

Best Practices for Event Review Committees



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The views expressed in this report are those of the authors and do not necessarily reflect the views of the Federal Aviation Administration or any aviation expert or organization.

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Foreword

The Aviation Safety Action Program (ASAP) has existed for over ten years and has evolved considerably during that time. There have, for example, been two revisions to the ASAP Advisory Circular 120-66 since it was first published on 8 January 1997. In May 2000, Sandia Laboratories published a study concerning early program effectiveness; in particular, it addressed the decision-making process involved in the deliberations of an ASAP Event Review Committee when seeking consensus on report acceptance and corrective action. At the time of that study, ASAP existed only as a test program for one employee group (pilots) at only one airline. The report noted, “The goal of FAA ASAP as a test program is to discover both flaws and innovations that can be, respectively, corrected and possibly incorporated into the program.” Since the Sandia study, ASAP has expanded to include not only pilots but also mechanics, dispatchers, flight attendants, ramp employees, and others. More than 170 ASAP Memoranda of Understanding are in place between companies, labor associations, and the FAA. Many lessons have been learned as the program has continued to grow. The present report seeks to capture those lessons learned and gathered via observation of the most effective ASAP ERCs across various employee groups. It not only identifies best practices but also provides recommendations on how they can be achieved.

A handwritten signature in black ink, appearing to read 'Thomas Longridge'.

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Executive Summary

This document presents the results of a 12-month investigation of Event Review Committee (ERC) Best Practices. The identified best practices are listed and described. Strategies to achieve the best practice and factors that airlines should consider when implementing the best practice are also presented.



Background

The Aviation Safety Action Program (ASAP) is a voluntary safety program initiated and sponsored by the Federal Aviation Administration (FAA). The objective of this program is to encourage aviation employees to voluntarily report safety data that may help identify actual or potential threats to safety. Airline representatives work collaboratively with the FAA and a third party (typically the labor union) to review reports submitted by employees. Known as the ERC, this committee works to identify causal contributors and to develop corrective action(s) for individuals and recommendation(s) to the airline or other entities to prevent recurrence. Much of the information reported through ASAP would be otherwise unknown and is critical to identifying safety risks.

Purpose

The purpose of this project was to identify best practices that facilitate the success of ASAP. The FAA's Voluntary Safety Programs Branch (AFS-230) sponsored this project to identify key features that make ASAPs successful.

Approach

Best practices were identified from previous research on ASAP, interviews with ASAP experts, and site visits to a sample of high-performing pilot, dispatcher, maintenance, and flight attendant ERCs as identified by the FAA's Voluntary Safety Programs Branch. Site visits included observations of ERC meetings and interviews with ERC members.

Results

This research resulted in 36 best practices and strategies for achieving them. The following list presents these best practices organized into eight high-level categories:

1. Precursors to ASAP Success

- Establish Buy-In for the Program at Startup
- Integrate ASAP Into Your Organization's Safety Culture
- Plan for Resources Needed
- Identify the Best Individual to Serve as the ASAP Manager

2. ASAP Training
 - Use a Standardized Approach to ASAP Training
 - Train All Stakeholders in the Appropriate Content
 - Provide Opportunities for Retraining
 - Leverage Other Sources of Information
3. ASAP Data Collection
 - Consider Employee Needs in the Report Submission Process
 - Ensure That the Data Management System Supports ERC Tasks
 - Require Submitters to Classify the Type of Event and Its Causal Contributors
4. ERC Report Review Process
 - Maintain a Manual of Processes and Procedures
 - Adopt an ERC Meeting Schedule That Supports Timely Review of Reports
 - Prepare for ERC Meetings in Advance
 - Strive for Consistency in the Report Review Process
 - Investigate Reports Thoroughly
 - Identify and Communicate Effective Corrective Actions and Recommendations
 - Maintain Complete Records of the Report Review Process
 - Develop and Maintain Transparency in the ERC Process
5. ERC Teamwork
 - Identify the Best Individuals to Serve on the ERC
 - Build Trust Among ERC Members
 - Build Consensus Proactively
 - Manage Conflict in ERC Member Interactions
 - Monitor ERC Interactions for Patterns
6. ASAP Data Analysis
 - Identify a Skilled Data Analyst
 - Determine the Appropriate Level of Analysis
 - Summarize ASAP Data
 - Use ASAP Data to Develop ERC Recommendations
 - Analyze ASAP Report Trends Over Time
7. Dissemination of ASAP Information
 - Make Information About ASAP Meaningful to the Intended Audience
 - Select a Method of Communication That Is Appropriate for the Audience
 - Participate in Industry-Wide ASAP Data-Sharing Initiatives

8. Management of Multiple ASAPs

- Use Lessons Learned From Other ASAPs Within the Airline
- Standardize Processes and Tools Across ASAPs When Possible
- Consider the Needs of Each Program With Respect to the Represented Employee Group
- Establish a Collaborative Review Process for Multi-ASAP Reports

This report provides detailed information regarding the best practices and strategies, arranged in sections by category. Each section has been written to be read independently from the entire report; however, because of the complex nature of ASAP and the many characteristics that contribute to success, several sections overlap or inform one another.

Conclusions

It is recommended that airlines use the best practices and implementation strategies in this document to promote open dialogue and assessment of performance of the ERC, both before and after ASAP implementation, to continually improve these important safety programs. Details of the project's approach, analysis, results, and conclusions are summarized in a separate technical report. Copies of the technical report may be requested from the American Institutes for Research or the FAA's Voluntary Safety Programs Branch.

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Introduction

The Aviation Safety Action Program (ASAP) is a voluntary safety program initiated and sponsored by the Federal Aviation Administration (FAA). The objective of this program is to encourage airline employees to voluntarily report safety data that may assist in the identification of actual or potential threats to safety. Airline representatives work collaboratively with the FAA and a third party (typically the labor union) in a committee to review reports submitted by employees. This committee, known as the Event Review Committee (ERC), works to identify causal contributors and to develop corrective action(s) for individuals and recommendation(s) to the airline or other entities to prevent recurrence. Much of the information reported through ASAP would be otherwise unknown and is critical to identifying safety risks.

Participation has grown from only a few programs in 2000 to more than 170 ASAPs across more than 70 airlines today. ASAPs are routinely recognized as an important contributor to aviation safety and are an integral part of the aviation safety culture. Fundamental to the success of these programs is the continual enhancement of the program by the FAA's Voluntary Safety Programs Branch (AFS-230). In addition to training FAA, airline, and union employees and auditing ASAPs, the Voluntary Safety Programs Branch sponsors ASAP-related research. To this end, AFS-230 sponsored the Best Practices for Event Review Committees Project to identify best practices that facilitate the success of the ASAP.

The best practices described in this document are based on information obtained from previous research conducted on ASAP, ASAP experts, and a sample of high-performing ERCs as identified by the FAA's Voluntary Safety Programs Branch. This document is not meant to summarize information provided in the current FAA Aviation Safety Action Program (ASAP) Advisory Circular (Advisory Circular); Volume 11, Chapter 2 from FAA Order 8900.1 Flight Standards Information Management (Order 8900.1); or Appendix F from FAA Order 2150.3B (Order 2150.3B), nor is it meant to be a prescription for success. Rather, this document presents a collection of best practices and strategies for implementation to make an ASAP more efficient and result in greater safety improvements. This document is recommended as a toolkit to promote open dialogue and ongoing assessment in an effort to continually improve these important safety programs. A detailed description of the methodology for this study is provided in a technical report, which may be requested from the American Institutes for Research or the FAA's Voluntary Safety Programs Branch.

