Request for Proposals:
Safety Management System Workshops

1. Introduction:

The National Business Aviation Association (NBAA) represents the interests of 8,000 Member companies that operate over 10,000 aircraft to support their businesses. NBAA is viewed as the leading organization for companies that rely on general aviation aircraft to help make their businesses more efficient, productive, and successful.

The use of Safety Management Systems (SMS) by business aircraft operators to proactively identify and manage risks is now an important part of the safety strategy for business aviation. Under a formalized SMS, operators identify potential hazards and ensure that a process is put in place to effectively manage them. NBAA advocates that flight departments of all sizes implement an SMS.

The International Business Aviation Council (IBAC) introduced the International Standard for Business Aircraft Operations (IS-BAO) program over seven years ago recognizing the need for leadership in fostering harmonization of operating procedures and requirements. IBAC and its Member Associations built the IS-BAO program based on the strong, internationally recognized foundation of Standards and Recommended Practices (SARPS) issued by the International Civil Aviation Organization (ICAO), responsible for setting world-wide aviation safety requirements. At the core of IS-BAO is a scalable SMS model and an SMS Toolkit for business aircraft operators, from single aircraft/single-pilot operations to large multi-aircraft flight departments.

The ICAO SARPS found in Annex 6, Part 2 now specify that an SMS requirement be incorporated into national safety regulations for operators of non-commercial aircraft (i.e. FAR Part 91) over 12,500 pounds maximum takeoff weight or turbojet powered aircraft. The compliance date for these standards is November 2010. Annex 6 Part 1 of the ICAO SARPS required compliance beginning on January 1, 2009 for commercial operators (i.e. FAR Part 135).

ICAO recognized IS-BAO as a code of practice to meet the new Annex 6 standards. The European Aviation Safety Agency (EASA) also proposes to recognize IS-BAO as a means of compliance with its new non-commercial operating regulations and SMS requirements. Additionally, the UK Overseas Territories have recognized IS-BAO registration as the preferred means of complying with their non-commercial operating rules and SMS requirements. A comprehensive and detailed SMS Toolkit is provided with the IS-BAO at no additional cost to manual holders. This Toolkit provides extensive guidance, forms, and background material on implementing and maintaining an SMS.

In addition to the toolkit, IBAC developed two individual workshops to introduce the SMS concept and provide guidance on the implementation process. NBAA wishes to evaluate the possibility of partnering with one or more vendors to present these workshops at various locations in the United States.
NBAA seeks responses to this Request for Proposals (RFP) for the scope of services outlined below in Section three. NBAA reserves the right to withdraw this RFP or not to award any services to any respondent. NBAA may award this RFP to more than one service provider. Please submit responses in accordance with the instructions in Section four.

2. **Overview of SMS Workshops:**

The first workshop, *Introduction to SMS*, is designed to be a two-day event that covers the basics of aviation safety and SMS concepts. The workshop will include presentations, discussions, and group exercises. The target audience is aviation management personnel in operations, maintenance, safety and other areas that may be involved in SMS development. The second workshop is the *SMS Toolkit Workshop*. It is designed to address the SMS implementation and development process. This workshop is intended to be a one day event for operators that are planning to utilize the IBAC SMS Toolkit. The target audience for this workshop is business aviation management personnel and safety officers who will be involved in SMS development.

While the workshops will normally be held during three consecutive days, this is not required. However, NBAA would like respondents to provide information on how they would meet the requirements to present both the *Introduction to SMS and SMS Toolkit Workshops*.

For both workshops, IBAC has developed learning objectives and a syllabus that will be utilized in the presentation of the material. A series of PowerPoint presentations, exercise scenarios, and guidance material has also been developed for use by workshop presenters. If vendors are selected, an IBAC SMS expert will provide training to the presenter(s) on the two workshops. The IBAC expert will also be responsible for a quality assurance process to monitor the effectiveness of the workshops. The information obtained from this process will be shared with NBAA and the presenter involved in the specific workshop.

NBAA would be responsible for selecting the workshop locations, securing meeting space, and marketing the workshops to NBAA Members. In addition, NBAA would be responsible for workshop registration and collection of associated fees. If NBAA selects one or more vendors to provide these workshops, a revenue sharing arrangement would be established with the vendor(s).

