ATO Safety Management System (SMS)

Michael Falteisek, ATO-Safety Manager, SRM

Michael Virga, ATO-Terminal Safety Engineer

November 2008

Federal Aviation Administration

What is SMS?

- **SMS is an integrated collection of processes, procedures, policies, and programs used to define, assess, and manage the safety risk in the provision of Air Traffic Control (ATC) and navigation services.**

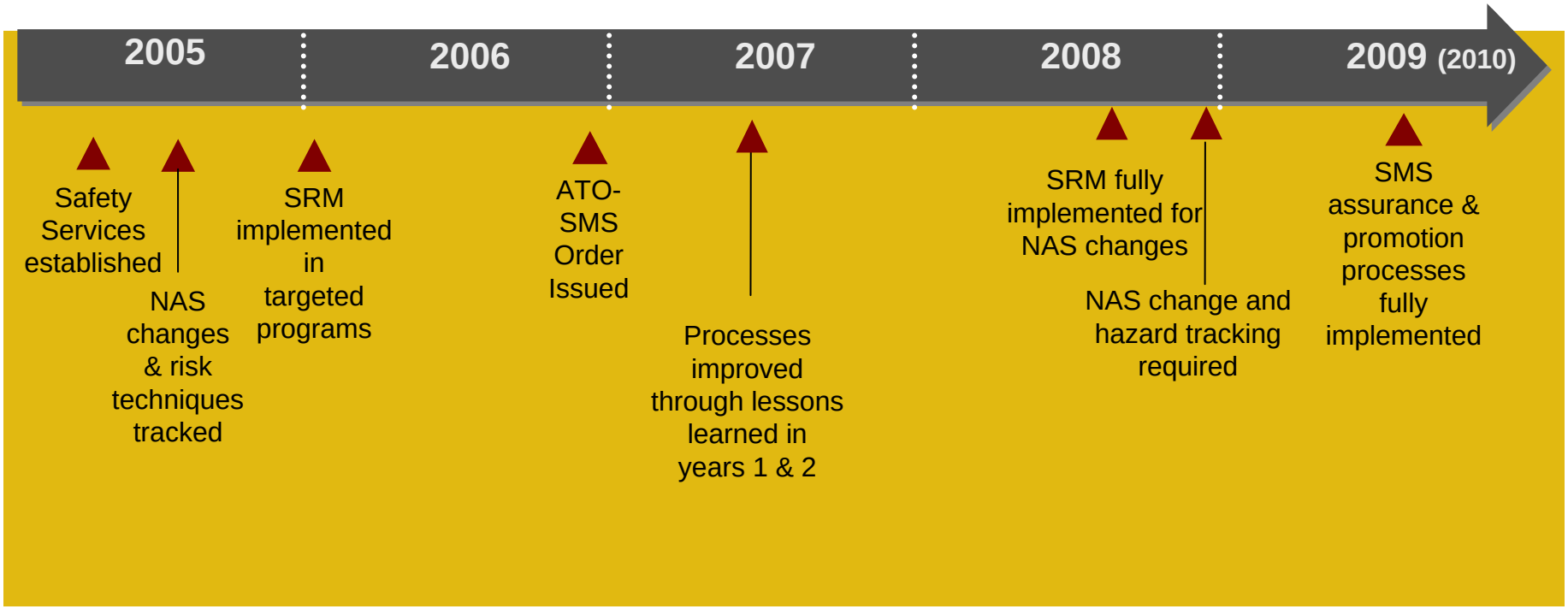
Safety Is a Core FAA Goal

- FAA Flight Plan 2008-2011
  - Increased Safety Goal: Achieve the lowest possible accident rate and constantly improve safety
    - Enhance the safety of FAA's air traffic systems
      - Design, develop, and implement a Safety Management System (SMS) that applies a system safety approach to the FAA's delivery of air traffic services and complies with the International Civil Aviation Organization's (ICAO) requirements
    - Reduce the commercial airline fatal accident rate
    - Reduce the number of fatal accidents in general aviation
    - Reduce the risk of runway incursions
    - Ensure the safety of commercial space launches

Safety and the SMS

- Safety:
  - Freedom from unacceptable risk
- ATO's SMS:
  - Focuses on NAS safety (safety in the provision of air traffic control and navigation services); not OSHA safety
  - Required by:
    - ATO Customers/Owners
    - Air Traffic Safety Oversight Service (AOV)
    - International Civil Aviation Organization (ICAO)
  - Will hold ATO accountable for the same level of safety discipline it requires of the aviation industry