In the sections that follow, we present the identified best practices by high-level category. Within each section, best practices are described and strategies are presented for achieving the best practice. In addition, where appropriate, we identify important considerations and other

information critical to the best practice. The best practices presented in Sections 1–7 are intended to be generalizable, meaning that they can be applied across ASAPs that represent different employee groups (e.g., pilot, maintenance, dispatch, flight attendant). The final Section, Section 8, identifies cross-program considerations. Note that each section has been written to be read independently; however, because of the complex nature of ASAP and the many characteristics that contribute to success, several sections overlap or inform one another.

1. Precursors to ASAP Success

An ERC can empower its ASAP to be successful by understanding the relationships between organizational factors and ASAP success and using this knowledge to influence organizational policy. The following best practices are tasks that the ERC can do to help achieve program success.

1.1 Establish Buy-In for the Program at Startup

An ASAP's start-up process provides a unique opportunity to establish a shared vision and strong foundation for the program. These characteristics can increase the probability that all stakeholders (i.e., ASAP Manager; ERC members and their respective organizations; the represented employee group; supervisors, managers, and safety officials; and the entities that receive ERC recommendations) will support the ASAP's mission, the ERC, and the ERC's decisions, even when challenging situations arise. The following steps can be taken at start-up to help ensure buy-in:

- Include all stakeholders in discussions regarding the development of the Memorandum of Understanding (MOU).
- Encourage open discussion regarding potentially divisive issues such as
 - rules for acceptance of reports into ASAP;
 - how company discipline of employees will be handled on an accepted ASAP report;
 - whether and under what circumstances ASAP reports will be de-identified; and
 - the process for sharing information with other ASAPs within the airline and with other safety programs such as Flight Operational Quality Assurance (FOQA).
- Educate all stakeholders about ASAP and its benefits.

1.2 Integrate ASAP Into Your Organization's Safety Culture

Experts indicate that an organization's safety culture, which is an environment that promotes behaviors and attitudes related to safety, is an important contributor to an ASAP's success. ASAP Managers and ERC members are in a position to improve and maintain their organizations' safety culture by integrating ASAP into that culture. Strategies to achieve this best practice including the following:

- Review your organization's safety goals and values thoroughly to ensure understanding.



Best Practices for Precursors to ASAP Success

- 1.1 Establish Buy-In for the Program at Startup
- 1.2 Integrate ASAP Into Your Organization's Safety Culture
- 1.3 Plan for Resources Needed
- 1.4 Identify the Best Individual to Serve as the ASAP Manager

- Align ASAP's goals with organizational safety goals by using the same language in descriptions of ASAP as used in other safety documents and/or programs.
- Use tools and resources that are common across safety programs and goals. For example, if one safety program uses a risk matrix to capture event severity and likelihood of occurrence, adopt the same one for ASAP.
- Ensure a clear understanding of ASAP and its goals by identifying, developing, and acting on opportunities, such as safety meetings, to educate others about the program and benefits.

1.3 Plan for Resources Needed

A successful ASAP requires access to resources. The ASAP Manager and ERC members should assess the availability of resources and make a plan for acquiring the needed resources. Over time, needed resources are likely to increase as trust in the program grows, resulting in a higher number of reports received. Important resources include the following:

- **Personnel.** An ASAP needs personnel to serve in various roles, including ASAP Manager, ERC members, and a data analyst. These roles may be filled by the same or different individuals. However, to the extent that these individuals are active employees in their field and have other job responsibilities, their respective organizations must ensure that they are available to participate fully in ASAP activities, such as having time to prepare for ERC meetings and participate in investigative tasks.
- **Training.** All stakeholders need training about ASAP and the role of the ERC. Therefore, this resource involves both delivering and receiving training. For example, ERC members may need to travel to talk with employees about ASAP. ERC members may also require support for travel to attend a formal ASAP course.
- **Data collection and dissemination support.** Technology and other resources are required to support ASAP. For example, an ASAP needs data management software that supports electronic submission of reports and analysis of the data collected and that is compatible with existing systems. Once the data are collected and analyzed, support will be required to inform stakeholders about what is being learned through ASAP.

Additional information regarding these resources is found in later sections of this report.

1.4 Identify the Best Individual to Serve as the ASAP Manager

The ASAP Manager typically has many responsibilities. In addition to collecting, distributing, and investigating reports, the ASAP Manager coordinates ASAP activities, facilitates ERC meetings, and is the primary

liaison between the ERC and other ASAP stakeholders. Identifying the appropriate individual to serve in this role is essential for enhancing the smooth and efficient functioning of the ERC and the program. Consider the following when identifying the ASAP Manager:

- An ASAP may benefit from having an ASAP Manager who is not a voting member of the ERC. This ensures that the Manager has the time to devote to such ASAP responsibilities as meeting preparation, research, and data analysis. In addition, this arrangement positions the Manager to intervene when conflicts among ERC members occur. The result is a more timely and bias-free review of reports. Having a non-voting ASAP Manager becomes especially important as the number of represented employees—and hence the number of reports—increases.
- The ASAP Manager will be better prepared for ERC duties if he or she is familiar with ASAP, the airline's other safety programs, safety principles, and the work of the represented employee group.
- As the facilitator of the ERC meeting, the ASAP Manager is responsible for monitoring and evaluating the ERC's progress and interactions, including keeping the discussion on topic and on schedule and facilitating the decision-making process. The ASAP Manager should be prepared to use various strategies before, during, and after ERC meetings to assist ERC members in achieving their goals.
- The ASAP Manager typically serves as the liaison between the ERC and both internal and external stakeholders. Consequently, the ASAP Manager should be adept at establishing strong professional working relationships, respected for his or her qualifications, and willing to be available for this role.



Best Practices for ASAP Training

- 2.1 Use a Standardized Approach to ASAP Training
- 2.2 Train All Stakeholders in the Appropriate Content
- 2.3 Provide Opportunities for Retraining
- 2.4 Leverage Other Sources of Information

2. ASAP Training

ASAP is far-reaching with multiple stakeholders, including the ASAP Manager; ERC members and their respective organizations; the represented employee group; supervisors, managers, and safety officials; and the organizational entities who receive ERC recommendations. A thorough understanding of ASAP and its benefits by all stakeholders is necessary to

- develop trust in the program;
- promote a shared understanding of the program;
- ensure support and buy-in of the program across organizational levels; and
- ensure support of the ERC and its decisions and recommendations.

Formal and informal training are important prior to an ASAP's initiation, but they are also ongoing processes. Best practices related to training are described below.

2.1 Use a Standardized Approach to ASAP Training

The ERC will benefit from a standardized approach to training, which will ensure a shared understanding of ASAP, including its benefits and goals. Although the specific format for providing ASAP education may vary by stakeholder group, the objective is to provide consistent training about the program to everyone. Strategies to achieve this best practice including the following:

- Standardize the coverage of ASAP training across all stakeholder groups by ensuring that all stakeholder groups are trained.
- Standardize the content of ASAP training by ensuring that all stakeholders hear the same information about ASAP's goals and objectives. Consider whether existing ASAP training courses can be made accessible or be used as a basis for developing customized ASAP training materials.
- Standardize the delivery of ASAP information by training ERC members as a group. Reviewing documents together line by line and hearing the same training information promote a shared understanding of how to interpret and apply information about the operation of the program.
- Standardize the indoctrination process for ERC members by ensuring that they have the opportunity to learn ERC processes and their expected role prior to serving as a voting ERC member. One approach is to give new ERC members opportunities to shadow existing members and to observe other ERCs.

