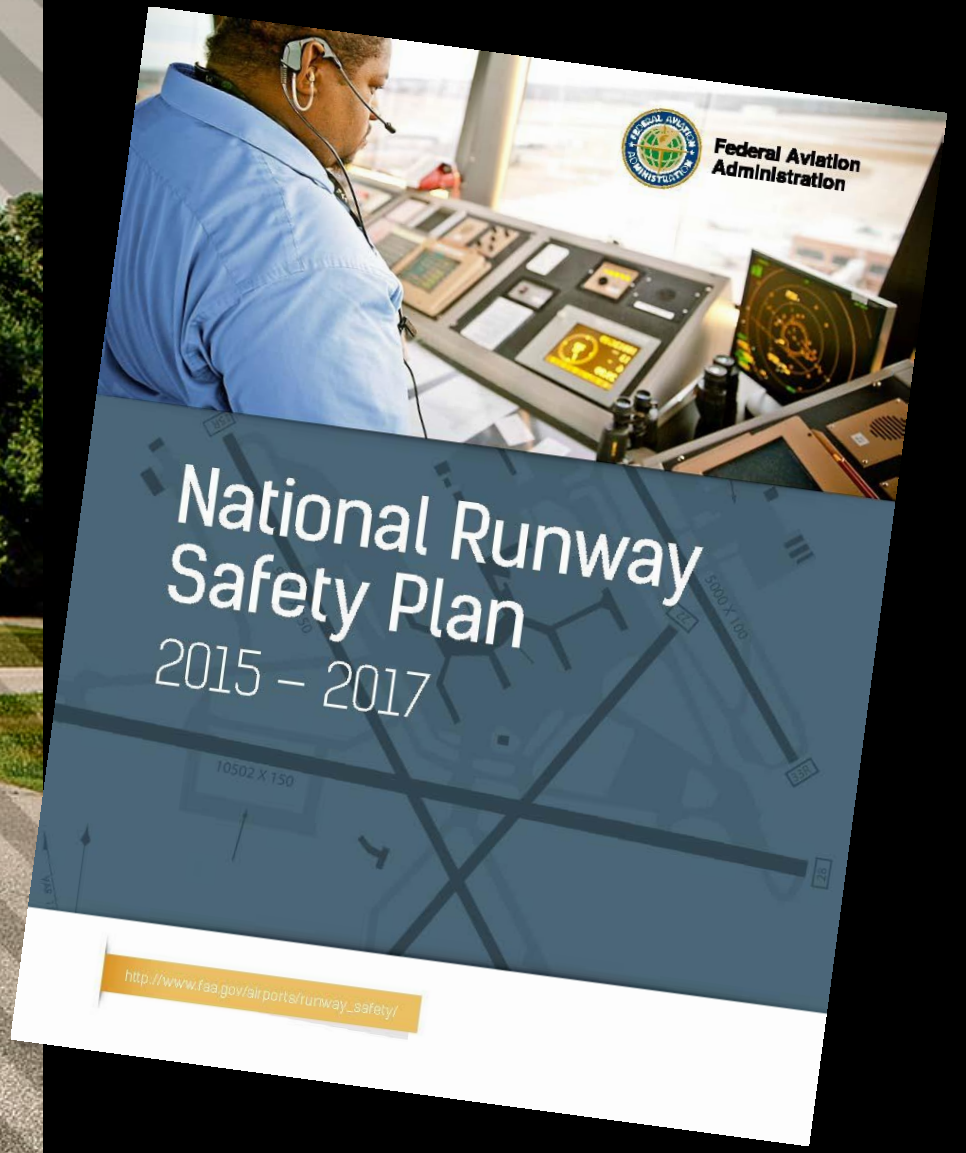
Policy, Training, Outreach

- Converging Runway Operations Policy
- Airport Recurrent Driver Training
- Air Traffic Controller Recurrent Training
- Aircraft Owners & Pilots Association Online Training
- Pilot Training and Outreach