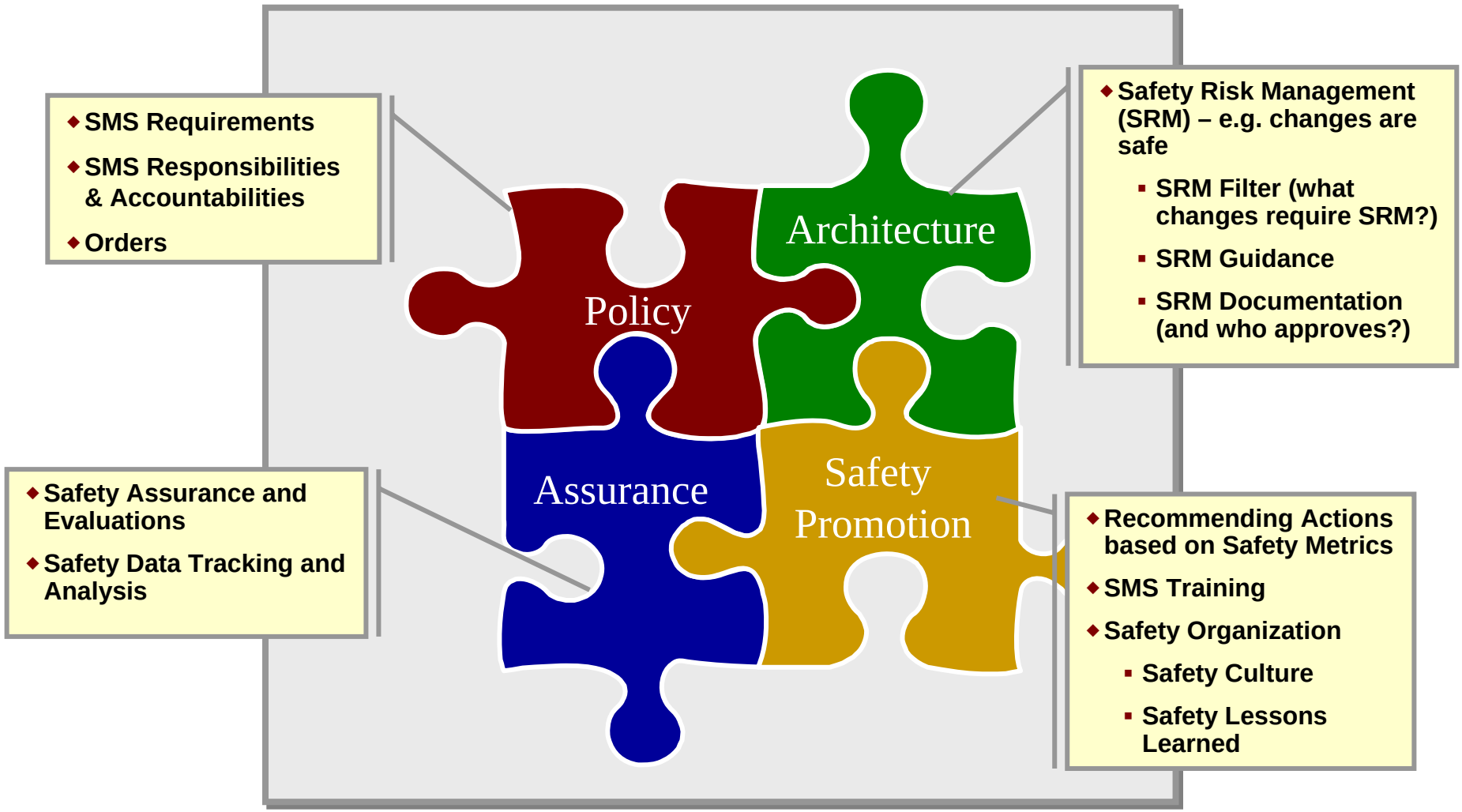
SMS Implementation



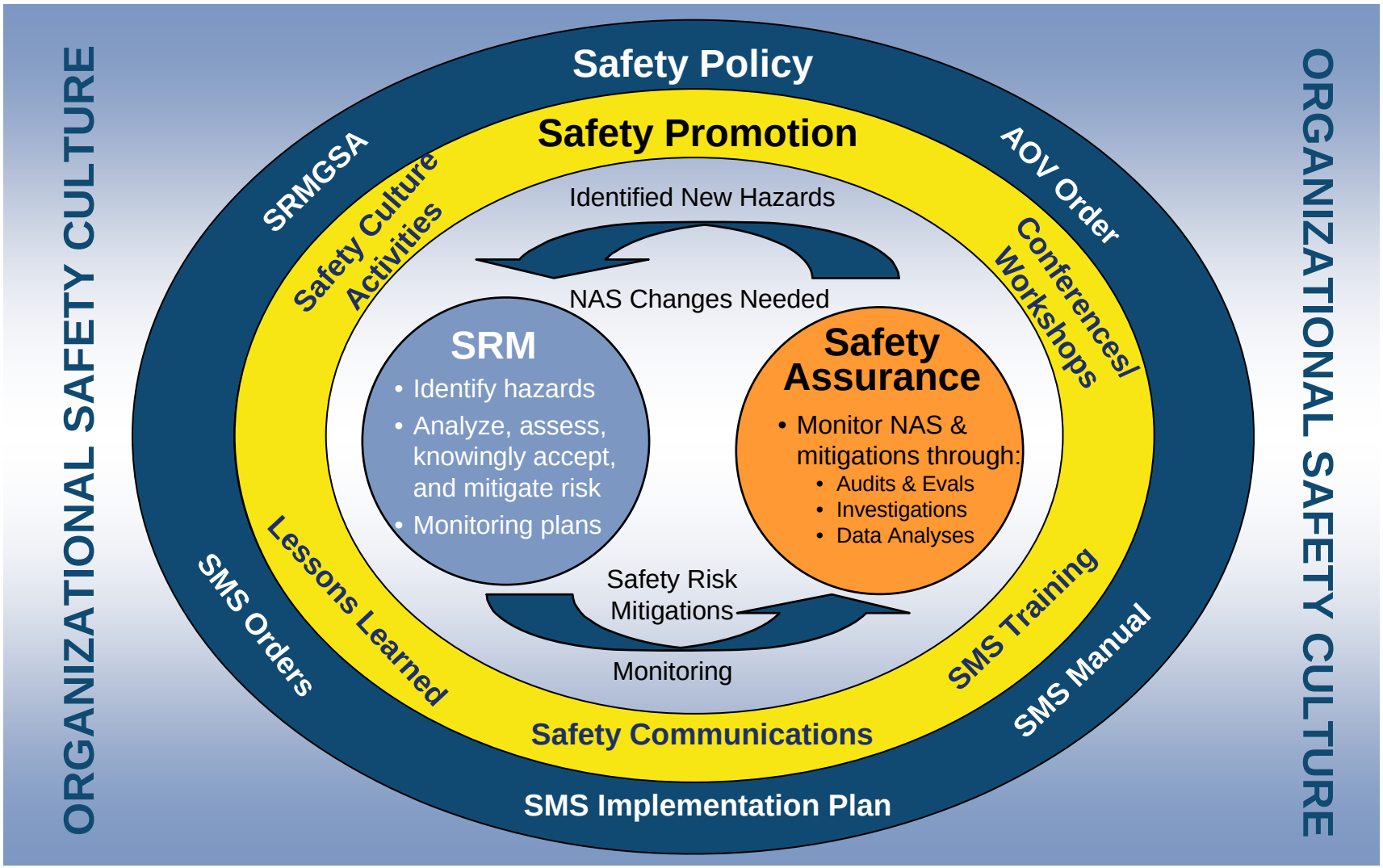
Policy

- FAA Order 8000.369 Safety Management System Guidance
- FAA Order 1100.161 Air Traffic Safety Oversight
- FAA Order 8000.36 Air Traffic Safety Compliance Process
- FAA Order 1000.37 Air Traffic Organization Safety Management System Order
- ATO- SMS Implementation Plan Version 1.0, 2007
- FAA SMS Manual Version 2.1 of June 2008
- Safety and Standards Guidance Letter 08-1
- AC 150/5200-37 Intro to SMS for Airport Operations