- Standardize the delivery of ASAP information by having ERC members jointly train stakeholders. This demonstrates unity among ERC members and their respective organizations, which is crucial for developing trust in the program.

2.2 Train All Stakeholders in the Appropriate Content

Stakeholder groups have both overlapping and unique training content requirements. Strategies to achieve this best practice include the following:

- Train all stakeholders in
 - the benefits of ASAP in terms of removing threats to safety;
 - the incentives provided for report submitters; and
 - the ASAP process (e.g., how ASAP reports, corrective actions, and discipline will be handled).
- Train the ASAP Manager in
 - the principles of trust and how to develop it;
 - how to facilitate the ERC's report review process;
 - the principles of teamwork and the strategies and tools to promote effective teamwork; and
 - how to use software programs and other tools for basic data analysis, or how to identify and work with a data analyst who would be responsible for the analysis.
- Train the ASAP Manager or data analyst and ERC members in
 - the content of the current Advisory Circular, Order 8900.1, and the airline's MOU;
 - the report review process outlined in the current version of the FAA's ASAP Report Process Chart;
 - the taxonomies used to classify events and causal contributors, and how to use them to identify event types and root causes; and
 - general safety principles, such as those associated with risk assessment, including the risk assessment matrix to be used for ASAP and the Enforcement Decision Tool found in Order 2150.3B.
- Train the represented employee group (e.g., pilots, dispatchers, mechanics, flight attendants) in
 - the report submission form and/or software and how to use it to submit a timely, accurate, and reliable report;
 - the taxonomies used to classify events, the contributing factors to the events, and any other factors they are asked to evaluate; and

- appropriate expectations regarding ASAP's protections and potential corrective actions.
- Train line supervisors, managers, and safety officials in
 - how ASAP aligns with the airline's safety goals and culture;
 - the roles and responsibilities of the ERC;
 - resources needed to support ASAP; and
 - the importance of the ERC to be empowered to work independently and without interference.
- Train organizational entities who receive ERC recommendations in
 - the process by which the ERC determines recommendations and
 - the importance of responding to the ERC's recommendations in a timely manner and the process for follow-up.

2.3 Provide Opportunities for Retraining

As previously stated, education is important prior to an ASAP's initiation. However, education is also an ongoing process. Providing opportunities for periodic ASAP retraining is recommended for several reasons:

- Knowledge of ASAP guidelines and competence with ASAP responsibilities and processes may decline over time because of infrequent interaction with the program or memory lapses.
- Employee turnover is inevitable. Providing ASAP training periodically ensures that new employees gain an understanding of ASAP in a timely manner and are prepared to both support the program and participate as opportunities arise.
- Maintaining ASAP's visibility supports the organization's safety culture as well as ASAP's objectives.
- ERC members who work together over time may inadvertently adopt procedures or decision-making strategies that do not align with best practices. Retraining ensures that the group's shared understanding of the program remains aligned with the intended goals and values of ASAP.

Strategies to achieve this best practice including the following:

- Include ASAP information in mandatory recurrent trainings for employee groups.
- Incorporate ASAP information into annual meetings for upper management.
- Use informal interactions with stakeholder groups to solicit questions about ASAP or share information.

- Set aside one ERC meeting annually to review ASAP guidelines, the ERC process, and ERC member roles and responsibilities.

2.4 Leverage Other Sources of Information

Establishing and maintaining a high-functioning ERC are ongoing processes. The ERC should take advantage of all available sources of information. In addition to FAA resources such as the current Advisory Circular, Order 8900.1, Order 2150.3B, FAA training, and the MOU, the ERC can use other resources to learn more about the program and how to manage it. The following resources provide support to the ERC:

- FAA's Voluntary Safety Programs Branch. Reaching out to the FAA's primary resource on ASAP provides an opportunity to resolve questions about the interpretation of program guidelines.
- Other established ERCs. Networking with other internal or external ERCs will open communication about lessons learned and provide a resource for how to handle specific types of challenging or recurring reported events.
- ASAP information-sharing meetings. These meetings provide opportunities to network, share ideas, and help one another discuss and resolve issues.



Best Practices for ASAP Data Collection

- 3.1 Consider Employee Needs in the Report Submission Process
- 3.2 Ensure That the Data Management System Supports ERC Tasks
- 3.3 Require Submitters to Classify the Type of Event and Its Causal Contributors

3. ASAP Data Collection

The ability of an ERC to address safety issues identified through ASAP depends in large part on the quality and quantity of the reports that are submitted. The following best practices support the collection of accurate and reliable data.

3.1 Consider Employee Needs in the Report Submission Process

Time is of the essence in ASAP reporting, because memory of events fades quickly. In addition, not all employees have access to a computer at work, and those who do may have access to only a public computer. Considering these and other employee needs will improve the quality and quantity of ASAP data. Strategies to achieve this best practice including the following:

- Develop and support a secure electronic report submission system that is accessible from an employee’s home. This will allow the submitter to access the system easily, quickly, and confidentially.
- Develop and support a submission form and policies surrounding its use that are easy to understand. This will facilitate program participation.
- Develop and support a submission form that helps the submitter quickly create and submit high-quality data. To save data entry time and reduce the possibility of error, consider including
 - drop-down boxes for commonly used responses;
 - data fields that have been pre-populated with relevant information, such as employee name and flight number; and
 - a format that guides the submitter through a series of questions that when answered, automatically directs him or her to other related data fields.

3.2 Ensure That the Data Management System Supports ERC Tasks

The data management system should yield data that are comprehensive and are formatted in a way that is easy for the ERC to review, analyze, and manage administratively. When reviewing, evaluating, and selecting data management systems, consider the following:

- Select a comprehensive and secure electronic data management system (i.e., software) that collects, analyzes, tracks, and protects data.
- Include data fields in the report submission form that will permit the ERC to understand the report and its context, determine or validate the underlying cause of the event, and decide the most

appropriate corrective action for the individual. Suggested data fields include, but are not limited to, the following:

- Unique report number
- Submitter name and contact information
- Date and time of report completion
- Date and time of event
- Aircraft type and tail number
- Location of event
- Primary duty or duties at time of event
- How and when event was detected
- Reaction to event
- Type of event (event category)
- Causal contributor(s) to the event (causal contributor category)
- Event narrative
- Suggestions for prevention
- Whether the report may be submitted to the Aviation Safety Reporting System (ASRS)
- Whether the event should be submitted to other safety incident reporting program(s)

The data fields above are needed for most ASAP reports. However, it is appropriate to customize the data fields in the data submission form for each employee group. For example, the following data fields may be useful:

- Flight number
 - Departure airport
 - Scheduled arrival airport
 - Landing airport
 - Phase of flight
 - Weather
- Include data fields in the software that can be completed or edited by the ASAP Manager or the ERC to assist in record-keeping, data management, and other administrative processes. The following data fields may be useful:
 - Date of the ERC's review of the report
 - Whether the report was solicited
 - Whether the report is timely
 - Whether the report is accepted
 - Whether the report is sole source
 - Link to reports submitted by others on the same event
 - Whether sufficient evidence exists to support a 14 CFR violation
 - ERC-identified event category

- ERC-identified causal contributor(s) for reports and events
 - Determined risk category
 - Corrective action(s)
 - Recommendation(s) based on this report
 - Date report is closed
 - Additional recommendation(s) based on this and multiple similar reports
 - Whether the event is a candidate for submission to the Voluntary Disclosure Reporting Program (VDRP)
- Include the capability to upload attachments. The report investigation process often results in supporting documents. The capability of the software to upload these documents as attachments will improve efficiency and organization and allow tracking of relevant report information in a secure and confidential manner.
 - Include user-friendly data analysis tools. Once gathered, ASAP data must be analyzed. Select software that assists in linking multiple reports about the same event and that includes tools that summarize, visualize, query, and monitor the data collected. Evaluate the ease with which the data analyst can use the tools.
 - Include email capability. Including the capability to send and receive emails (including attachments) within the software program allows all information about a report to be tracked with a single tool and allows secure and confidential communication about reports.