For specific details on the planned syllabus and learning objective for the two workshops, please see Attachment A. This document is intended to offer general guidance on content for the workshops. Respondents are encouraged to offer additional suggestions on areas such as the length of the workshops and scope of topics to be covered.

3. **Scope of Services:**

In partnering with one or more vendors to offer the SMS Workshops, NBAA seeks the following broad categories of services. Additional details about the specific requirements for the workshops can be found in the sections below.

- Ability to provide qualified presenters with substantial knowledge of SMS concepts as they relate to business aviation;
- Capability to offer experienced presenters that have proven presentation skills;
• Ability to provide presenters that have experience in providing training on SMS or other similar safety related materials to business aviation audiences;
• Ability to travel to various workshop locations around the United States and adhere to the workshop schedule established by NBAA;

NBAA will consider a variety of factors in evaluating proposals offered in response to this RFP. The items listed above and specific details of the workshops included in Attachment A were developed based on the experience of IBAC and its Member associations in the development of SMS programs. This is not necessarily an exhaustive list, and NBAA looks forward to receiving creative and innovative proposals from qualified vendors that may provide valuable additions to the workshops.

To assist respondents we are providing details on the criteria that will be utilized by NBAA staff members in evaluating proposals. In addition to the features mentioned above, NBAA believes that the following items are very important in providing valuable SMS workshops for Members:

• **Ability to Provide Qualified Presenters with Knowledge of SMS Concepts**

While many NBAA Members are familiar with the general principles of an SMS, they are interested in obtaining information on how an SMS can be applied to the business aviation environment. Attendees at these workshops will be looking for information on the specific safety benefits that an SMS can provide to their operation. With these points in mind, it is important that the presenter have significant experience in the application of SMS programs to business aviation.

Details on the experience of the vendor and its presenters in working with flight departments to implement SMS programs would be helpful in evaluating responses. Information on any previous SMS-related speaking engagements is also desired.

• **Familiarity with IS-BAO and the SMS Toolkit**

Assisting NBAA Members in the development and implementation of an SMS that meets ICAO and national/regional civil aviation regulations is the main focus of this workshop. In addition, NBAA would like to introduce Members to the IS-BAO and the benefits of becoming a registered operator. In order to accomplish these goals, it is desired that the vendor and presenters have significant experience with the specifics of the IS-BAO program. The SMS Toolkit is complementary to the IS-BAO and provides operators with specific guidance on the SMS implementation process. This means that vendors and presenters should be thoroughly familiar with both the IS-BAO and the accompanying Toolkit.

To evaluate the experience level of the vendor and presenters, information on IS-BAO auditing experience or implementation support provided to flight departments is desired. Please provide details on your work with operators to develop and implement SMS programs that meet the IS-BAO standard.

• **Familiarity with ICAO Annex 6 Part 1 and 2**

Many NBAA Members that participate in the workshops will be doing so to comply with provisions in ICAO Annex 6 Part 1 (commercial operators) and Part 2 (non-commercial operators) that require adoption of an SMS. IS-BAO and the SMS Toolkit are designed to be utilized by both Part 91 and 135 operators. This means that vendors and presenters must be very familiar with the specific provisions in
ICAO Annex 6 that deal with SMS requirements. It is also important that the presenter understand the applicability of ICAO SARPS and how they are implemented by member states.

Details on your experience in providing instruction on elements of the ICAO SARPS to business aircraft operators would be helpful in evaluating responses. Information on international operations experience is also desired.

- **Experience in working with business aviation customers**

When implementing an SMS, business aircraft operators will have unique requirements and expectations that may differ from other industries that utilize SMS concepts, such as commercial airlines. It is important that the vendors and presenters have significant experience in the business aviation industry. Knowledge of the specific SMS requirements for Part 91, 135, 125, and 91K operators is also important. For example, some flight departments will have challenges implementing an SMS due to limited staff resources. Workshop attendees will look to presenters for specific strategies that can be used to implement an SMS in the business aviation environment. Please provide specific details regarding your experience in working with business aviation customers.

