Safety Risk Management at the State Level

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Annex 19: Safety Management

General Content Today
- State Safety Programmes (SSP)
- SMS for Service Providers
- Protection of Safety Information

Proposed Additions to SSP
- Safety Management at the State Level
- Safety Performance Improvement
- Emergency Response Planning
Case study
US FEDERAL AVIATION ADMINISTRATION
Overview of U.S. Safety Management

- The U.S. SSP provides the overarching framework for the U.S. safety system.
- The FAA SMS provides the details of the FAA approach to safety management, showing how the US will meet most of the tenets of SSP.
- The Risk-Based Decision Making Initiative enables the FAA SMS by putting in place the tools and processes to proactively address emerging safety risk using consistent, data-informed approaches to support system-level, risk-based decisions.
U.S. SSP Document

- Describes how the U.S. meets the 11 ICAO SSP Framework elements
  - U.S. currently meets SSP intent and most elements through implementation of FAA SMS and SMS in the Lines of Business (LOBs)
- Focuses on roles of FAA and National Transportation Safety Board (NTSB)
  - Although multiple U.S. Government agencies may contribute to U.S. SSP
- *Foreword*, signed by the FAA Administrator and NTSB Chairperson
- Will be reviewed on a regular basis to ensure it reflects evolving aviation safety standards and practices
FAA SMS Order

- FAA Order 8000.369A, Safety Management System, Purpose:
  - Ensure commonality and alignment of SMS implementation across the FAA
- Content:
  - Explains the SMS principles and requirements
  - Establishes the FAA SMS Executive Council and FAA SMS Committee
  - Standardizes terminology for SMS
  - Requires FAA organizations to:
    - Establish guidance for their own SMS activities and their industry segment on implementing SMS
    - Develop and maintain SMS implementation and/or continuous improvement plans
Risk-Based Decision Making
Build on SMS principles to address emerging safety risk by using consistent, data-informed approaches to make smarter, system-level, risk-based decisions

Global Leadership
Improve safety, air traffic efficiency, and environmental sustainability across the globe through an integrated, data-informed approach that shapes global standards and enhances collaboration and harmonization

National Airspace System
Lay the foundation for the NAS of the future by accelerating prioritized NextGen benefits, integrating new user entrants, and delivering more efficient, streamlined services

Workforce of the Future
Prepare FAA’s human capital for the future, by identifying, recruiting, and training a workforce with the leadership, technical, and functional skills to ensure the U.S. has the world’s safest and most productive aviation sector

FAA Strategic Initiatives
Summary

• The U.S. is integrating their safety management activities to have cohesive approach, whereby:
  – The U.S. SSP provides the overarching framework for the U.S. aviation safety system
  – The FAA SMS provides the details of the approach
  – The Risk-Based Decision Making Initiative enables the FAA SMS by putting in place the tools and processes to proactively address emerging safety risk.
Case study

UK CIVIL AVIATION AUTHORITY
UK Approach Similar to FAA

- UK has similar structures and documents to the FAA approach
- Two features spotlighted for discussion
  - Risk Wheel
  - Safety Model
### People
- Pilot Performance
- Fatigue Management
- ATCO Performance
- Engineer Performance
- Ground Staff Performance
- Automation / HMI

### Technology
- Helicopter Tech Reliability
- Precision Approaches
- Un-stabilised Approaches
- TCAS / EGPWS Available/
  Correct Response
- Pilot Information
- Production Supply Chain
  Lithium Batteries

### Ops Environment
- Helicopter Ops Environment
  CAT in Class G
- Ground Operations/ De-Icing
- Some Foreign Operators
- Destination Hotspots
- Weather /Turbulence
- New Business Models
- CAS Infringement
- Laser Threat

### Accident Types
- Loss of Control
- Flight Management
- Runway Excursion
- Mid Air Collision
- Loss of Control due
  Ground Services
- Collision on Ground
  Runway Incursion
- Controlled Flight into
  Terrain
- Aircraft Environment
  Un-survivable
# State Level Safety

<table>
<thead>
<tr>
<th>SRM Level</th>
<th>US Examples</th>
<th>UK Examples</th>
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<tbody>
<tr>
<td>Strategic Planning</td>
<td>• Strategic Initiatives to allow for a more cohesive approach to enhance safety</td>
<td>• Strategic initiatives to improve actions targeted to risk and better integrated internationally</td>
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<tr>
<td>Systematic</td>
<td>• FAA SMS including hazard identification and risk mitigation</td>
<td>• FAA SMS including hazard identification and risk mitigation</td>
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<tr>
<td>Annex 19 Amdt 1 max</td>
<td>• Integrates SMS in core activities</td>
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<tr>
<td>max interpretation</td>
<td>• Performance Based Oversight</td>
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<tr>
<td>Collaborative</td>
<td>• US CAST FAA - Industry</td>
<td>• Significant 7 TFs CAA - Industry</td>
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<tr>
<td>Annex 19 Amdt 1</td>
<td>• International work e.g. SM ICG</td>
<td>• International Partners/ Hotspots</td>
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<tr>
<td>max interpretation</td>
<td>• ASIAS ‘big data’ system</td>
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<tr>
<td>Proactive</td>
<td>• Strategic Initiatives</td>
<td>• Safety Improvement Projects</td>
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<td>Annex 19 Amdt 1</td>
<td>• Measure Continuous Improvement</td>
<td>• Measure Continuous Improvement</td>
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<tr>
<td>max interpretation</td>
<td>• Safety data analysed &amp; shared</td>
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<tr>
<td>Reactive</td>
<td>• Clear FAA &amp; NTSB responsibilities</td>
<td>• Clear CAA &amp; AAIB responsibilities</td>
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<tr>
<td>Annex 19 SSP</td>
<td>• Event causes investigated, analysed and addressed</td>
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<td></td>
<td>• Safety Oversight focus on risk</td>
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<td>• Training &amp; Publications</td>
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Case study

SMALLER STATES
What if I am a Small State: Scalability

**Larger / Mature**
- Use extensive data analysis from own industry reports to determine risk profile
- Programmes to generate best practice/technology for all areas of aviation
- Programmes to explore where issues may arise in (inter)national systems

**Smaller/ Emerging**
- Use internationally published data analysis for main risks and add key local hazards
- Apply internationally published best practice/tools to target selected risks
- Workshop with all front line disciplines present to discuss local hotspot situation
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