3.3 Require Submitters to Classify the Type of Event and Its Causal Contributors

Classifying events by type and causal contributor(s) provides the foundation for identifying reports that have common elements, which is required for identifying systemic threats to safety. In addition, classifying events by type and causal contributor(s) will facilitate communication about ASAP reports within the airline and with the industry. Requiring the submitter to use taxonomies to classify events and their causal contributors will improve the quality of the data collected because the submitter has contextual and situational knowledge of the event and its cause(s) that is unavailable to others who were not present when the event occurred. Strategies to achieve this best practice include the following:

- Identify or develop two separate taxonomies: one for event types and one for causal contributors to events. Each taxonomy should
 - include a comprehensive set of non-overlapping categories;
 - use terminology that stakeholders understand;

- provide help in the form of definitions and examples; and
 - include an “Other (Please describe): _____” category.
- Educate the report submitter on how to use the taxonomies to ensure consistency.
- Require the submitter to select the event category and causal contributors by using the taxonomies embedded in the report submission form. Note that the ASAP Manager and/or the ERC should review and evaluate the submitter’s categorizations as part of the investigative portion of the report review process.



**Best Practices for the
ERC Report
Review Process**

- 4.1 Maintain a Manual of Processes and Procedures
- 4.2 Adopt an ERC Meeting Schedule That Supports Timely Review of Reports
- 4.3 Prepare for ERC Meetings in Advance
- 4.4 Strive for Consistency in the Report Review Process
- 4.5 Investigate Reports Thoroughly
- 4.6 Identify and Communicate Effective Corrective Actions and Recommendations
- 4.7 Maintain Complete Records of the Report Review Process
- 4.8 Develop and Maintain Transparency in the ERC Process

4. ERC Report Review Process

Establishing effective report review processes promotes an efficient and organized program, helps facilitate the timely review of reports, encourages informed discussion by ERC members, and ensures that the ERC’s decisions are based on thorough understanding of the events. Collectively, these results help ensure that the underlying causes of events are identified and reduced or eliminated. Best practices for the ERC report review process are below.

4.1 Maintain a Manual of Processes and Procedures

A manual of processes and procedures is a resource for current and future ASAP Managers, ERC members, and other stakeholders by providing important ASAP documents and outlining the ERC’s processes. Strategies to achieve this best practice include the following:

- Incorporate ASAP-specific documents and/or resources to facilitate the ERC’s review process across meetings. These may include the current Advisory Circular, Order 8900.1, Order 2150.3B, the airline’s MOU, the FAA’s ASAP Report Process Chart, event and causal contributor taxonomies, a risk matrix, and lists of corrective actions and/or sample letters to submitters.
- Document and incorporate the ERC’s rules, such as how to handle difficult decisions, when to use certain corrective actions, and how to participate in meetings (i.e., rules of conduct). These may be formal rules that are established at the program’s initiation or rules that develop over time for the ERC.
- Include contact information for the ASAP Manager, ERC members, and other individuals or contacts who assist ERC members in gathering information or following through on recommendations.

4.2 Adopt an ERC Meeting Schedule That Supports Timely Review of Reports

Timeliness of report review and resolution is important for identifying and removing threats to safety and building trust among submitters. Strategies to achieve this best practice include the following:

- When determining an ERC meeting schedule,
 - work with ERC members to adopt a schedule that is convenient and practical for all ERC members;
 - be prepared to be flexible when needed, such as meeting prior to the next regularly scheduled meeting when a high-profile report is submitted;
 - for ERC members who are not employed full-time in their ERC role, share the meeting schedule with their

- supervisors to help create an environment where the members can fulfill their ERC responsibilities;
 - meet often enough to have sufficient time in each meeting to thoroughly review both old and new reports and to make well-informed decisions; and
 - be realistic regarding how many reports can be evaluated during an ERC meeting; significant time is often required during the investigation phase to ensure that all relevant facts about the event are uncovered and considered.
- Reevaluate the ERC meeting schedule regularly to accommodate changes in the number of ASAP reports received and ERC member availability.

4.3 Prepare for ERC Meetings in Advance

Preparing for an ERC meeting in advance will help ensure that enough time will be available to thoroughly investigate each report and consider the appropriate response. Strategies to achieve this best practice include the following:

- Gather supplemental information such as additional perspectives, details, plausible explanations, or potential contributors to the event in advance of the ERC meeting. The more information available to the ERC at the time of the report review, the more efficient the discussion will be. (More information about the investigation of a report can be found in Section 4.5.)
- Provide all ERC members with complete event reports and information about any investigative action already taken sufficiently in advance of the meeting to allow them to review the reports in preparation for the ERC meeting.
- Develop and distribute a document (e.g., agenda, list) to guide the ERC's report review discussion. Ideas for organizing the order of the discussion include
 - reviewing old reports first to ensure that reports are resolved in a timely manner;
 - reviewing new reports that will require long discussion by the members first to ensure that the ERC will have sufficient time to address challenging reports; and
 - reviewing reports with the highest risk levels first to help ensure that the most serious events will be resolved in a timely manner. Reviewing in order of risk assessment is possible only if risk is assessed prior to the ERC meeting and if all ERC members agree on that assessment.

4.4 Strive for Consistency in the Report Review Process

The ERC is responsible for making several key decisions (e.g., report acceptance, the appropriate corrective action for the individual, recommendations for airline remediation) and determinations (e.g., validation of the causal contributors, risk assessment) during the report review process. Although the specifics of the process may vary, adopting a process that is consistent from one report to the next helps ensure that each report is reviewed thoroughly. A consistent process can also be helpful in getting the ERC back on track if members are having trouble reaching consensus. Finally, consistency builds trust. Strategies to achieve this best practice include the following:

- Adhere closely to existing agreed-upon guidelines, such as
 - the MOU;
 - the Advisory Circular;
 - the FAA’s ASAP Report Process Chart;
 - Order 8900.1; and
 - Order 2150.3B.
- Follow the same process for every report. The ERC may benefit from a list of questions to answer in a particular order, such as “Do we agree to accept this report?” and “What is the risk assessment for this report?” Following a prescribed process may be particularly important when decisions regarding corrective actions become difficult. For example, following the FAA’s ASAP Report Process Chart or the Enforcement Decision Tool (EDT) step-by-step may help members focus on the ERC’s required tasks and make better decisions.

4.5 Investigate Reports Thoroughly

A thorough investigation of reports by the ERC consists of many steps that may be conducted before, during, and after the ERC meeting. It often requires investing significant time and resources and querying multiple sources for information. However, it is critical for program success because it helps ensure that ERC members obtain a complete picture of each event and its true underlying cause(s). Strategies to achieve this best practice include the following:

- Develop a plan that describes what information will be collected, when, and by whom. For example, before making a call to a submitter during an ERC meeting, identify the information the ERC expects to obtain and the structure of the call, including who will introduce the call participants.
- To the extent possible, conduct research in advance of the ERC meeting; the more information available to the ERC at the time of the report review, the more efficient the discussion will be. This may include information gathered by the ASAP Manager to

support the report or information that individual ERC members gather.