Air Traffic Control Procedures

- People and Equipment in the Runway Safety Area
  - Improved awareness for proper and safe procedures for controlling situations where aircraft and equipment might be inside an Runway Safety Area (RSA).
- Approach Hold Procedures
  - Obstacle Identification Surfaces, Obstacle Free Zones, Runway Safety Areas, and Clearways
  - Taxi and Ground Movement Operations

Objectives



National Runway Safety Plan 2015-2017

National Safety Runway Plan (NSRP) Objectives

- Integration of runway safety efforts consistent with the maturation of the FAA's Safety Management System
- Establishment of a National Focus Airports Program
- Development of runway safety metrics which identify and rate the effectiveness of the agency's runway safety risk assessment efforts
- FAA intra-organizational alignment to improve runway safety
- Further develop internal and external communication and stakeholder engagement strategies to include collaborative training, local leadership and the expanded use of mobile technology and social media

Risk-Based Decision Making

- Build on safety management principles to proactively address emerging safety risk by using consistent, data-informed approaches to make smarter, system-level, risk-based decisions
- FAA SMS risk-based decision making
- Collect, Find, Fix

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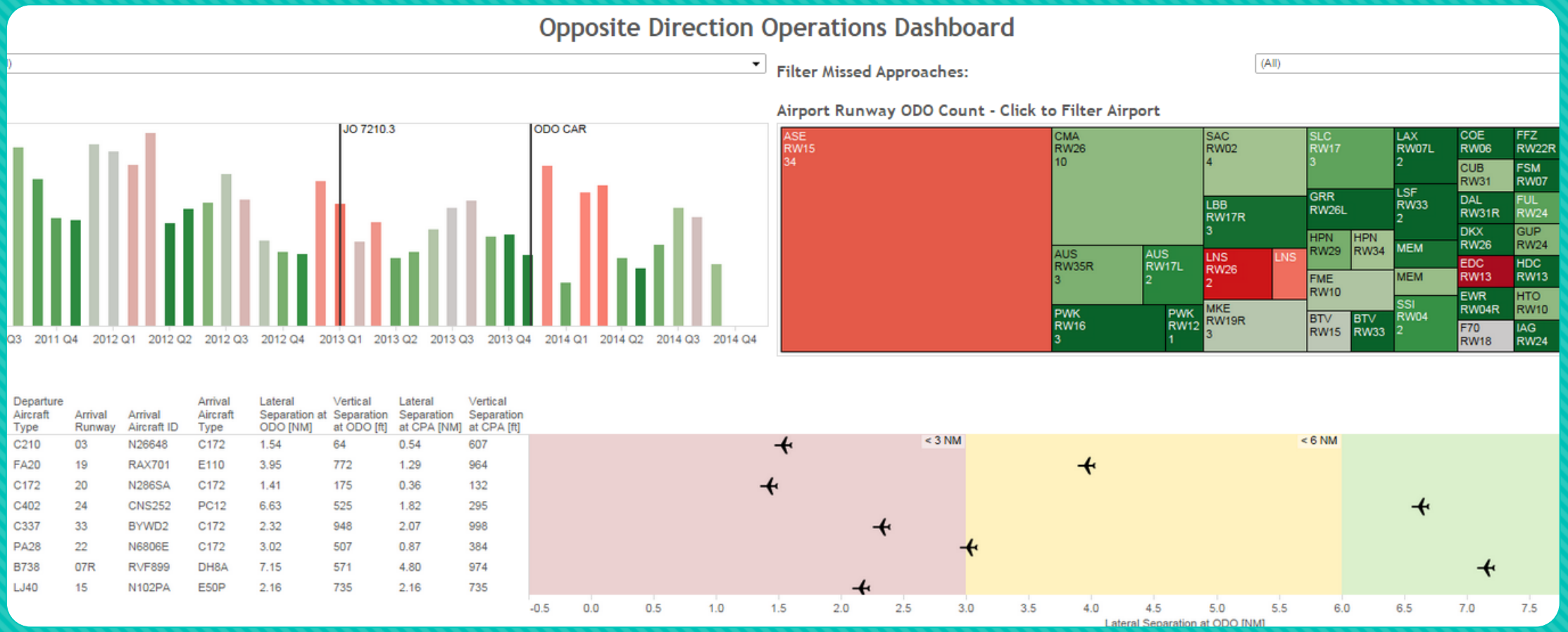