4. **Responses:**

In order for NBAA to evaluate the responses, please provide a description of how the SMS Workshops offered by your company would meet the requirements specified above. Also, include information on how your company meets the selection criteria described above. Finally, provide information on the pricing structure that your company believes would be appropriate for providing presenters to conduct these workshops. Any initial details that can be provided on how a revenue sharing arrangement could be structured with NBAA would also be helpful in evaluating the proposals.

Responses to this Request for Proposals must be provided in writing and postmarked or emailed no later than **August 7, 2009**. Please send responses to:

Scott O’Brien
National Business Aviation Association, Inc.
1200 Eighteenth Street, NW
Suite 400
Washington, DC 20036
Phone: (202) 783-9451
email: sobrien@nbaa.org

**ALL RESPONSES WILL BE HELD IN STRICT CONFIDENCE AND WILL NOT BE SHARED EXTERNAL TO NBAA STAFF.**

NBAA will review all responses received and follow up to respondent(s) with any questions about specific proposals.

NBAA intends to notify the successful respondent(s), if any, by September 4, 2009.
OUTLINE

SMS WORKSHOPS

FOR

BUSINESS AVIATION

International Business Aviation Council (IBAC)
Suite 16.33, 999 University Street
Montreal, Quebec, H3C 5J9, Canada

www.ibac.org
Table of Contents

1. About the SMS Workshops ..................................................................................................1
   1.1 Overview.................................................................................................................................... 1
   1.2 Workshop Objectives ................................................................................................................. 1
       1.2.1 Introduction to SMS Workshop........................................................................................... 1
       1.2.2 SMS Toolkit Workshop ...................................................................................................... 1
   1.3 Specific Learning Objectives ...................................................................................................... 1
       1.3.1 Introduction to SMS Workshop........................................................................................... 1
       1.3.2 SMS Toolkit Workshop ...................................................................................................... 2
   1.4 Workshop Prerequisites ............................................................................................................. 2
       1.4.1 Introduction to SMS Workshop........................................................................................... 2
       1.4.2 SMS Toolkit Workshop ...................................................................................................... 2
2. Workshop Syllabus ..............................................................................................................2
   2.1 Introduction to SMS Workshop ................................................................................................... 2
       Topic 1: Workshop Introduction................................................................................................... 2
       Topic 2: Introduction to SMS ....................................................................................................... 2
       Topic 3: Making the Case for SMS .............................................................................................. 3
       Topic 4: Introduction to Safety-Risk Management ........................................................................ 3
       Topic 5: SMS Components - Management Framework ............................................................... 3
       Topic 6: SMS Components - Hazard Analysis ........................................................................... 3
       Topic 7: SMS Components - Ongoing Safety Management Activities ........................................ 4
       Topic 8: Hazard Analysis Exercise .............................................................................................. 4
   2.2 SMS Toolkit Workshop ............................................................................................................... 4
2.3 Reference Material ...................................................................................................................... 5
4. Typical Agenda ........................................................................................................................... 5
   4.1 Introduction to SMS Workshop ................................................................................................... 5
   4.2 SMS Toolkit Workshop ............................................................................................................... 6
SMS Tools Workshop Outline

1. About the SMS Workshops

1.1 Overview

The SMS workshops for business aviation are two individual workshops that normally will be held in three consecutive days. The first is the Introduction to SMS Workshop. It is a two day classroom event that covers the basics of aviation safety and safety management systems. It includes presentations, discussions and group exercises. This workshop will be of interest to business aviation management personnel in operations, maintenance and other branches who have accountabilities within a safety management system (SMS), and safety officers who wish to develop an understanding of safety management systems.

The second is the SMS Toolkit Workshop. It addresses the SMS development and implementation process. It will be of interest to business aviation management personnel and safety officers who will be involved in using the IBAC SMS Toolkit to develop and implement an SMS.

Participants are expected to bring their own copy of the SMS Toolkit. It is part of the IS-BAO – an International Standard for Business Aircraft Operations, and it may also be purchased from national and regional business aviation associations as an individual product.

1.2 Workshop Objectives

1.2.1 Introduction to SMS Workshop

The objective of the Introduction to SMS Workshop is to provide business aviation operator personnel with an understanding of the basic principles of safety management and safety management systems.

1.2.2 SMS Toolkit Workshop

The objective of the SMS Toolkit Workshop is to provide business aviation operator personnel with a working knowledge of the use of the tools and related material contained in the IBAC SMS Toolkit for developing and implementing a safety management system.