FAA ATO Safety Management System

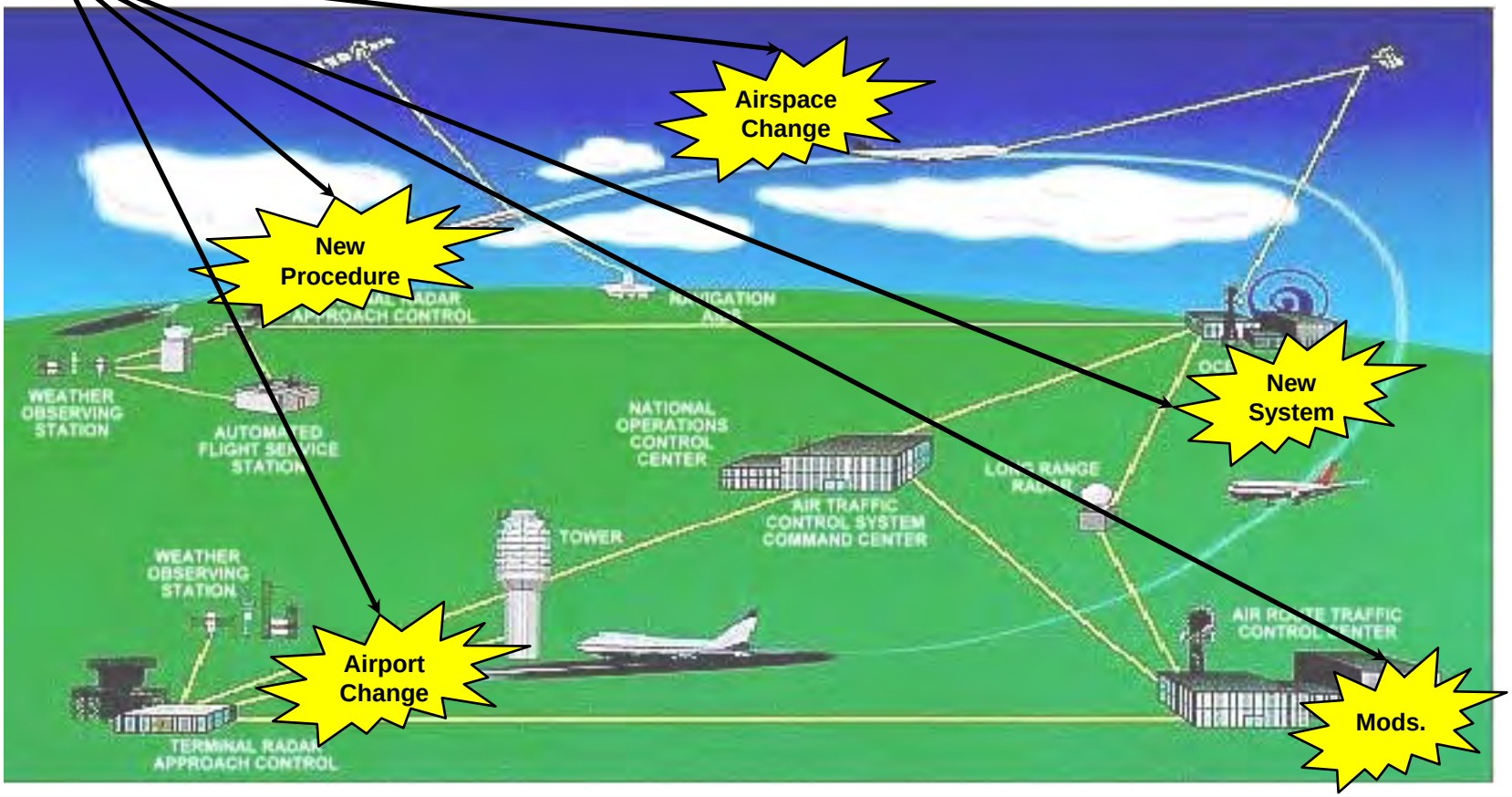


SMS Components



SRM

Safety Risk Management → Describe System → Identify Hazards → Analyze Risk → Assess Risk → Treat Risk

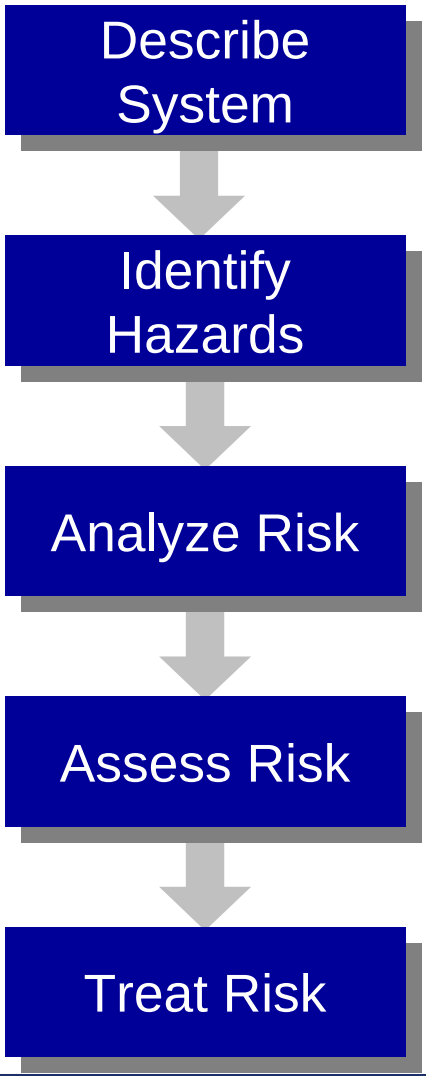


Application of SRM

- At minimum, safety risk must be evaluated and managed on safety significant changes, including:
  - Airspace changes
    - Reorganization of ATS route structure
    - Resectorization of an airspace
  - Changes to air traffic services procedures and standards
    - Reduced separation minima applied to airspace
    - New operating procedures
    - Waivers to existing procedures, requirements, or standards
  - Changes to airport procedures and standards
    - Reduced separation minima applied at airport
    - **Physical changes to airport runways, taxiways, or airport operations area**
  - New equipment, systems, or facilities
  - Modifications to critical equipment, systems, or facilities

**DOES NOT INCLUDE INFORMATION SECURITY AND OSHA

SRM Process



- Define scope and objectives
- Define stakeholders
- Identify criteria and plan for safety risk management effort
- Describe system (use, environment, and intended function, including planned future configuration)

Identify hazards (what can go wrong?) that exist in the context

- Use structured approach
- Be comprehensive (and do not dismiss hazards prematurely)
- Lessons learned and experience supplemented by checklists

For each hazard:

- Identify existing mitigations/controls
- Determine risk (severity and likelihood) of outcome
  - Qualitative or quantitative

- Rank hazards according to the severity and likelihood of their risk
- Select hazards for detailed risk treatment (based on risk)

- Identify feasible mitigation options
- Select best balanced response
- Develop risk treatment plans
- Verify and implement
- Monitor

Severity Definitions

Effect On: ↓	Hazard Severity Classification				
	Minimal 5	**Minor 4**	**Major 3**	**Hazardous 2**	**Catastrophic 1**
ATC Services	Conditions resulting in a minimal reduction in ATC services, or a loss of separation resulting in a Category D Runway Incursion (RI)[1], or proximity event	Conditions resulting in a slight reduction in ATC services, or a loss of separation resulting in a Category C RI[1], or Operational Error (OE)[2]	Conditions resulting in a partial loss of ATC services, or a loss of separation resulting in a Category B RI[1], or OE[2]	Conditions resulting in a total loss of ATC services, (ATC Zero) or a loss of separation resulting in a Category A RI[1] or OE[2]	Conditions resulting in a collision between aircraft, obstacles or terrain
Flight Crew	– Flightcrew receives TCAS Traffic Advisory (TA) informing of nearby traffic, or, – Pilot Deviation (PD) where loss of airborne separation falls within the same parameters of a Category D OE [2] or proximity Event – Minimal effect on operation of aircraft	– Potential for Pilot Deviation (PD) due to TCAS Preventive Resolution Advisory (PRA) advising crew not to deviate from present vertical profile, or, – PD where loss of airborne separation falls within the same parameters of Category C (OE) [2] , or – Reduction of functional capability of aircraft but does not impact overall safety e.g. normal procedures as per AFM	– PD due to response to TCAS Corrective Resolution Advisory (CRA) issued advising crew to take vertical action to avoid developing conflict with traffic, or, – PD where loss of airborne separation falls within the same parameters of a Category B OE [2], or, – Reduction in safety margin or functional capability of the aircraft, requiring crew to follow abnormal procedures as per AFM	– Near mid-air collision (NMAC) results due to proximity of less than 500 feet from another aircraft or a report is filed by pilot or flight crew member that a collision hazard existed between two or more aircraft – Reduction in safety margin and functional capability of the aircraft requiring crew to follow emergency procedures as per AFM	– Conditions resulting in a mid-air collision (MAC) or impact with obstacle or terrain resulting in hull loss, multiple fatalities, or fatal injury

Severity Definitions (cont'd)

Effect On: ↓	Hazard Severity Classification				
	Minimal 5	**Minor 4**	**Major 3**	**Hazardous 2**	**Catastrophic 1**
Flying Public	– Minimal injury or discomfort to passenger(s)	– Physical discomfort to passenger(s) (e.g. extreme braking action; clear air turbulence causing unexpected movement of aircraft causing injuries to one or two passengers out of their seats) – Minor[3] injury to greater than zero to less or equal to 10% of passengers	– Physical distress on passengers (e.g. abrupt evasive action; severe turbulence causing unexpected aircraft movements) – Minor[3] injury to greater than 10% of passengers	– Serious[4] injury to passenger(s)	– Fatalities, or fatal[5] injury to passenger(s)

1 – As defined in 2005 Runway Safety Report

2 – As defined in FAA Order 7210.56 – Air Traffic Quality Assurance and *N JO 7210.663*-Operational Error Reporting, Investigation, and Severity Policies

3 – Minor Injury - Any injury that is neither fatal nor serious.