- Collect data beyond those included in the report by
 - talking with the report submitter to obtain the full story and help validate the causal contributors the submitter identified;
 - reviewing other ASAP reports filed about the same event and talking with the submitters of these reports to ensure an understanding of the various perspectives;
 - talking with other crew members who may be able to provide additional detail regarding the event;
 - talking with others who perform the job to determine whether the event was an isolated one or whether it suggests a discrepancy between practice and training;
 - reading relevant policies and procedural manuals;
 - requesting and reviewing supporting materials, such as employee schedules, crew rest rules, air traffic control tapes, letters of agreement between air traffic sectors, noise abatement requirements, pictures of airplane damage, manufacturer specifications including specific performance characteristics of the aircraft, maintenance logs, and flight releases;
 - reviewing relevant training materials and/or determining the length of time since the submitter has been trained;
 - recreating the event, noting that recreations using simulators and recreations that are lower in realism may both be useful; and
 - considering, when possible, using the ERC meeting to conduct research. When ERC members investigate aspects of a report together, it helps ensure a shared understanding of the issue and may help promote employee trust in the program by showing that ERC members work together to determine the appropriate outcome.
- Review submitter-generated event type and causal contributors, determine the ERC's perspective, and evaluate any differences. Completion of this step requires a complete understanding of the event. Consequently, additional investigation may be required. Specific tasks include
 - ensuring that all ERC members have the event types and causal contributors that were identified by the submitter;
 - discussing each submitter's event type and causal contributor(s) and evaluating the appropriateness of the event type and the potential of the causal contributor(s) as the true underlying cause of the event;
 - reviewing all reports about the same event and using the event type and causal contributor information from individual reports to identify an event type and causal

- contributor(s) that appropriately classify the entire event; and
- identifying and recording the event types and causal contributors that the ERC believes are correct.
- Request expert assistance from others if necessary to verify that all documentation, processes, or procedures identified during the investigation are understood by the ERC.

4.6 Identify and Communicate Effective Corrective Actions and Recommendations

When conducted properly, the report review process described above will result in accurate and reliable data regarding threats to safety. However, these data are useful only to the extent that they are used to effect change. This requires the ERC to identify both corrective actions for individuals and recommendations for changes beyond individuals to help prevent future recurrence. Determining the corrective action for an individual or a recommendation to another party for change will depend on the risk associated with—and the underlying cause(s) of—the event and requires developing and evaluating the steps necessary to prevent the event from reoccurring. Strategies to achieve this best practice include the following:

- Identify the relevant party to receive the corrective action or recommendation. For example, corrective actions may be assigned to only some of the individuals who submitted a report on a particular event. Similarly, recommendations for change may be made to an entity within the airline, such as the training department, or to an outside group, such as an air traffic control facility, the manufacturer, or a specific airport.
- Use a risk matrix to quantify the level of risk associated with the event. Risk assessment typically involves summarizing information regarding the severity of the event and the probability of recurrence into a single number or score.
- Discuss the causal contributors identified by the submitter and the ERC, and determine how these factors may have influenced the submitter's behavior.
- Determine the corrective action or recommendation that is most likely to address the identified causal contributor(s) and that is commensurate with the identified risk. In addition to issuing more traditional corrective actions and recommendations, incorporating creative solutions such as requiring the submitter to write a blurb for the safety newsletter or publishing a completion letter from the airport that made a change in response to an ERC's recommendation may be useful.
- Communicate the corrective action or recommendation and set specific expectations for completion.

- Leverage existing relationships and build new ones as required to encourage the development and implementation of corrective actions and recommended changes.

4.7 Maintain Complete Records of the Report Review Process

Maintaining complete records of the report review process will improve efficiency; the quality of corrective actions for individuals and recommendations for other entities; the identification of patterns and trends over time; and the communication of data to employees, organizations, and other airlines. Strategies to achieve this best practice include the following:

- Record information that will help the ERC use ASAP data over time. The ERC may benefit from recording
 - important dates, such as the dates of the ERC’s review, the resolution of the report, and the report closure;
 - parameters surrounding the report’s acceptance into ASAP (e.g., timeliness, sole source, violation of 14 CFR regulation);
 - all communications regarding the report;
 - steps involved in the investigation and any supporting documents;
 - event type(s) identified by the submitter and the ERC;
 - causal contributor(s) identified by the submitter and the ERC;
 - risk assessment;
 - corrective actions for individuals;
 - ERC recommendations for change by the airline or other entity;
 - whether the report should be submitted to other safety programs such as the Voluntary Disclosure Reporting Program (VDRP); and
 - an indication of the report’s suitability for future dissemination.
- Establish a procedure to ensure that corrective actions or recommendations that have been issued by the ERC are communicated and completed satisfactorily.

4.8 Develop and Maintain Transparency in the ERC Process

Providing stakeholders insight into the ERC process is important for educating them about the program and developing and maintaining trust. Strategies to achieve this best practice include the following:

- Communicate openly, honestly, and in a timely manner with the submitter regarding his or her report. Note that many electronic data collection systems are capable of automatically generating an email to the submitter to
 - acknowledge receipt of the report;
 - inform the submitter of report acceptance or exclusion and provide guidance about next steps;
 - communicate the report resolution, including any action required; and
 - inform the submitter of any recommendations made by the ERC or changes (e.g., changes in training content, policy, or procedure) that resulted from his or her report.

- Communicate openly, honestly, and in a timely manner with all ASAP stakeholders regarding the ERC's process by
 - establishing a procedure that defines whether and when non-ERC members may attend ERC meetings and any expectations regarding attendance (e.g., if a confidentiality statement must be signed); and
 - recognizing submitter or other stakeholder participation in an ERC meeting as an opportunity to provide exposure to the ERC process.

5. ERC Teamwork

Experts agree that the knowledge, skills, and personal characteristics of ERC members are important contributors to teamwork, which directly affects an ERC's performance. Best practices for promoting ERC teamwork are described below.

5.1 Identify the Best Individuals to Serve on the ERC

An ERC's success largely depends on the characteristics of the individuals who serve as members. This section describes the knowledge, skills, and personal characteristics of ERC members that are innate or gained through many years of experience and contribute to effective teamwork. Consider individuals who possess the following:

- Expert knowledge about the work of the represented employee group. Expert-level knowledge about the work is important because it allows individuals to be respected as authorities; to understand the context of the report and what additional information to gather; to differentiate between acceptable and unacceptable performance; and to identify the true underlying cause of the incident and the most appropriate corrective action(s) and recommendation(s). Important areas of knowledge may include
 - work processes;
 - changes in work over time;
 - policies, procedures, and regulations that guide the work performed;
 - training provided for the work performed; and
 - tools and equipment used by the employee group.
- Knowledge of safety principles. A basic understanding of general principles of system safety will be useful to ERC members as they attempt to identify and mitigate threats to safety through the ASAP concept. One source of information about system safety is the FAA's 2008 System Safety Handbook. Specific concepts that may be useful include
 - safety risk identification and analysis;
 - risk assessment;
 - risk controls and mitigation; and
 - accident investigation.
- Effective communication skills. Verbal and listening skills are critical to the functioning of the ERC because they affect the ERC's ability to have productive discussions about reports and to effectively make decisions. Some specific verbal communication strategies include
 - stating points and ideas clearly and briefly;



Best Practices for ERC Teamwork

- 5.1 Identify the Best Individuals to Serve on the ERC
- 5.2 Build Trust Among ERC Members
- 5.3 Build Consensus Proactively
- 5.4 Manage Conflict in ERC Member Interactions
- 5.5 Monitor ERC Interactions for Patterns

- maintaining an even tone of voice, even when disagreements occur;
- summarizing the points made by others to ensure understanding; and
- asking questions when there is lack of understanding or clarity.