1.3 Specific Learning Objectives

1.3.1 Introduction to SMS Workshop

The learning objectives of the Introduction to SMS Workshop are to:

1. Acquaint participants with the basic concepts of SMS;
2. Acquaint participants with safety management concepts and the evolution from traditional flight safety programs to safety management systems;
3. Acquaint the participants with ICAO requirements and national/regional civil aviation SMS regulations as they relate to air operators;
4. Acquaint participants with the cost and benefits of developing and implementing an effective SMS;
5. Provide participants with knowledge of tools to identify and analyze hazards and risks, and to develop mitigation to eliminate hazards or reduce risks to an acceptable level;
6. Provide participants with the knowledge and tools to develop and implement procedures to track and analyze safety management activities to ensure that they are appropriate and effective;
7. Acquaint participants with the concepts of safety culture and the cultural elements that are necessary for an SMS to be effective;
8. Provide participants with knowledge and tools to assess their current management and safety programs and to identify elements that require modification or development, in order to meet the requirements of an SMS; and
9. Provide participants with knowledge of tools to evaluate the soundness, appropriateness and effectiveness of a company’s safety performance.

1.3.2 SMS Toolkit Workshop

The learning objectives of the **SMS Toolkit Workshop** are to acquaint participants with the 12 steps to develop and implement an SMS as described in the SMS Toolkit and to acquaint them with the following tools and their use in the SMS development and implementation process:

1. Gap Analysis Tool,
2. Risk Assessment Guidelines,
3. Hazard Identification Tools,
4. Generic Hazard Lists,
5. Safety Risk Profile,
6. Safety Policy Examples,
7. Organizing SMS Accountabilities,
8. Cultural Assessment Tools,
9. Hazard Identification and Tracking Tools,
10. Risk Analysis and Awareness Tools,
11. Flight Data Analysis Programs,
12. Emergency Response Plans,
13. Staff SMS Training Programs,
14. SMS Implementation Management Tools, and
15. SMS Evaluation Tools.

1.4 Workshop Prerequisites

1.4.1 Introduction to SMS Workshop

There are no prerequisites for the **Introduction to SMS Workshop**.

1.4.2 SMS Toolkit Workshop

Participant in the **SMS Toolkit Workshop** must have an understanding of the basic principles of safety management and safety management systems. This should have been attained by attending the **Introduction to SMS Workshop** or other formal SMS training.

2. Workshop Syllabus

2.1 Introduction to SMS Workshop

The syllabus for the **Introduction to SMS Workshop** is as follows:

**Topic 1: Workshop Introduction**

**Topic 2: Introduction to SMS**

**Topic objective – To introduce the SMS concept**

2.1 Definition of Safety
2.2 IS-BAO and ICAO Definitions of SMS
2.3 Functional Definition of SMS
2.4 SMS Framework
2.5 ICAO SMS Elements and Components
2.6 National/Regional SMS requirements
### SMS Tools Workshop Outline

#### 2.7 Potential Results of an SMS

**Topic 3: Making the Case for SMS**

Topic objective – To acquaint participants with the evolution of safety management and make the case for SMS

<table>
<thead>
<tr>
<th>3.1</th>
<th>Basic Concepts of Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2</td>
<td>Acceptable Level of Safety</td>
</tr>
<tr>
<td>3.3</td>
<td>Traditional Approach to Safety</td>
</tr>
<tr>
<td>3.4</td>
<td>Professor James Reason’s Accident Causation Model</td>
</tr>
<tr>
<td>3.5</td>
<td>Twin Factors That Cause Accidents - “Latent Conditions” and “Active Failures”</td>
</tr>
<tr>
<td>3.6</td>
<td>Accident Causation</td>
</tr>
<tr>
<td>3.7</td>
<td>An Evolving Understating of Safety</td>
</tr>
<tr>
<td>3.8</td>
<td>Why SMS</td>
</tr>
<tr>
<td>3.9</td>
<td>The Operational Case</td>
</tr>
<tr>
<td>3.10</td>
<td>The Business Case</td>
</tr>
<tr>
<td>3.11</td>
<td>The Regulatory Case</td>
</tr>
</tbody>
</table>