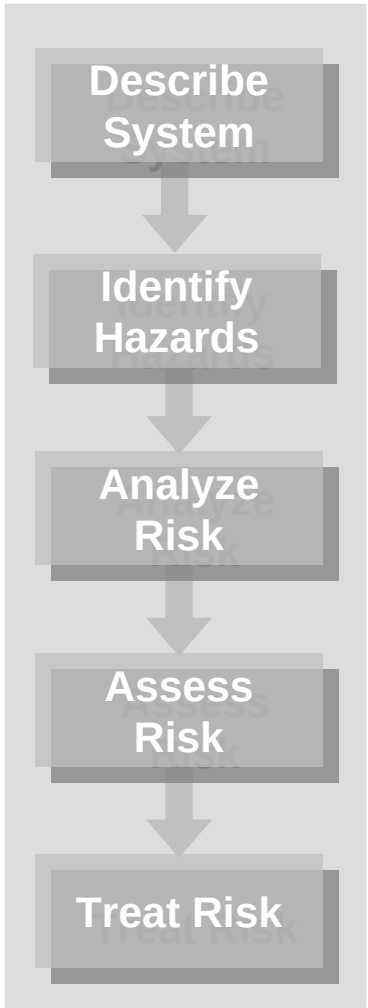
4 – Serious Injury - Any injury which: (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

5 – Fatal Injury - Any injury that results in death within 30 days of the accident.

Likelihood Definitions

	NAS Systems & ATC Operational	NAS Systems		ATC Operational		Flight Procedures
	Quantitative	Qualitative				
		Individual Item/System	ATC Service/ NAS Level System	Per Facility	NAS-wide	
Frequent A	Probability of occurrence per operation/ operational hour is equal to or greater than $1x10^{-3}$	Expected to occur about once every 3 months for an item	Continuously experienced in the system	Expected to occur more than once per week	Expected to occur more than every 1-2 days	Probability of occurrence per operation/ operational hour is equal to or greater than $1x10^{-5}$
Probable B	Probability of occurrence per operation/ operational hour is less than $1x10^{-3}$, but equal to or greater than $1x10^{-5}$	Expected to occur about once per year for an item	Expected to occur frequently in the system	Expected to occur about once every month	Expected to occur about several times per month	
Remote C	Probability of occurrence per operation/ operational hour is less than or equal to $1x10^{-5}$ but equal to or greater than $1x10^{-7}$	Expected to occur several times in life cycle of an item	Expected to occur numerous times in system life cycle	Expected to occur about once every year	Expected to occur about once every few months	Probability of occurrence per operation/ operational hour is less than or equal to $1x10^{-5}$ but equal to or greater than $1x10^{-7}$
Extremely Remote D	Probability of occurrence per operation/ operational hour is less than or equal to $1x10^{-7}$ but equal to or greater than $1x10^{-9}$	Unlikely to occur, but possible in an item's life cycle	Expected to occur several times in the system life cycle	Expected to occur about once every 10-100 years	Expected to occur about once every 3 years	Probability of occurrence per operation/ operational hour is less than or equal to $1x10^{-7}$ but equal to or greater than $1x10^{-9}$
Extremely Improbable E	Probability of occurrence per operation/ operational hour is less than $1x10^{-9}$	So unlikely that it can be assumed that it will not occur in an item's life cycle	Unlikely to occur, but possible in system life cycle	Expected to occur less than once every 100 years	Expected to occur less than once every 30 years	Probability of occurrence per operation/ operational hour is less than $1x10^{-9}$

Assess Risk



Likelihood \ Severity	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Frequent A					
Probable B					
Remote C					
Extremely Remote D					
Extremely Improbable E					*

High Risk
Medium Risk
Low Risk

* Unacceptable with Single Point and/or Common Cause Failures

Risk Classification

- High Risk: Unacceptable Risk
  - Change cannot be implemented unless hazard's associated risk mitigated so that risk reduced to medium or low level
  - Tracking, monitoring, and management are required
  - Hazards with catastrophic effects caused by:
    - Single point events or failures,
    - Common cause events or failures, or
    - Undetectable latent events in combination with single point or common cause events

  are considered high risk, even if possibility of occurrence is extremely improbable

- Medium Risk: Acceptable Risk
  - Minimum acceptable safety objective
  - Change may be implemented but tracking, monitoring, and management are required

- Low Risk: Acceptable Risk
  - Acceptable without restriction or limitation
  - Hazards not required to be actively managed, but must be documented

ATO and Airports

- Changes made at airports most likely will impact Air Traffic Operations and Procedures
  - Runway Extensions
  - Building Construction
  - Taxiway Changes or Additions

- Changes need to be identified upfront and early and assessed in the design early to ensure proper mitigation are in place

- Air Traffic and Airports must utilize a systems engineering approach to integrate processes to ensure consistency, communication, and effectiveness of potential changes and related safety requirements

THIS MUST BE DONE BEFORE THE FIRST SHOVEL HITS THE GROUND!!!

SRM and Airport Changes

•Currently **NO** considerations are integrated into the OEP Runway Process

•OEP Runway Changes impact Air Traffic procedures

•Airport Construction Impacting Air Traffic Operations

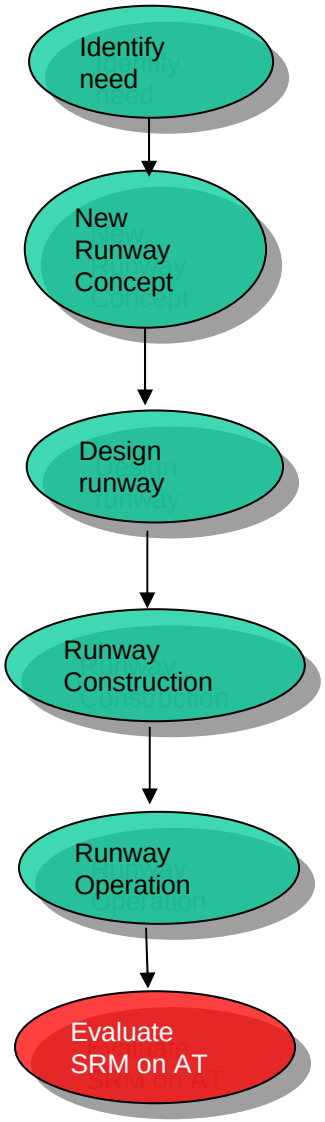
•SRM must be considered in the early stages of OEP runway planning and decision making