Some specific listening strategies include

- waiting until another member has finished speaking before sharing one's point of view;
 - using appropriate body language (e.g., nodding one's head, turning toward the speaker);
 - making eye contact with one another; and
 - refraining from distracting activities (e.g., using the phone, moving on to the next report while others are speaking).
- Personal characteristics that promote good ERC teamwork. The foundation of ASAP is built on the ability of the airline, the FAA, and the third party (typically the labor union) to work together. However, the task of representing a particular party while serving on the ERC is not an easy one. To successfully do so requires ERC members who share a focus on and commitment to safety. Personal characteristics that support these goals include
 - being professionally mature (i.e., seen as someone who is fair, trustworthy, and consistent);
 - being open-minded (i.e., willing to consider the merits of another individual's opinion);
 - having integrity (i.e., able to admit wrongdoing or confusion);
 - believing firmly in the goal of improving safety;
 - having overall trust in ASAP and pride in being part of the ERC as demonstrated by words and actions; and
 - being willing to set aside personal or organizational biases and to compromise if necessary.

5.2 Build Trust Among ERC Members

Trust among ERC members is the reliance on and confidence in the expertise, knowledge, opinions, and values of fellow ERC members. Without this trust, an ASAP is likely to fail. Trust can be built by ERC members in a number of ways, including the following examples:

- Show value in the opinions and knowledge of other members. Statements such as “I can see your point” or “You have a level head...you think like a pilot...that's why I listen to you” demonstrate respect.
- Ask questions to capitalize on other members' experience or to learn more about an issue or a point.

- Share information with fellow ERC members that cannot be shared outside the ERC.
- Demonstrate the ability to consider the “big picture” by acknowledging situational factors that contribute to the event.
- When ERC tasks must be completed by only one of the ERC members, express confidence in the member responsible. For example, if one member will be conducting an interview with a submitter, use statements such as, “We trust you to conduct the interview and to report back to the ERC at the next meeting.”

5.3 Build Consensus Proactively

One of the most important characteristics of an ERC is its ability to reach consensus on decisions. As described in the current Advisory Circular, consensus does not require that all members believe that the decision or recommendation is the best one but only that it falls into their range of acceptable outcomes for the particular issue. The ability to achieve consensus is essential to the success of ASAP. Strategies to achieve this best practice include the following:

- Practice. Consensus building is unique to each ERC. Therefore, the specific approaches to reaching consensus will vary and may simply require time and practice to identify.
- Establish and document rules for ERC members to follow, such as “Each ERC member must state his or her perspective before a decision is made” or “Personal attacks are not permitted.”
- Ask questions. Ensure that discussions are based on an accurate understanding of the issues. If information is unclear or unknown, ask questions to learn more.
- Be open to other points of view. Members should be willing to consider interpretations and conclusions that are different from those they bring to the discussion.
- Anticipate the perspectives of the other ERC members by considering how they will view the issue, and how and why conclusions about the report may differ. Thinking through this information will help members remain open-minded and be thoughtful about how their perspective is shared.
- Focus on the facts. Diffuse personal conflicts by working to develop a shared understanding of the event and its impact on safety.

5.4 Manage Conflict in ERC Member Interactions

Difficult discussions and decisions are inevitable within an ERC and may result in conflict among members. Effectively managing conflict will help improve the productiveness of these discussions and facilitate ERC success. Strategies that the ASAP Manager or ERC members may use to achieve this best practice include the following:

- Refer to the FAA's ASAP documents and the MOU often for specific guidance regarding the rules for ASAP administration.
- Work to ensure that all information about a report and any policies regarding how to address it are understood by all ERC members.
- Continue to gather more information about the event, even if ERC members appear to be in agreement about the event's facts. Additional research may reveal details that provide the insight needed to reach consensus.
- Look at the issue from the other ERC members' points of view. Have each member take a turn at stating his or her perspective, or try to argue the issue from another member's perspective.
- Recenter the group on the facts. If the ERC becomes engaged in a discussion that is no longer focused on the event and its impact on safety (e.g., a member is pushing for a particular result for reasons other than safety), refocus the discussion by summarizing what is known and identifying outstanding questions.
- Take a break. Give the members a few minutes to step away from the discussion and clear their thoughts.
- Delay discussion or resolution of a report until the next meeting. Giving members time to think more deeply about an issue or to cool down from a heated discussion may pave the way for a smoother discussion at the next meeting.
- Bring in the alternate ERC members to review the report. A fresh perspective may facilitate consensus.

5.5 Monitor ERC Interactions for Patterns

ERC members spend many hours working closely together. Over time, patterns may develop in their interactions. Once patterns are identified by the members themselves or the ASAP Manager, consider the following to improve teamwork:

- If the pattern is positive, attempt to build on it by identifying it as a positive trend and recognizing and/or rewarding the ERC members for it.
- If the pattern is negative, try to identify the reason (e.g., specific type of report, personality issues) and resolve as appropriate. When the ASAP Manager is not a voting member, he or she can help by considering the reason(s) and suggesting a plan to improve the process. If needed, the ERC can also bring in a conflict resolution specialist to train ERC members in strategies that are customized for working within their team.

6. ASAP Data Analysis

Data analysis means producing and analyzing statistics on ASAP data for the purposes of grouping reports and events that have common characteristics and using identified patterns to inform decision making. When conducted regularly, data analysis will allow stakeholders to do the following:

- Identify common safety risks that should be addressed by the airline or other entity.
- Allocate resources more effectively by identifying which safety risks should be given priority.
- Provide a basis for communicating with the industry and establishing industry norms.
- Provide information to tailor reports and/or recommendations to the right audience (e.g., company division, geographic location).
- Allow the ERC to demonstrate that its recommendations were successful in reducing safety risks.

Best practices for ASAP data analysis are described below.

6.1 Identify a Skilled Data Analyst

To make full use of ASAP data, the ERC should identify a skilled individual to analyze the data. This individual may also serve as the ASAP Manager or as an ERC member. Consider identifying an individual for this role who has these characteristics:

- Sufficient time to devote to the task of analyzing data
- Competency with computers and data analysis programs
- Skill in basic data analysis and data interpretation
- Understanding of the work of the represented employee group and the types of reports submitted to ASAP
- Competence in working with confidential data

6.2 Determine the Appropriate Level of Analysis

An ASAP yields data at two levels of analysis: report level and event level. Report-level data describe a single submitter's perspective about an event. Event-level data describe the event as a single occurrence and are based on data provided by one or more submitters. Because multiple submitters may provide a report on a single event, the number of events is typically less than the number of reports. Both types of data provide useful information, but the information is different and answers different questions. Consider the following strategies when determining the proper level of analysis:



Best Practices for ASAP Data Analysis

- 6.1 Identify a Skilled Data Analyst
- 6.2 Determine the Appropriate Level of Analysis
- 6.3 Summarize ASAP Data
- 6.4 Use ASAP Data to Develop ERC Recommendations
- 6.5 Analyze ASAP Report Trends Over Time

- Report-level data are most useful for describing variables related to an individual submitter and his or her report, such as *primary duties at the time of the event*, and short term report-driven variables, such as *timeliness of submissions* and *ERC-identified corrective actions for individuals*.
- Event-level data are most useful for describing variables related to the event as a whole and are more likely to address organizational concerns, such as *event types*, and long-term multi-report–driven variables such as *recommendations for organizational change*.
- It may be necessary to analyze some variables at both the report level and the event level, such as submitter-identified causal contributor(s) from a single report, ERC-identified causal contributor(s) for a single report, and ERC-identified causal contributor(s) for an overall event.
- Coordination with ASAP stakeholders in multi-ASAP organizations is important for determining whether reports on the same event from submitters in different programs are included in analyses.