#### 4.4 Topic 4: Introduction to Safety-Risk Management

Topic objective – To acquaint participants with the fundamentals of risk management

<table>
<thead>
<tr>
<th>4.1</th>
<th>Definition of “Hazard”, “Risk”, “Mitigation” and “System Safety Deficiency”</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2</td>
<td>Classification of Risks</td>
</tr>
<tr>
<td>4.3</td>
<td>Identifying Hazards and Risks</td>
</tr>
<tr>
<td>4.4</td>
<td>Managing Risks</td>
</tr>
<tr>
<td>4.5</td>
<td>Definition and Explanation of ALARP</td>
</tr>
<tr>
<td>4.6</td>
<td>Risk Management in SMS</td>
</tr>
</tbody>
</table>

#### 6.1 Topic 5: SMS Components - Management Framework

Topic objective – To acquaint participants with the first component of an SMS – the management framework

<table>
<thead>
<tr>
<th>5.1</th>
<th>Safety Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2</td>
<td>SMS Goals and Goal Setting</td>
</tr>
<tr>
<td>5.3</td>
<td>The Safety Management Process and Role in Solving the Management Dilemma</td>
</tr>
<tr>
<td>5.4</td>
<td>Management Role in SMS</td>
</tr>
<tr>
<td>5.5</td>
<td>Roles, Responsibilities &amp; Accountabilities</td>
</tr>
<tr>
<td>5.6</td>
<td>Management Role in Safety Culture</td>
</tr>
<tr>
<td>5.6.1</td>
<td>How Culture and Safety are Related</td>
</tr>
<tr>
<td>5.6.2</td>
<td>Nature of Culture</td>
</tr>
<tr>
<td>5.6.3</td>
<td>Corporate Safety Culture</td>
</tr>
</tbody>
</table>

#### 6.6 Topic 6: SMS Components - Hazard Analysis

Topic objective – To acquaint participants with the second component of an SMS – the hazard analysis process

<table>
<thead>
<tr>
<th>6.1</th>
<th>Overview of the Hazard Analysis Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2</td>
<td>Hazard, Risk, Mitigation &amp; System Safety Deficiency</td>
</tr>
<tr>
<td>6.3</td>
<td>The Steps in the Hazard Analysis Process</td>
</tr>
<tr>
<td>6.4</td>
<td>Templates and Checklists for the Process</td>
</tr>
<tr>
<td>6.5</td>
<td>The SHEL Model</td>
</tr>
<tr>
<td>6.5.1</td>
<td>Human Factors in Accidents</td>
</tr>
<tr>
<td>6.5.2</td>
<td>Using the SHEL Model in Hazard Analysis</td>
</tr>
<tr>
<td>6.6</td>
<td>Developing Mitigation</td>
</tr>
</tbody>
</table>

---

page - 3
6.7 Assessing Mitigation
6.8 Refining Mitigation
6.9 Documenting the Analysis

**Topic 7: SMS Components - Ongoing Safety Management Activities**

Topic objective – To acquaint participants with the third component of an SMS – ongoing safety management activities

7.1 SMS Implementation Plan
7.2 Safety management Strategy
7.3 Ongoing Identification of Hazards and Risks
7.4 Developing and using a Hazard Identification and Tracking System (HITS)
7.5 Reporting Systems and the Importance of a Positive Safety Culture
7.6 Ongoing Data Collection – Flight Data Analysis
7.7 Making Risk Assessment a Way of Life
7.8 The Management of Change
7.9 Accident and Incident Investigation
7.10 Emergency Response Planning
7.11 SMS Education and Communication
7.12 SMS Evaluation and Management Review

**Topic 8: Hazard Analysis Exercise**

Topic objective - A group exercise to provide participants with practical experience in conducting a hazard analysis including:

8.1 Identifying Hazard,
8.2 Analyzing Associated Risks,
8.3 Developing Mitigation,
8.4 Assessing and Refining Mitigation
8.5 Concluding by summarizing how this hazard analysis would be integrated into the SMS of an organization.