•7460 Process is not accomplishing SMS Objective

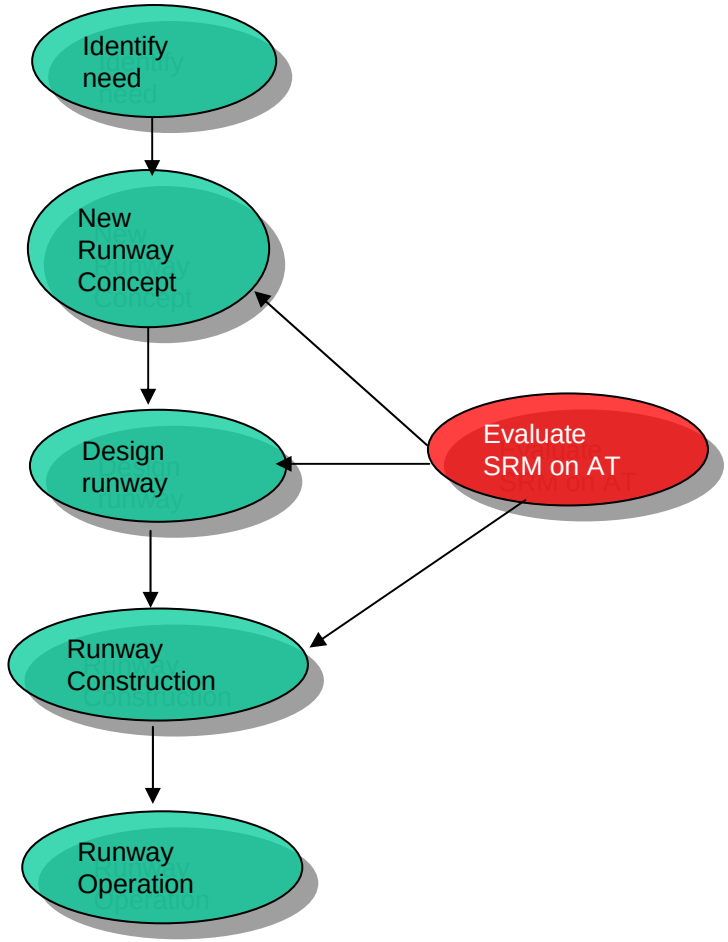
•SRM on impacted procedures must be conducted as runway concept is conceived and developed and **not** as an afterthought.

Process Example

Today



Tomorrow



08-1 Interim Guidance for Safety Management Systems (SMS)/Safety Risk Management Document (SRMD) Activities Requiring ARP Participation.

- ARP is preparing an Order to establish an SMS framework and implementation plan. The new guidance is expected in early 2009.

- In the meantime, ATO is moving forward with its SMS program and is asking ARP to provide subject matter experts for some of its safety risk management processes.

- ATO policy requires evaluation of safety risk for “safety significant changes” to airport procedures, including physical changes to airport runways, taxiways, or the airport operations area.

- While ATO-Terminal guidance specifies that ARP is responsible for the SRMD documenting risk analysis for airfield construction projects, ATO-Terminal is initiating and forming SRM Panels when they know an airport change may impact their procedures. ATO-Terminal, usually through a facility representative, then invites ARP to name SMEs to the SRM Panels.

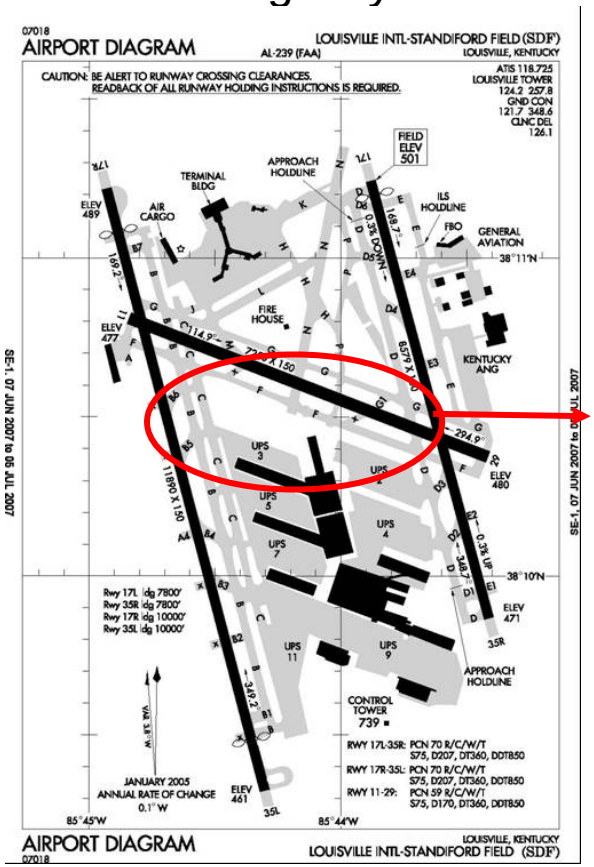
- Until ARP issues its own SMS Order, ARP staff will only participate on SRM Panels as SMEs and will not initiate these panels or issue SRMDs.

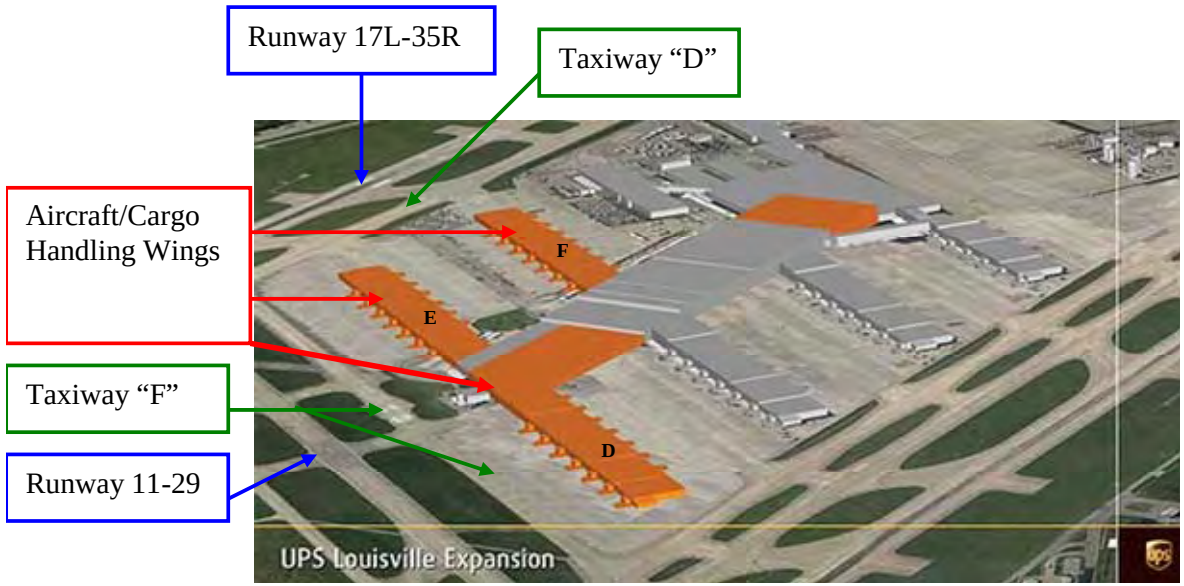
Examples

LOUISVILLE (SDF)

SDF- Louisville / UPS Hanger Extensions

- United Parcel Service (UPS) has advised the FAA and the Louisville Regional Airport Authority (LRAA) of it's plans to begin expansion of it's Louisville "Worldport" hub by approximately one million square feet starting July 2007 and completing in May 2010.