Data Dashboards Developed

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Communication and Stakeholder Engagement Strategies

- The tenets of the SMS will apply to all runway safety communication and engagement initiatives and messages

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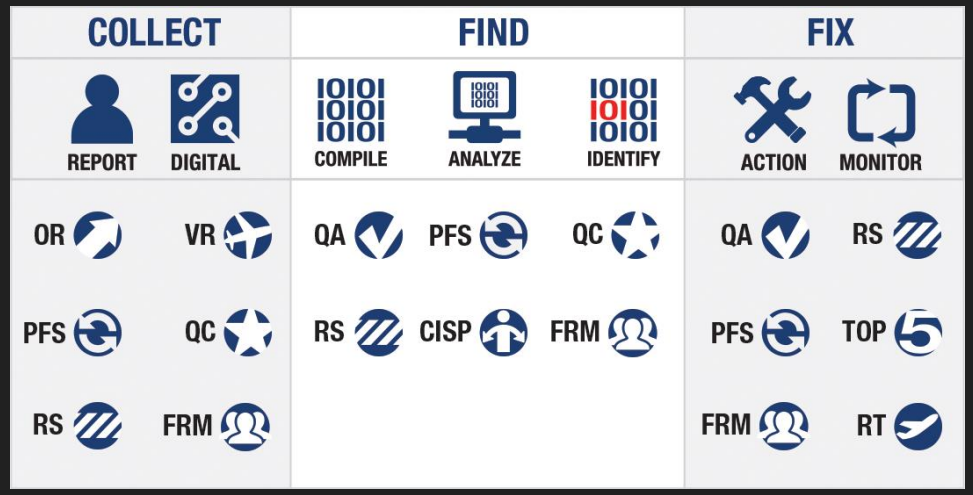
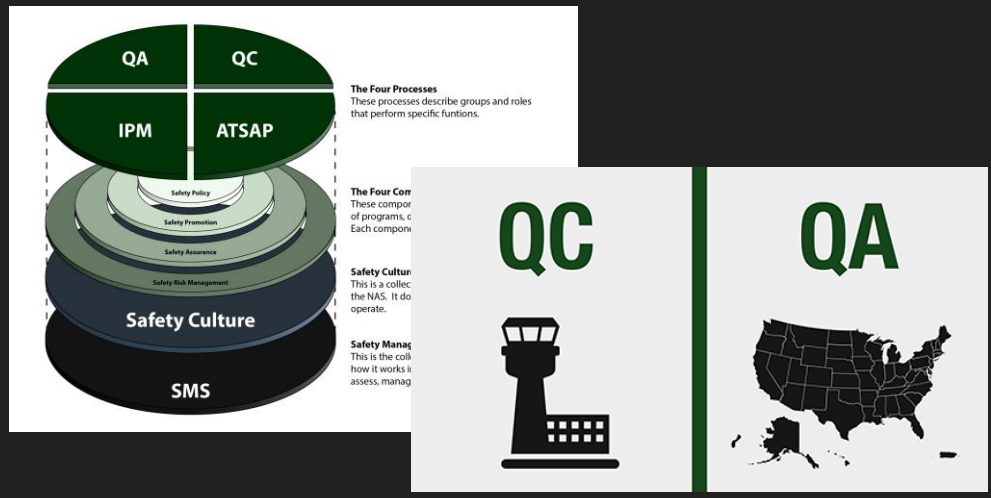
SMS Safety Promotions