6.3 Summarize ASAP Data

Summarizing ASAP data on a regular schedule provides a way to identify patterns. After determining the appropriate level of analysis, select the variables to summarize. Common variables to summarize and the reasons for doing so include, but are not limited to, the following (for a more comprehensive list of useful data fields that may be aggregated, see Section 3.2).

- Causal contributor(s). Examining patterns in causal contributors may help identify the course of action required to prevent the events from reoccurring. For example, if 50% of reports that involve a regulatory infraction were caused by on-time performance pressure, the ERC can focus on issuing corrective actions and developing recommendations to address this particular challenge.
- Risk assessment. Identifying patterns in risk level allows the ERC to prioritize and focus on those events with the highest risk and make them a priority over those that occur often but have a minimal impact on safety. For example, if a particular type of event is consistently evaluated as a high risk, the ERC should devote extra effort to issuing corrective actions and developing recommendations for change to reduce or eliminate that event's recurrence.
- Report characteristics. Many characteristics may be informative when summarized. For example, it may be useful to summarize the number of reports that were submitted in a timely manner or the number that were sole source versus non-sole source.
- Corrective actions and recommendations. Summarizing data about the corrective actions for individuals and recommendations for others provides the ERC with feedback about the range of

corrective actions used and recommendations to remedy underlying causes.

Common approaches to summarizing data across reports include conducting the following statistical analyses:

- **Frequency.** Frequency is a count of the number of reports or events that belong to a specific category. Examples include the number of
 - reports involving a certain event type (e.g., MEL violations);
 - events attributed to a certain causal contributor (e.g., fatigue);
 - times the ERC made a particular recommendation for change (e.g., change the airline's training policy); and
 - reports that were not accepted by the ERC into ASAP.
- **Percent of total.** A useful companion to frequency data is the percent of total, which represents the proportion of the reports or events in a category in relation to the total number of all events. Examples include the percentage of
 - MEL violations as a function of all dispatch ASAP events;
 - altitude deviations attributed to fatigue as a function of all possible contributors to altitude deviations;
 - times that changing the airline's training policy was recommended as a function of all the ERC's recommendations; and
 - reports that resulted in a letter of no action as a function of all possible corrective actions.
- **Cross-tabulations.** Cross-tabulations are a way to summarize report data across more than one variable. Examples include the percentage of
 - total cabin door closure events by employee work shift or by domicile;
 - total MEL violations by aircraft type; and
 - policy violations by work shift.
- **Pictorial representations of numerical data.** Presenting numerical information pictorially can assist in understanding and communicating patterns in data. Examples include tables, graphs, charts, and histograms.

6.4 Use ASAP Data to Develop ERC Recommendations

Summarizing ASAP data will help identify patterns or trends in the data. These patterns are the key to identifying the recommendations that should be submitted to the airline or other entity. These

recommendations may be small in scope or require a series of interventions to correct a safety issue. Strategies to achieve this best practice follow:

- Prioritize safety risks by summarizing risk assessment data across reports. Address the most severe issues immediately.
- Compose recommendations by describing the safety risks identified and the recommended steps to correct the issue.
- Submit recommendations to the appropriate group(s).
- Maintain records of the recommendations submitted. Tracking recommendations issued and to whom will facilitate follow-up.
- Follow up with the group(s) responsible for implementing changes to ensure that the recommendation(s) is implemented.
- Follow up on implemented recommendations periodically (e.g., annually) to be sure that they are successful over time. If they are not, make the necessary changes.

6.5 Analyze ASAP Report Trends Over Time

Analyzing and interpreting trends over time will help illustrate the result of the systematic changes that were made. In some cases, the result may be a positive one, indicating success. In other cases, the data may demonstrate the need to revise the approach to addressing a specific issue to ensure a more positive, long-term outcome. Sample analyses follow:

- Changes in frequency or percentage of total before and after the implementation of a policy change. This analysis will help identify whether those changes have had a positive impact on safety or have been ineffective and should be readdressed. Monitor these changes over the long term to ensure that changes continue to be effective.
- Changes in frequency or percent of total over time. Reviewing data as a function of time may help identify errors that could be a result of seasonal changes.

7. Dissemination of ASAP Information

The value of ASAP can only be known and understood if the successes and findings of the program are shared openly and honestly with all stakeholders. Making the impact of ASAP on safety visible—and sustaining this visibility over time—is important for building and maintaining trust in and buy-in for the program. Best practices for the dissemination of ASAP information follow.

7.1 Make Information About ASAP Meaningful to the Intended Audience

ASAP data and results can be shared in a number of formats. Although the interpretation of the results should be consistent, the particular format in which they are presented should vary by the intended audience to ensure that the information is understood by and interesting to those receiving it. To ensure that ASAP data are meaningful to a particular audience, consider the following:

- Identify the type of data to share. ASAP data will largely come in two forms: statistical data and narrative data. Each form may have specific benefits to the audience:
 - Statistical data, such as frequencies or percentages, presented in tables or graphs will provide helpful information to stakeholders. For example, both the represented employee group and ERC members will likely be interested in the number of reports accepted and the most common event types reported. Airline managers may be interested in data that provide evidence of return on investment, quantities of reports, and identified trends. Statistics about the frequency of an event may be helpful in comparing the airline's findings with the occurrence of the same event within the industry as a whole. A site manager for the airline may find statistics about the frequency of an event at that site to be the most meaningful information to compare safety between sites.
 - Narrative data, such as de-identified summaries of individual reports or group of reports or articles about threats to safety identified and corrected through ASAP will also provide useful information to stakeholders. For example, text authored by a report submitter may be more likely to help fellow employees relate to this type of data and to discuss the information with one another.
- Use the selected data to tell a story. Whether statistical or narrative data are used, compile the information in a way that tells a story that both is interesting and provides information regarding the issue and how it affects the intended audience.



Best Practices for Dissemination of ASAP Information

- 7.1 Make Information About ASAP Meaningful to the Intended Audience
- 7.2 Select a Method of Communication That Is Appropriate for the Audience
- 7.3 Participate in Industry-Wide ASAP Data-Sharing Initiatives

- Disseminate information about known and significant threats to safety in a manner that prepares employees in advance of upcoming tasks.

7.2 Select a Method of Communication That Is Appropriate for the Audience

It is unlikely that a single communication strategy will work for all ASAP stakeholders. Consider your employee group and determine the mode or modes of communication accessible to—and likely to be absorbed by—that group. Strategies to achieve this best practice include the following:

- Identify the communication modes most appropriate for your organization from among the full range of information outlets: safety alerts, in-person presentations, email, ASAP websites, general safety or ASAP-specific newsletters, safety magazines, electronic boards, internal safety meetings, and/or safety round tables.
- Resist the urge to rely solely on electronic means of sharing information. It is likely that not all employees will have regular access to a computer. Those who do may be dealing with information overload.
- Use multiple forms of communication. Information is more likely to be absorbed and remembered if it is repeated.
- Be open to trying new approaches to communication. Creativity will help in identifying the best ways to communicate ASAP information. For example, developing a newsletter that is small enough to fit in a pocket or displaying information on an electronic board may facilitate communication to a particular audience.
- Actively seek feedback from the audience about what is working.