PANEL

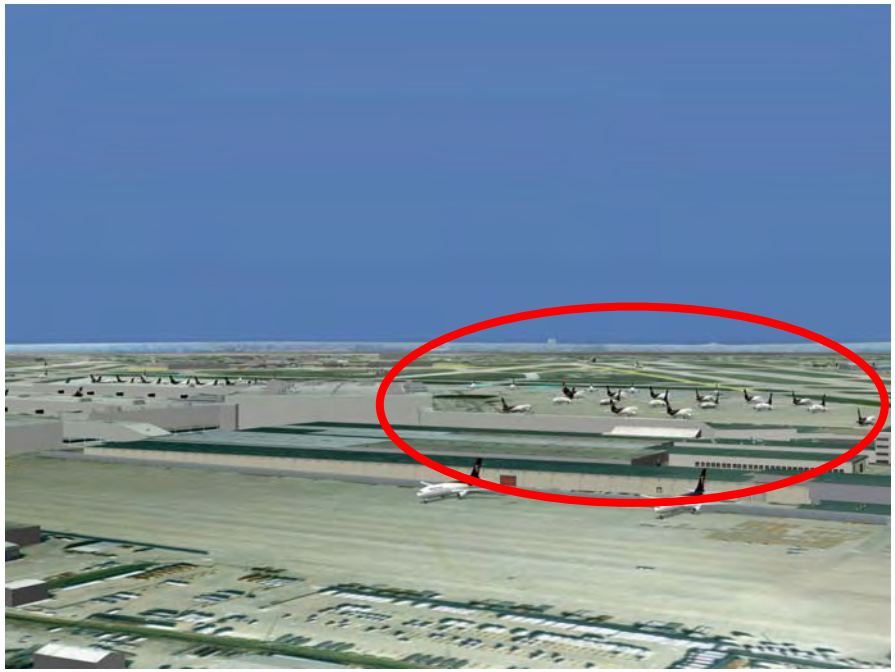
SRM Panel Members	Organization	Role
Rod Bourne	AFTIL/L3	Simulation Design / ATC
Phillip Braden	Memphis Airports District Office	Manager, MEM ADO
George A. Foster	SDF ATCT	SDF ATCT Supervisor
Tommy Dupree	Memphis Airports District Office	Program Manager, MEM ADO
Karen Scott	Louisville Regional Airport Authority (LRAA)	Deputy Executive Director
Mark Scherrens	UPS	Worldport Expansion Program Manager
Jon Brugman	UPS	UPS Plant Engineering
Skip Miller	Louisville Regional Airport Authority (LRAA)	Executive Director
Kris Tucker	SDF ATCT Staff Specialist	SDF Staff Specialist
Tim Smith	FAA Eastern Service Area	Systems Support
Bruce Hargis	FAA Eastern Service Area Contractor Support	Plans & Requirements
David Black	HNTB	UPS Consultant
Greg Albjerg	HNTB	UPS Consultant
Tim Stull	UPS	UPS Operations
David Reuter	FAA Eastern Service Area	Flight Standards
Bob Walker	UPS	UPS Operations
Kevin O'Toole	UPS	UPS Operations
Joe Sims	AFTIL/L3	SMS Facilitator
Bill Vaughan	AFTIL	AFTIL Manager
Stan Pszczolkowski	FAA	Operations Planning

Risks

Hazard	Initial Risk
Unable to have an clear view of runway 11-29 during aircraft pushback from the gates on the new wings “D” & “E” from taxiway “F”	Medium
View of taxiway "F" obstructed by the two new proposed wings between taxiways "C" & "D"	High
New wing “F” obscures view of the UPS ramp area at Spot 4 from the tower	High

Impacts - Visual

Before

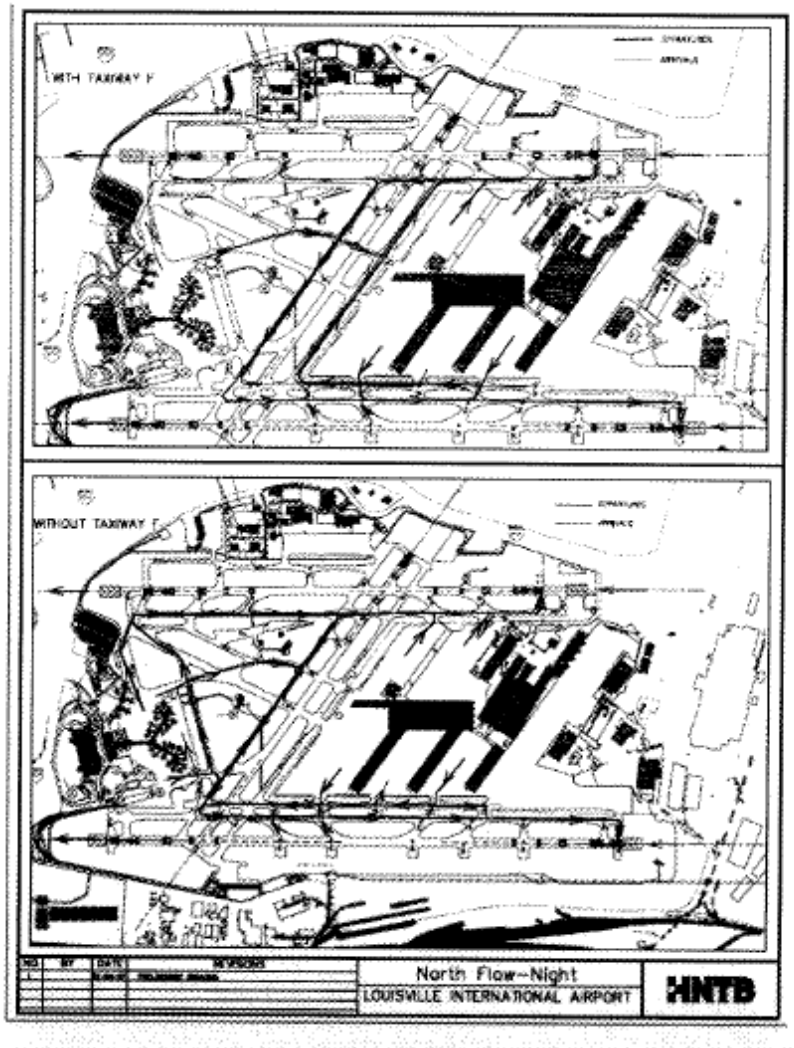


After

Assessment

Hazard# (1)	Hazard Description (2)	Causes (3)	System State (4)	Possible Effect (5)	Severity/ Rationale (6)	Likelihood Rationale (7)	Existing Control or Requirement (8)	Initial / Current Risk (9)	Recommended Safety Requirements (10)	Predicted Residual Risk (11)
B-1 Visibility Daytime Ops	Line of sight angle of incidence, obstructions, object discrimination, 2-point lateral discrimination create visual sight limitations, look-up/look-down.	Visual acuity of observer Contrast with background Atmospheric turbulence due to heat Viewing distance Object motion or lack of motion Proposed new structures (ALP approved) limits line of site Existing structures and ATCT limits line of sight	During both VMC and IMC operations, including departures and approaches . During VMC where visual acuity, depth perception, and object and color differentiation are critical.	Unable to have an clear view of runway 11-29 during aircraft pushback from the gates on taxiway "F" during daytime operations	3 – Major Runway 11-29 operations are partially obscured, especially with vehicles and small aircraft, by UPS aircraft during pushback from the existing and new gates along taxiway "F"	A - Frequent Based on operational ATC experience of the SDF ATCS.	FAA Order 6480.4A: Airport Traffic Control Siting Process The Human Factors Design Standard HF-STD-001 Airport Facilities Terminal Integration Laboratory (AFTIL), FAA Tech Center ATCS shall use 7110.65 procedures for validating and/or verifying aircraft ID, position, and altitude. FAR 91.111, 91.113, 91.115, 91.119, 91.155, & 91.157.	**4A** **Medium**	Limit the number of aircraft operations along taxiway "F" and wings "D" & "E" during daytime staging Do not schedule aircraft pushback's on wings "D" & "E" during daytime Update MOA/LOA/LOP procedures between UPS, LRAA and the tower during aircraft pushback off the current and proposed taxiway "F" wings "D" & "E"	**4C** **Low**

