Part 139 SMS Implementation Pilot Study
SMS Presentation Agenda

- Introduction
- ATL Stakeholders
- SMS Committees
- Risk Assessments
- SRA Step 6 Risk Management
- ASOCS and SMS DASHBOARD
- SMS Performance Assessment
- Challenges
- Benefits
- Pilot Study Experience Summary
- ATL SMS Logo and Safety Poster
ATL Statistics

- Owner/Operator: The City of Atlanta / Department of

- Total Airport Area: 4,700 acres
- Terminal building and 5 concourses
- 199 gates (171 domestic and 28 international gates)
- 5 Parallel Runways
- Economic impact of more than $32.5 billion for the metro Atlanta
- World’s busiest airport in 2010
  - 950,119 flight operations
  - 89.3 million passengers
Where Is ATL with SMS?

- Participated in 1st Airport SMS Pilot Study
- Draft ATL Safety Management System Manual
- SMS Implementation Plan
- Created ATL SMS Working Group
- Participant 3rd Part 139 SMS Implementation Pilot Study
Airport Stakeholders

- Federal Government
- Police
- Airline
- Concessions
- Security
- Employees
- Ground Handlers
- Airline Customers
- Local Government
- Fire
ATL & Stakeholders

- ATL has an excellent working relationship with its stakeholders
- Stakeholders work together through the ATL SMS Working Group
- Participation in SMS Initiatives
- Data sharing is to benefit ATL and its stakeholders
Airport SMS Committees

- Allows concerns of all airport stakeholders to be raised and taken into account
- Offers a structured forum for discussion and an opportunity to reach a common understanding between interested groups concerning Airport operations and issues of concern among interested stakeholders
- Promotes understanding about Airport operations more widely, through dissemination of relevant information to committee participants
Risk Assessments

- Vehicle Traffic on The Ramp assisted by ATO Safety Assurance Group/Airport Operations
- FOD- assisted by ACE/ESIS
- Taxiway Dixie Conversion-NLVR crossing assisted by ATO Safety Assurance/Airport Operations
## SRA Step 6: Risk Management and Risk Reduction

<table>
<thead>
<tr>
<th>Step 6 Risk Management and Risk Reduction</th>
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<tbody>
<tr>
<td>Critical Control (Y if Residual Severity is Catastrophic or Serious, or if Residual Risk is High)</td>
</tr>
</tbody>
</table>

### Risk Management:
- Conformance to using or following Critical Controls
- Ensuring Preferred Controls or Defense in Depth is in place

### Risk Reduction = Continuous Improvement: Establishing Goals to add better/more controls based on your Risk Priorities
### Step 6: Identify Critical Controls

<table>
<thead>
<tr>
<th>Residual Severity</th>
<th>Residual Probability</th>
<th>Critical Control</th>
<th>Critical Control Owners (by Title)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>L</td>
<td>M N Enclosure of electrical junctions.</td>
<td>Maint</td>
</tr>
<tr>
<td>C</td>
<td>L</td>
<td>H Y Training</td>
<td>Security</td>
</tr>
<tr>
<td>S</td>
<td>L</td>
<td>H Y Flight Path, Clearance areas.</td>
<td>Tower</td>
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If Residual Severity is
- S=Serious or
- C=Catastrophic

- **If Residual Risk is**
  - High

Then Control is “Critical”

(Other Controls may be Critical, based on Assessor’s judgment)

**Assign Critical Control Owners**

- Require “Failure Rate Metrics” from them periodically
- Validate through inspections and observations
- Hold them accountable for maintenance & long-term controls
If The Preferred Controls
• Elimination,
• Substitution or
• Engineering

are not feasible, or the risk is high, then additional and multiple controls (Defense in Depth) should be identified to control the Risk!

For example: (See next page)
### Hierarchy/Defense in Depth Control Verification

<table>
<thead>
<tr>
<th>Scenario (Outcome)</th>
<th>Description of Controls</th>
<th>Residual Risk Total</th>
<th>Critical Control Owner (by Title)</th>
<th>Control Category (based on Corrective Action)</th>
<th>Hierarchy/Defense in Depth Met (if No: Identify additional controls vs. (if yes: stop 3))</th>
<th>Risk Reduction Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle striking and damaging an airplane</td>
<td>Training, licensure, markings, control tower observations</td>
<td>High</td>
<td>Training</td>
<td>Security</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

**“High” Residual Risk**

Training is a “Less Effective” control

Additional Controls are expected (H/DiD not Met)

Either Identify better/more controls or set this Action as part of your Annual SMS Goal Setting
Risk Reduction

