IS-BAO
for
Small Flight Departments

International Business Aviation Council
International Business Aviation Council (IBAC)

- Non-Government Council
- Represents the Interests of Business Aviation Worldwide
- 14 Member Associations
- Permanent Observer Status with the International Civil Aviation Organization (ICAO)
- Manage the IS-BAO Program
An International Standard for Business Aircraft Operations (IS-BAO)

- Professional Code of Practice
- Developed by the Industry for the Industry
- Based on ISO 9000 Principles
  - Tailored for Aviation
- Promotes harmonization of quality operating practices for business aircraft operations on the international level.
- Scalable to Fit all Sizes, Missions, Aircraft Types
- Foundation is a Safety Management System (SMS)
IS-BAO Standards

- IS-BAO Standards based on:
  - ICAO Standards and Recommended Practices (SARPs)
    - Recommended Practices in italics
  - Business Aviation Best Practices
- Cover all aspects of the organization
- Performance based
  - Describes what the operator must do
  - How depends on size and complexity of organization.
IS-BAO Overview

• Introduced in 2002 after 2 years of developmental testing
• Approximately 100 aviation organization involved
• Voluntary program
• Registration encouraged
  – Requires an external audit by IBAC accredited auditor.
World-Wide Growth

• Over 1700 IS-BAO manuals distributed
• Over 730 registered operators worldwide---Growing!
• 33% Stage I, 47% Stage II, 20% Stage III.
IS-BAO Standards: Chapters 3 thru 15

3. Safety Management System
4. Organization and Personnel Requirements
5. Training and Proficiency
6. Flight Operations
7. Operations in International & Special Use Airspace
8. Aircraft Equipment Requirements
9. Aircraft Maintenance Requirements
11. Emergency Response Plan
12. Environmental Management
13. Occupational Health and Safety
14. Transportation of Dangerous Goods
15. Security
Safety Management System
(ICAO Annex 19)

Systematic approach to managing safety, including the necessary:

– Organizational structure
– Accountabilities
– Policies
– Procedures.
Safety Management System (SMS)

- SMS appropriate to the size and complexity of the operation
- Based on ICAO model
  - 4 Components
  - 12 elements
- Facilitates State Recognition.
SMS – Short Version

- Managing risk to a level as reasonably practicable...

ALARP
Small Flight Departments

• What is it?
  – Single aircraft
  – Three employees or less

• Why Special?
  – Fewer than 15% of all registrants
  – 65% of NBAA members operate a single aircraft.
What’s the Problem?

• SFD operators told us....
  – Not enough benefit vs. cost
    • What’s in it for me?
  – Insufficient resources
    • People
    • Time
    • Money
    • Expertise.
More...

• Boss not interested
  – Doesn’t understand the problem
  – Aircraft operations cost too much now

• Other flight department members not interested, other priorities, overworked, underpaid, etc....
Major Issue

• Creating a company operations manual
• IS-BAO currently provides a Generic Company Operations Manual (GCOM)
• For SFD GCOM reported to be:
  – Too complicated
  – Too much detail
  – Not enough real process/procedures.
Solution:

- SFD Generic Operations Manual
- Tailored to operators with –
  - Light to moderate schedules
  - Few people to communicate with
  - Little maintenance performed in house
  - Few records to keep
  - Limited resources.
Why IS-BAO?

• Selling the concept may be the most important step for –
  – You
  – Flight department personnel
  – The boss

• References:
  – www.ibac.org/is_bao-2
  – www.ibac.org/is-bao-benefits
IS-BAO Operators attain --

• Enhanced operational safety through proactive methods
• A sense of teamwork and pride of achievement
• Improved efficiency and effectiveness
• Increased senior management understanding and appreciation for the flight department
• Reduced insurance rates
• The ability to measure overall department performance.
For the Boss --

• Measuring risk enables us to ensure we have covered all aspects of our operation
  – We can’t readily measure safety
  – We measure risk!

• IS-BAO used by flight departments around the world

• Provides high quality standards covering the entire operation

• The processes and procedures enable us to ensure that we are doing what we need to do
More...

- **Costs** to implement and maintain the program are **minimal** compared to our overall operational costs
- High quality standards enable us to be more efficient and effective
- Most of all, we have a better method of measuring all of our efforts
Others Who Need to Know

• The boss’ assistant/secretary
• Chief Operating Officer
• Risk management/insurance
• Legal
• Human resources
• Passengers
Selling it...

- Know your product
- Know your audience
- Listen carefully
- Define the need
- Note usage examples
- Ask for the order!
SFD Generic Operations Manual

- Tailored to the SFD
- More specific items provided
- Smaller -- 41 vs 72 pages for GCOM
- Fewer fill-in-the-blank sections
- More compact reports
- Better task integration
SMS

• Safety Risk Profile

  – A copy of the safety risk profile is shown in attachment B. It presents the highlights of the hazards and associated risks identified by this company with linkage to the mitigation that has been developed to manage the level of risk to as low as reasonably practicable. The Safety Manager is responsible for drafting the initial list of issues for the Flight Department Manager’s approval and updating the profile at least annually.
## Operator Risk Profile