Operations - Impact



- Place taxiway “F” under the control of UPS and designate it as a non-movement area
- Re-design taxi flow and procedures

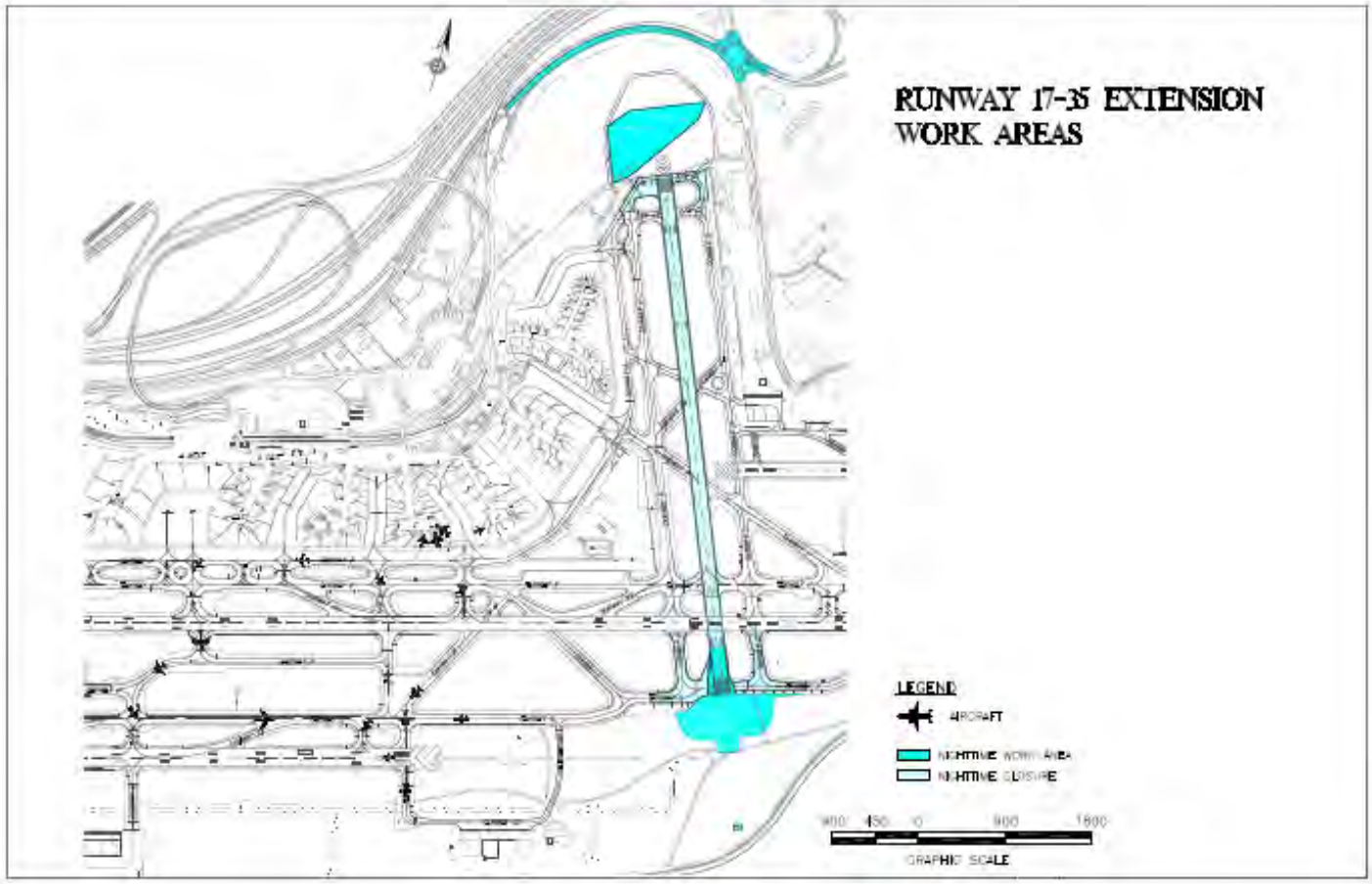
PHILADELPHIA

PHL

- Runway 17/35 at Philadelphia International Airport (PHL) is currently 5460 feet long and 150 feet wide. The Philadelphia Division of Airports, City of Philadelphia, plans to extend the runway to 6500 feet. This extension will include an addition of 400 feet to the north end of the runway and 640 feet to the south.

- This risk assessment is limited in scope to air traffic safety issues within the purview of the Air Traffic Organization (ATO). The analysis of aircraft safety issues (e.g. runway over-run and safety area) has been addressed in the construction planning stage and is in compliance with Advisory Circular 150-5370-2E.

Proposed Change



Panel

SRM Panel Members	Organization	Role
Gail Swider	PHL-ATCT	Field Level Expertise
Bob Eberly	PHL-ATCT	Field Level Expertise
Jerry Atherholt	PHL-ATCT	Field Level Expertise
Keith Brune	Philadelphia Aviation Division	Construction Information
Mike Falteisek	ATO-Terminal Safety	Safety Engineer

Hazards

Hazard	Initial Risk
Light Contamination causing problems for ATC identification of aircraft on the ground.	Medium
Light Contamination causing problems for ATC identification of aircraft on final for RWY 17.	Low
Light Contamination causing problems for ATC identification of aircraft on final for RWY 27L.	Low
Light Contamination causing problems for aircraft on final for RWY 27L causing go-around.	Medium
Construction vehicle committing runway incursion.	Medium
TWY M & L closures causing RWY incursion.	Low
Change in spacing for arrivals landing RWY 27L and RWY 17	Low

SO WHATS NEXT

HOW TO GET THERE

- Air Traffic and Airports: Must integrate processes to ensure consistency, communication, and effectiveness of potential changes and related safety requirements
- Create a group to ensure policy and process alignment
- Integrate SRM Requirements into change processes
- Involve all parties early
- Monitor effectiveness of changes and mitigation

WHO DO I GO TO?

ATO-Safety

SMS Office

Huan Nguyen –Director of Safety Management Systems	202-385-4861
Mike Falteisek- Manager, Safety Risk Management/SMS Policy	202-385-4780
Mark DeNicuolo –Manager SMS Safety Assurance/Promotion	609-485-4843

Runway Safety Office

Steve Smith - Runway Safety Manager	202-385-6245

ATO-Terminal POCs

Alan Feinberg, Senior Safety Engineer, Ph. 202-385-8925

Natking Estevez, Terminal Operations Safety Specialist, Ph. 202-385-8755

Mike Virga, Terminal Program Operations, Ph. 609-485-8877

Tito Gonzalez, Terminal Operations Safety Specialist, Ph. 202-385-8657

Warren Smith, Terminal Operations Safety Specialist, Ph. 202-385-8609

Terminal Operations Safety Specialist, Ph. 202 385-8599

Hub/District Contacts ETSA

INDEPENDENCE
Edward Snyder
Air Traffic Manager,
Griffiss TRACON
Ph. 315-336-2622
Edward.Snyder@faa.gov