Collect, Find, Fix: Safety Programs



Information Graphics and Animation

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Digital Media Outreach

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Case Studies

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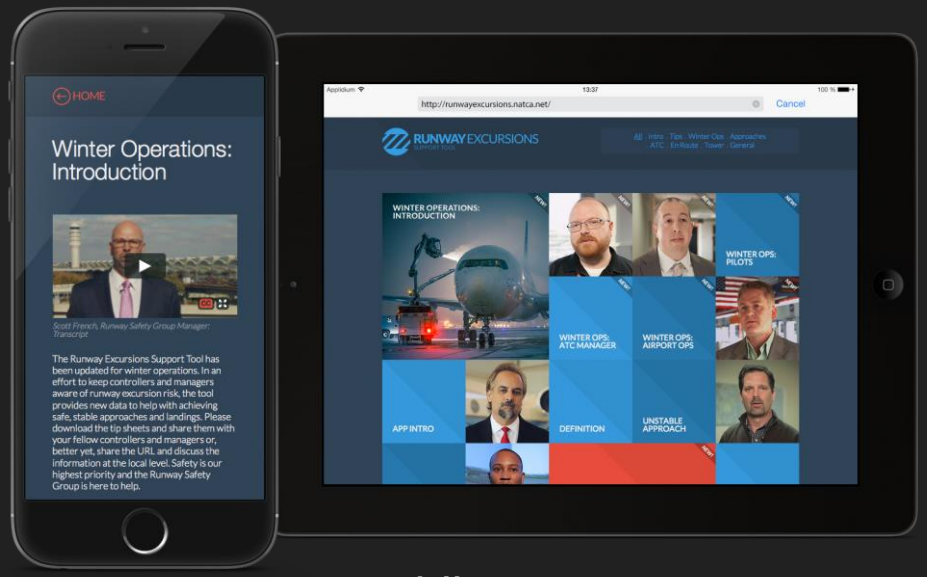
Runway Excursions Campaign



Mobile App

Print Campaign

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Focus Partnerships on Creating Safer Runways

- Focus existing partnerships with industry groups, unions and transportation authorities on the Administrator's initiative of creating safer runways through risk assessment and risk mitigation

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General Aviation Online Pilot Training

- AOPA-FAA Developed Training for GA Pilots on Runway Safety

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General Aviation Outreach at Airshows

Air Venture and Sun N Fun

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Airline Pilot and Air Traffic Controller Training