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Risk Level</th>
<th>Mitigation</th>
<th>Ops Manual</th>
<th>Resulting Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weather</td>
<td>H</td>
<td>Planning, Standards</td>
<td>6.4</td>
<td>L</td>
</tr>
<tr>
<td>Airport</td>
<td>(Care in selection)</td>
<td></td>
<td>6.6</td>
<td>M</td>
</tr>
<tr>
<td>Size</td>
<td>M</td>
<td>Performance data</td>
<td>6.6.3</td>
<td>M</td>
</tr>
<tr>
<td>Contamination</td>
<td>H</td>
<td>Performance data</td>
<td>6.6.6</td>
<td>M</td>
</tr>
<tr>
<td>Terrain/obstacles</td>
<td>H</td>
<td>Approach/departure procedure notes, airport analysis</td>
<td>6.7</td>
<td>L</td>
</tr>
<tr>
<td>Inst. Approach</td>
<td>H</td>
<td>Approach procedures</td>
<td>6.8</td>
<td>L</td>
</tr>
<tr>
<td>Facilities</td>
<td>L</td>
<td>Research</td>
<td>6.2</td>
<td>L</td>
</tr>
<tr>
<td>Air Traffic Svcs.</td>
<td>M</td>
<td>Research, experience</td>
<td>6.3</td>
<td>L/M</td>
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<tr>
<td>International</td>
<td>H</td>
<td>Flight planning/handling services, coordinated planning</td>
<td>7</td>
<td>M</td>
</tr>
<tr>
<td>Security</td>
<td>M</td>
<td>SOP, international assessments</td>
<td>15</td>
<td>L</td>
</tr>
<tr>
<td><strong>Airworthiness</strong></td>
<td></td>
<td></td>
<td>9.1</td>
<td></td>
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<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-house</td>
<td>M</td>
<td>Training, experience, currency</td>
<td>9</td>
<td>L</td>
</tr>
<tr>
<td>On road</td>
<td>M</td>
<td>Research, evaluation</td>
<td>9.7</td>
<td>L</td>
</tr>
<tr>
<td>Contract</td>
<td>M</td>
<td>Process, research</td>
<td>9.8</td>
<td>L</td>
</tr>
<tr>
<td>Hazard</td>
<td>Associated Risks</td>
<td>Mitigation Strategies</td>
<td>Mitigation Accomplished</td>
<td>Follow-up Evaluation</td>
</tr>
<tr>
<td>--------</td>
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</tr>
</tbody>
</table>
| 7/11/14 – JC – VNY FBO taxiway between hgrs too narrow. Wing walkers not provided. | Wingtip collision with hangar/GSE.  
High risk assigned. | a. Radio FBO to provide wing walkers.  
b. Shut down, request tug  
c. Cease using FBO | FBO will provide two wing walkers on request if available or aircraft will be towed in or out of the alley. 7/15/14 | 10/3/14 – After four trips to VNY, process works well |
| 8/21/14 – SB – Fuel load incorrectly entered into FMS caused longer takeoff distance/shallow climb gradient on a relatively short runway. | Runway excursion or obstacle collision possible.  
High Risk Assigned | a. Pilot monitoring double check fuel entry value.  
b. Have both pilots verify fuel load entry. | Both pilots verify fuel load entry – on prestart checklist. 8/23/14 | 1/7/15 – No repeat of |
| 9/5/14 – JS – Passengers boarding aircraft walk through the hangar during bad wx. Aircraft wing tips often overlap the passenger walkway. | Serious injury to passengers is possible due to possible head impact with trailing edges and/or static discharge wicks. Medium risk | a. Have FBO enforce proper aircraft parking rules.  
b. Load passengers from lounge.  
c. Install wingtip streamers | FBO will enforce aircraft positioning rules and install streamers on all aircraft parked next to the walkway. | 12/1/14 – FBO is enforcing the rules. |
The Training Manager shall be accountable for administration of all training activities within the department. Those duties shall include:

– devising and monitoring all required training elements for the flight department
– arranging, scheduling and ensuring that all training requirements are completed as specified the Stage of registry, the flight department and ISBAO
– maintaining records of training event completion
– keeping the flight department manager apprised of training progress
Aircraft Airworthiness

• The PIC shall ensure that the aircraft to be used for an assigned flight is airworthy. This shall be accomplished by reviewing the following:
  – Maintenance record tracking system for completion of required inspections, airworthiness directives and mandatory service bulletins and required replacement of life-limited parts.
  – Aircraft discrepancy record to ensure that all discrepancies have been corrected or deferred in accordance with the aircraft minimum equipment list (MEL).
  – Ensuring the aircraft is in a safe condition for flight by performing a thorough preflight inspection.
OSHA

The MM shall identify, comply with and train all flight department members regarding all national and local occupational health and safety laws and a workplace safety programme;

– compliance with fire safety, first aid and sanitary requirements;
– safety and protective clothing, devices and equipment, particularly fall protection for aircraft maintenance personnel;
– provision of safety information and training to employees;
– machinery, tools and equipment, including lifting equipment safety standards; and
– control of requirements, including those related to storage, handling and information regarding hazardous materials.

Dangerous Goods

• Dangerous goods (hazardous materials) shall not be carried aboard the aircraft.

• The Training Manager will ensure that all flight department personnel receive biennial training in the recognition and handling of dangerous goods.

• Passengers will be informed of what materials are considered dangerous via a poster identifying these items located in the passenger lounge and via brochures distributed to regular and potential passengers within the company. Additionally, the pilot providing the preflight passenger safety briefing will mention the prohibition of carriage of dangerous goods in the aircraft.
SFD Plans

• Finishing touches being applied next month
• Program and sample manual will be provided when the 2015 IS-BAO standards are released in January
• SFD materials are not mandatory, only advisory in nature.
IS-BAO

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