- Safety Management System and Risk Management philosophy both include the concept of:
  - Continuous Improvement
- This means ongoing efforts should continually be looking for opportunities to improve, or REDUCE RISKS
- Set targets for risk reduction, either buy developing
  - Corrective Actions for additional Controls and or
  - SMS Goals to investigate, fund etc. additional controls
ASOCS provides a computer-based means to document all airport inspections, incidents, manage the Part 139 compliance process, document calls for service, issue NOTAMS, and store operational and activity data for the facilities. ASOCS allows for a simple means of data research, report generation, and providing an easily accessible and searchable, yet secure, server-based database of information.
SMS Dashboard - Sample - Part 139
SMS Dashboard - Sample - Part 139

Number of FOD Calls

- Advised of by ramp personnel
- Called in by TBI Ramp Tower
- Called in by Delta Ramp Tower
- Observed during inspection
- Called in by ATCT

Type of FOD

- Other
- Metal
- Rock
- Plastic
- Cardboard
- Paper
Type of Hazmat Spills

- Q1 2011
- Q2 2011
- Q3 2011
- Q4 2011

- Other
- Isopropanol (alcohol)
- Oil spill
- Jet A
- Hydraulic fluid
- HazMat (unknown)
- Gasoline
- Diesel Fuel
- Deicing Fluid
SMS  Performance Assessment

- Internal assessment was a focus audit on the implementation of Safety Risk Management components.
- Used ESIS Insurance assessment tool based on the SMS NPRM
Challenges

- Safety Risk Management: FAA guidance material does not address which entity (airport, air carrier, service provider, etc.) is responsible for accepting any known risks for shared responsibilities/areas.

- Develop a documented process/protocol for the Airport and its business partners ensuring acceptance and harmonization of the decision making process and defining responsibilities to evaluate, accept and mitigate risks; need to be addressed in each operator’s particular SMS (i.e. MOUs MOAs, Lease Agreements).
Challenges Continued

- Time required to conduct an SRM Panel can be substantial depending on the nature of the scenario; After three risk assessments, none were completed within a six-hour, one-day session; should be two four-hour sessions to complete an external risk assessment.

- The initial SRM Tools that were used from the ACRP Report 1 Safety Management System for Airports, Volume 2: Guide Book was inadequate for an effective risk assessment evaluation.

- Safety Assurance: The FAA should provide an example of an SMS assessment table that airports could use when conducting an assessment. The ACRP SMS Guidebook and ICAO provide examples of SMS assessment tables.
Challenges Continued

- FAA should provide resources to assist airports in creating a training curriculum. ICAO has provided a ten-module presentation and handouts on the ICAO website for the industry to use. This would provide a uniform and consistent set of standards for initial and recurrent training that would meet the goals and expectations of SMS.

- FAA should provide guidance on how the airport, air carrier and FAA Air Traffic SMS programs would interface. There are concerns related to responsibilities, auditing processes and interests regarding ramp/gate areas that may be exclusively leased by an air carrier or other entity; provide guidance on how these issues should be addressed with regards to notification and data sharing requirements.
Benefits

- The use of SMS at ATL can contribute by increasing the likelihood that airport operators will detect and correct safety problems before those problems result in an aircraft incident or accident.
- The SMS will allow ATL to realistically and efficiently balance safety and operations. Perhaps most importantly, ATL will be at the forefront of the FAA mandated SMS requirement for all airports in the future.
- The Safety Risk Assessment process is helping to effectively evaluate, hazards with construction projects and changes on the airfield.
- Establishing an SMS Working Group with tenant involvement has provided cohesive business relationships in the development and refinement of the ATL SMS Program. The SMS Working Group will become the Safety Committee, as directed in the SMS Program.
Benefits

- The ASOCS database system is very beneficial for Part 139 reporting and being able to fulfill SMS reporting requirements. The SMS Dashboard will supplement the ASOCS data with trend analysis and tracking capability.

- This Part 139 Implementation Study provided ATL a robust SMS program with more resources and tools, a refined SMS Manual, and an informed staff on the Safety Risk Management and Safety Assurance components of SMS. Overall, this will enhance safety initiatives at ATL.

- As a result of partnering with ESIS Insurance and the Air Traffic Organization, the following have been successfully developed:
  - Robust Safety Risk Assessment process, a
  - Conceptual SMS Dashboard/SMS Module to be incorporated into the ASOCS system for SMS reporting
  - Through SMS Manual and Implementation Plan,
  - An effective SMS Performance Assessment Tool
HJAIA SMS Logo & Safety Poster

HARTSFIELD-JACKSON

SAFETY MANAGEMENT SYSTEM

HELP CREATE A CULTURE OF SAFETY
THINK SAFETY FIRST!
SMS Pilot Study Experience Summary

- SMS will increase the likelihood that airport operators will detect and correct safety problems before those problems result in an aircraft accident or incident.
- The SMS will allow ATL to strike a realistic and efficient balance between safety and operations, and most importantly, ATL will be in the forefront of the upcoming FAA mandatory SMS requirement for all airports in the future.
- The SMS initiative will help support the strategic priorities *enhancing the customer experience* and *optimizing operational efficiencies*. 
Questions?
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