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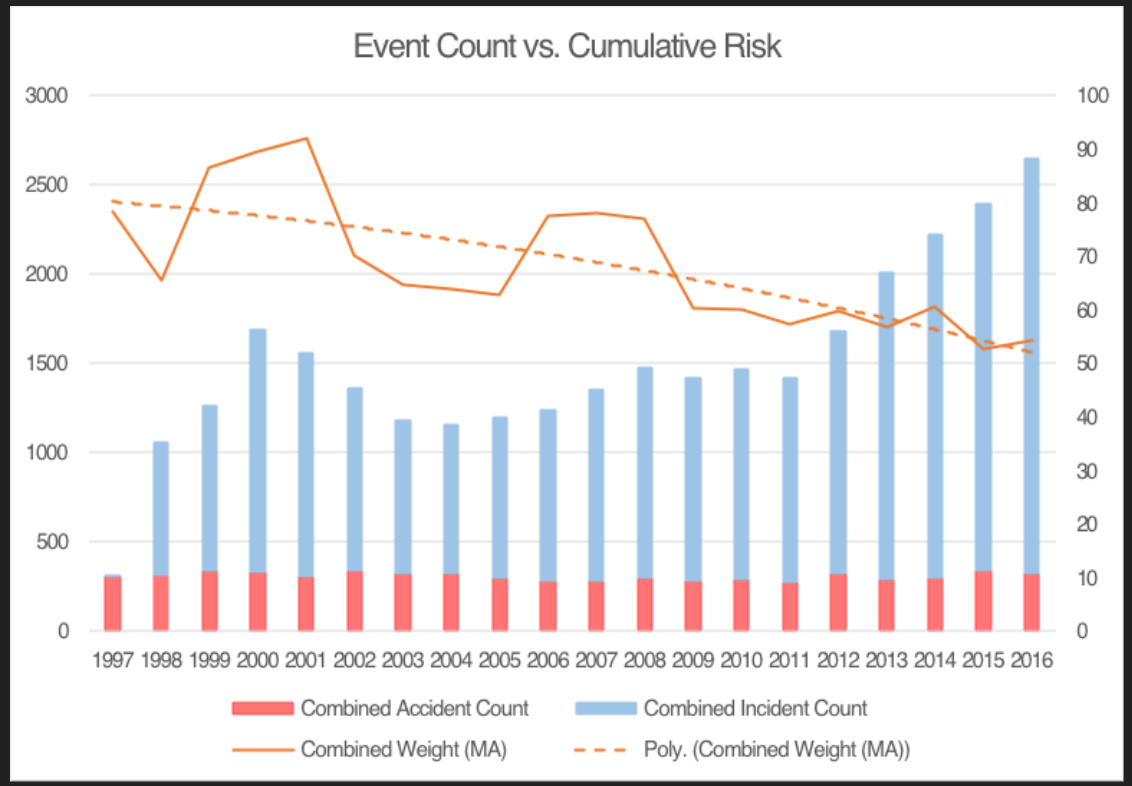
Safety Assurance: U.S. Combined Risk & Event Count

- Observations:
  - Risk decreased
  - Reports increased
  - Accidents relatively constant over time



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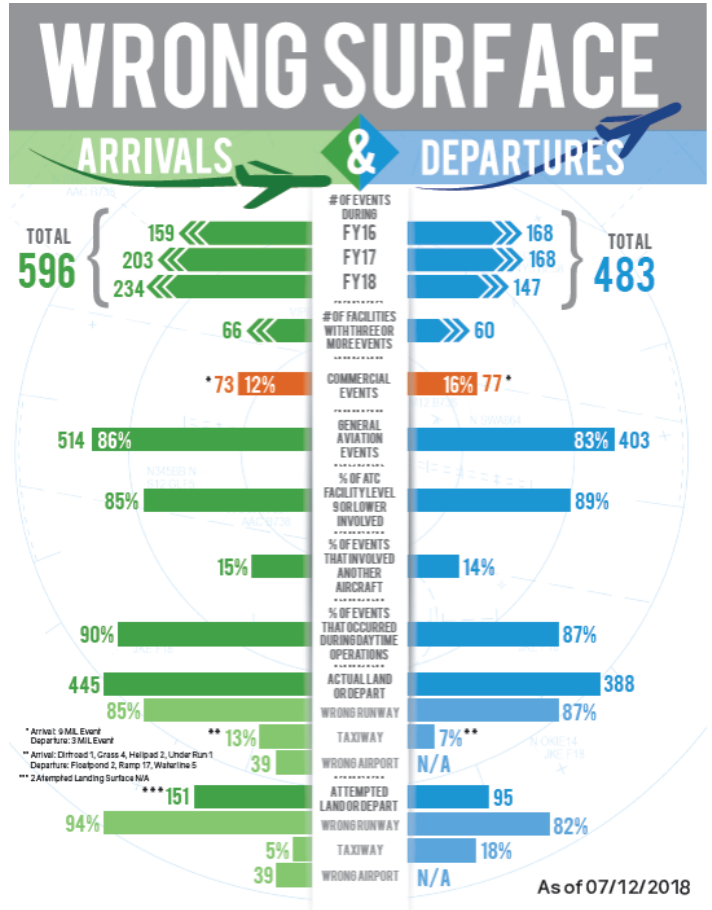
Emerging Risks



Working Together to Improve Runway Safety

Review and Discussion