Carroll Jones
Carroll.Jones@faa.gov
Philadelphia ATCT
215-492-4109

NEW YORK
Fred Prosperi
ATM, MMU ATCT
Ph. 973-267-0331
Fred.Prosperi@faa.gov

WASHINGTON
Bob Laser
OM, DCA
Ph. 703-413-1533
Bob.Laser@faa.gov

PITTSBURGH
Paul L. Clark
PIT
Ph. 412-269-9237 x235
paul.l.clark@faa.gov

Brooks Tickel
PIT ATC
412-269-9237 EXT: 232
Brooks.Tickel@faa.gov

MEMPHIS
Mike Baker
ATM, MEM
Ph. 901-322-3303
Mike.Baker@faa.gov

Bill Wagner
ATM, BHM
Ph. 205-599-0901
Bill.Wagner@faa.gov

N90
Anthony Russo
Support Manager
Ph. 516-683-2912
anthony.russo@faa.gov

CAROLINA
Preston L. Williams
Support Manager
Ph. 919-380-3113
Preston.L.Williams@faa.gov

Jim Koon
Ph. 704-359-1028
Jim.Koon@faa.gov

NEW ENGLAND
Brendan Reilly
BOS ATCT
617-455-3178
brendan.reilly@faa.gov

NORTH FLORIDA
Steve Ruckman
Support Specialist
Ph. 407-852-7511
Steve.Ruckman@faa.gov

PCT
Brian Hughes
Support Manager
Ph. 540-349-7530
Brian.Hughes@faa.gov

PCT (con't)
Maureen Zwirble
maureen.zwirble@faa.gov

GEORGIA
Mike Jenkins
Support Manager
Ph. 678-364-6161
Mike.Jenkins@faa.gov

Joel Cole
Joel.P.Cole@faa.gov

CINCINNATI
Dan Lewin
CVG ATCT
Ph. 859-372-6407
Dan.Lewin@faa.gov

Lyn Bertke
Support Manager
Ph. 859-372-6418
Lyn.Bertke@faa.gov

SOUTH FLORIDA
Maria Hofbauer
Support Specialist
Ph. 305-869-5485
Maria.Hofbauer@faa.gov

Hub/District Contacts CTSA

GATEWAY
Duane Fant
217-535-1400 x1401
Duane.d.Fant@faa.gov

Philip Harman
314-890-1032
Philip.Harman@faa.gov

GULF
Catherine Myers
337-234-4935
Catherine.Myers@faa.gov

HEARTLAND
Cindy Coram
847-294-7888
Cindy.Coram@faa.gov

Timothy Conway
614-338-4044
Timothy.conway@faa.gov

KANSAS CITY
Cindy Whitten
816-329-2700
Cindy.Whitten@faa.gov

LAKE
Art Hillmer
414-489-2153
Arthur.T.Hillmer@faa.gov

Jay Bailey
414-489-2160
Jay.Bailey@faa.gov

LONESTAR
Anna Herzog
505-856-4900
Anna.Herzog@faa.gov

Mike Keyworth
325-675-8200
Mike.Keyworth@faa.gov

ORCHARD
Kathy Peterson
773-601-7642
Kathy.Peterson@faa.gov

CHICAGO TRACON
Anne Hulsey at C90
847-608-5524
Anne.Hulsey@faa.gov

MOTOWN
Patricia Bynum
734-955-5007
Patricia.Bynum@faa.gov

METROPLEX
Bruce Thorson
817-222-5519
Bruce.Thorson@faa.gov

Robert W. Beck
972-615-2530
robert.beck@faa.gov

NORTHERN LIGHTS
Jeffrey L. Kleinbeck
612-713-4015
Jeffrey.l.kleinbeck@faa.gov

SAN JACINTO
Caroline Carey
281-233-0530
Caroline.Carey@faa.gov

Don B. Baker
281-233-0510
Don.B.Baker@faa.gov

TWO RIVERS
Roger Blake
515-974-8015
Roger.Blake@faa.gov

Hub/District Contacts WTSA

ANCHORAGE
Tom Eisenmayer
(907) 271-2700 x2708
Tom.Eisenmayer@faa.gov

Alfonso A (Andy) Haro
A11 TRACON / ANC ATCT
(907) 271-2710
Alfonso.A.Haro@faa.gov

Clark Wolverton
907-271-2711
Clark.wolverton@faa.gov

DENVER
Marty Berry
303-342-1525
Marty.Berry@faa.gov

William Andrews
720-873-2771
William.Andrews@faa.gov

SANTA BARBARA
William O'Connell
(805) 681-0534
Bill.O'Connell@faa.gov

HAWAII - PACIFIC
Clyde Fuse
808-840-6127
Clyde.Fuse@faa.gov

JOHN WAYNE
Doug Blaul
714-668-0141 ext. 128
Doug.Blaul@faa.gov

Irene Willard
714-668-0141 127
irene.willard@faa.gov

LAS VEGAS
Jon Holman
702-262-5983
Jon.Holman@faa.gov

LOS ANGELES
Tony DiBernardo
310-342-4912
Tony.DiBernardo@faa.gov

Steve Ramirez
310-342-4914
steve.ramirez@faa.gov

N. CALIFORNIA
Pringle Patterson
916-366-4048
Pringle.Patterson@faa.gov

Patty Daniel
916 366-4004
Patty.Daniel@faa.gov

PHOENIX
Kent Peterson
602-306-2522
kent.d.peterson@faa.gov

PORTLAND
Laura Schneider
503-493-7506
Laura.Schneider@faa.gov

James S. Pieser
503-493-7514
James.Pieser@faa.gov

SEATTLE
Ric Wunn
206-214-4602
Ric.Wunn@faa.gov

SALT LAKE CITY
Gordon B. Stewart
208-334-1642
Gordon.B.Steward@faa.gov

Garth Harris
801-325-9691
Garth.Harris@faa.gov

SAN FRANCISCO
Tony Wakin
650-876-2883 ext. 108
Tony.Wakin@faa.gov

Greg Kingery
650-876-2883 x107
Gregory.Kingery@faa.gov

S. CALIFORNIA
Kevin Karpe
858-537-5881
Kevin.Karpe@faa.gov

Richard Pyke
858-537-5884
Richard.Pyke@faa.gov

Service Center SMS/SRM POCs

- **James Garrett, ESC**
- 404-305-7104
- James.Garrett@faa.gov

- **Charles Blackwell, ESC**
- 404-305-7492
- James.Garrett@faa.gov

- **James Owens, CSC**
- 817-222-4500
- James.Owens@faa.gov

- **Charlie Longenecker, CSC**
- 817-222-4795
- Charlie.Longenecker@faa.gov

- **Steve Roewer, WSC**
- 425-203-4330
- Steve.Roewer@faa.gov

- **Anjan Majumder, WSC**
- 425-917-6782
- Anjan.Majumder@faa.gov

What training is Available

- The ATO & Safety: Understanding the Safety Culture (CD)

- SMS Overview online training

  -ELMS Website (FAA Course 10603)

- SMS/SRM Practitioners Training (FAA Course FAA66000004)

  - Contact your service area training coordinator

- ATO-T SRM Workshop (FAA COURSE 67000001)

  - Contact ATO-T Safety Engineer for Information

- ATO-T SMS Managers Briefing (FAA-Course 67000002)

  - Contact ATO-T Safety Engineer for Information

Contact Info

For ATO-Safety Policy and Safety Risk Management Questions

Michael Falteisek
Manager, Safety Risk Management
Email – Mike.Falteisek@Faa.gov
Phone: 202-385-4780

For ATO-Terminal Policy and Process Questions

Alan Feinberg
Senior Safety Engineer
Email – Alan.Feinberg@Faa.gov
Phone: 202-385-8925