**2.2 SMS Toolkit Workshop**

The syllabus for the *SMS Toolkit Workshop* is as follows:

2.2.1. Workshop Introduction
2.2.2. ICAO SMS 4 Elements and 14 Components
2.2.3. Twelve Steps to SMS Implementation
   1. Study the SMS concept
      a. SMS Explanatory Material in the Toolkit
      2. Obtain senior management commitment
      3. Establish SMS team
      4. Determine what you already have and what you need
         a. Gap Analysis Tool,
      5. Conduct initial hazard identification and risk assessment, and develop safety risk profile
         a. Risk Assessment Guidelines,
         b. Hazard Identification Tools,
         c. Safety Risk Profile,
         d. Generic Hazard Lists and BowTie XP Examples
      6. Develop your safety management strategy
         a. Safety Policy Examples,
SMS Tools Workshop Outline

b. Safety Management Strategy Example

7. Identify safety accountabilities
   a. Organizing SMS Accountabilities,
   b. Safety Culture and Cultural Assessment Tool,

8. Develop ongoing hazard identification and tracking system and risk assessment procedures
   a. Hazard Identification and Tracking Tools,
   b. Risk Analysis and Awareness Tools,
   c. Flight Data Monitoring Programs,

9. Develop emergency preparedness plan
   a. Emergency Response Plans,

10. Amend programs, procedures and documents as required

11. Conduct staff training and education

12. Track and evaluate safety management activities
   a. SMS Evaluation Tools,
   b. Evaluation Tracking Forms,

2.2.4. SMS Development and Implementation Management

2.2.5. Change Management

2.2.6. Management Review

3. Reference Material

The primary reference for the Introduction to SMS Workshop is the IBAC SMS Guidance Manual on the SMS Toolkit CD. It is supplemented by the other reference material on the CD. The first six topics of this Workshop follow the flow of the SMS Guidance Manual. Topic 8 will use a scenario that is relevant to the Workshop participants.

The primary reference for the SMS Toolkit Workshop is the SMS Tools for Business Aviation Operators booklet and the related tools on the SMS Toolkit CD.

4. Typical Agenda

The following is a typical agenda for the Workshops. It should be adjusted as appropriate to fit the needs of the participants.

4.1 Introduction to SMS Workshop

Day 1

0900 Registration and Administration
0915 Topic 1 - Introductions and Overview of the Workshop and Materials
0930 Topic 2 - Introduction to SMS
1030 Break
1100 Topic 3 Making the Case for SMS
1215 Lunch
1300 Topic 4 - Introduction to Safety-Risk Management Concepts
1415 Break
SMS Tools Workshop Outline

1430 Topic 5 - SMS Components – Management Framework
1630 Summary and Discussion
1700 End of Day 1

Day 2

0900 Review of Day 1
0915 Topic 6 - SMS Components – Hazard Analysis
1015 Break
1030 Topic 6 continued
1100 Topic 7 - SMS Components – Ongoing Safety Management Activities
1215 Lunch
1300 Topic 7 continued
1415 Summary and Discussion
1430 Hazard Analysis Exercise
1600 Exercise Review
1630 Workshop Feedback
1700 End of Workshop

4.2 SMS Toolkit Workshop

0900 Introductions and Workshop Overview
0915 SMS Toolkit Session 1
  - ICAO SMS 4 Elements and 14 Components
  - Twelve Steps to SMS Implementation
  - Step 1 Study the Concept
  - Step 2 Obtain Senior Management Commitment
  - Step 3 Establish SMS Team
  - Step 4 Determine What You Have and What You Need
1013 Break
1030
  - Step 5 Conduct Initial Hazard Identification and Risk Assessment and Develop Safety Risk Profile
  - Step 6 Develop Safety Management Strategy
1215 Lunch
1300 SMS Toolkit Session 2
  - Step 7 Identify SMS Accountabilities
  - Step 8 Develop Ongoing Hazard Identification and Tracking System and Risk Assessment Procedures
  - Step 9 Develop Emergency Preparedness Plan
1400 Break
1415
  - Step 10 Amend Programs, Procedures and Documents, as Required
  - Step 11 Conduct Staff Training and Education
SMS Tools Workshop Outline

- Step 12 Track and Evaluate Safety management Activities
- SMS Development and Implementation Management

1515 Break

1530
- SMS Development and Implementation Management - continued
- Change Management
- Management Review

1630 Summary and Discussion

1700 End of Workshop