7.3 Participate in Industry-Wide ASAP Data-Sharing Initiatives

The analysis of ASAP data, as described in Section 6, provides critical information needed for identifying and implementing changes to improve safety. Although this is an important function within an airline, it is equally important to share this information with the industry to help identify industry-wide safety risks. Sharing of data can be formal or informal and include the following initiatives:

- Aviation Safety Reporting System (ASRS). ASRS collects voluntarily submitted aviation safety incident reports to lessen the likelihood of aviation accidents. These reports are analyzed to identify industry-wide deficiencies and discrepancies in the National Airspace System. ASRS shares these analyses with the appropriate authorities to remedy the issues. Some ASAP reporting software allows the automatic submission of ASAP

data into ASRS or asks the submitter whether information may be shared in this way.

- Aviation Safety Information and Analysis Sharing (ASIAS). ASIAS is a collaborative government and industry initiative on data sharing and analysis to proactively discover safety concerns before accidents or incidents occur, leading to timely mitigation and prevention. ASIAS supports the analysis of proprietary and government data to support the assessment of industry-level safety risks. This information is used as part of a collaborative process to develop mitigation strategies implemented across the National Airspace System. ASIAS partnerships include the FAA, commercial airlines, contract support, and a growing number of additional aviation industry service providers.
- ASAP information-sharing meetings and other safety conferences. Many meetings and conferences are designed specifically to share safety information. ASAP information-sharing meetings provide a way for ASAP stakeholders to meet and share safety concerns and success stories. Conferences such as the *Shared Vision of Aviation Safety Conference* and the *International Symposium on Aviation Psychology* focus on more general aviation safety issues and often include presentations on ASAP.



Best Practices for Management of Multiple ASAPs

- 8.1 Use Lessons Learned From Other ASAPs Within the Airline
- 8.2 Standardize Processes and Tools Across ASAPs When Possible
- 8.3 Consider the Needs of Each Program With Respect to the Represented Employee Group
- 8.4 Establish a Collaborative Review Process for Multi-ASAP Reports

8. Management of Multiple ASAPs

The existence of multiple ASAPs (e.g., a pilot ASAP and a dispatch ASAP) within the same airline presents a unique opportunity to share information and capitalize on data collected across programs. Some best practices regarding the management of multiple ASAPs within a single airline are described below.

8.1 Use Lessons Learned From Other ASAPs Within the Airline

Each ASAP and ERC will adopt processes and strategies to help achieve success. Although one ASAP's processes and strategies may not lead to success for another ASAP, having multiple ASAPs within the airline allows the airline to use lessons learned from the early programs. Strategies to achieve this best practice include the following:

- Ask the other ASAPs about needed and/or unanticipated resources and use this information to plan ahead.
- Review and incorporate MOU language that improved the quality or efficiency of another previously established ASAP.
- Learn how the individual for—and the role of—the ASAP Manager was determined and how this has contributed to the ERC's success.
- Evaluate the tools and strategies of the other ERCs. Consider adopting particularly effective procedures or materials (e.g., program manual).

8.2 Standardize Processes and Tools Across ASAPs When Possible

Cross-program standardization in processes such as data collection, data dissemination, and cross-program safety issues ensures fairness and enhances the ability for programs to share safety information and data. Some suggested areas for standardization include the following:

- ASAP reporting process. The format of the ASAP submission form and processes for accessing and using it should be standardized throughout the airline. Each program's reporting form may have unique questions or data fields; however, the overall format should be comparable across programs.
- ASAP taxonomies. Develop and/or use taxonomies to classify the type of event and the causal contributor(s) that allow some common classifications across programs. Again, some customization may be required to meet the reporting and data analysis needs of each employee group.

8.3 Consider the Needs of Each Program With Respect to the Represented Employee Group

Standardization across ASAPs within an airline provides benefits. However, ASAPs will differ to the unique characteristics and needs of the employee group represented. Considering these needs will help improve efficiency and the likelihood of success. Strategies to achieve this best practice include the following:

- Create a company position for one individual to work across all ASAPs. Having a single individual knowledgeable about each ASAP will help promote standardization because the individual can ensure that each program follows established procedures in key aspects of the program (see Section 8.2 for more information). In addition, working with each program will give the individual an opportunity to learn how differences between employee groups affect differences in each ERC's work, thus allowing a more accurate assessment of each ERC's performance.
- Avoid assessing ASAP success on the basis of the number of reports received. A number of complex factors, including differences in employee group size and type of work, will affect the number of ASAP reports submitted.
- Be aware that the time required for investigative work on ASAP reports may vary by employee group. An ERC that receives and reviews large quantities of similar reports may, over time, develop an efficient way to address these reports with little investigation. However, an ERC that routinely receives unique reports may need to conduct significant additional research—and therefore need more time—to understand each report and its context and to identify or confirm the causal contributors.

8.4 Establish a Collaborative Review Process for Multi-ASAP Reports

An airline with more than one ASAP will likely encounter situations in which reports about a single event are filed by employees represented by other ASAPs within the airline. Establishing a collaborative procedure for processing these reports may result in more effective results.

Strategies to achieve this best practice include the following:

- Encourage the ERCs involved to meet and openly discuss the event.
- Conduct a joint investigation of the details of the event.
- Develop corrective actions and recommendations that are appropriate for all employee groups and are likely to resolve the issue.

ERC Best Practices Checklist

This checklist of ERC best practices can be used to measure how well your organization is meeting the established best practices.

ERC Best Practices		Yes	No
1.	Precursors to ASAP Success		
1.1	Establish Buy-In for the Program at Startup		
1.2	Integrate ASAP Into Your Organization's Safety Culture		
1.3	Plan for Resources Needed		
1.4	Identify the Best Individual to Serve as the ASAP Manager		
2.	ASAP Training		
2.1	Use a Standardized Approach to ASAP Training		
2.2	Train All Stakeholders in the Appropriate Content		
2.3	Provide Opportunities for Retraining		
2.4	Leverage Other Sources of Information		
3.	ASAP Data Collection		
3.1	Consider Employee Needs in the Report Submission Process		
3.2	Ensure That the Data Management System Supports ERC Tasks		
3.3	Require Submitters to Classify the Type of Event and Its Causal Contributors		
4.	ERC Report Review Process		
4.1	Maintain a Manual of Processes and Procedures		
4.2	Adopt an ERC Meeting Schedule That Supports Timely Review of Reports		
4.3	Prepare for ERC Meetings in Advance		
4.4	Strive for Consistency in the Report Review Process		
4.5	Investigate Reports Thoroughly		
4.6	Identify and Communicate Effective Corrective Actions and Recommendations		
4.7	Maintain Complete Records of the Report Review Process		
4.8	Develop and Maintain Transparency in the ERC Process		
5.	ERC Teamwork		
5.1	Identify the Best Individuals to Serve on the ERC		
5.2	Build Trust Among ERC Members		
5.3	Build Consensus Proactively		
5.4	Manage Conflict in ERC Member Interactions		
5.5	Monitor ERC Interactions for Patterns		

ERC Best Practices		Yes	No
6.	ASAP Data Analysis		
6.1	Identify a Skilled Data Analyst		
6.2	Determine the Appropriate Level of Analysis		
6.3	Summarize ASAP Data		
6.4	Use ASAP Data to Develop ERC Recommendations		
6.5	Analyze ASAP Report Trends Over Time		
7.	Dissemination of ASAP Information		
7.1	Make Information About ASAP Meaningful to the Intended Audience		
7.2	Select a Method of Communication That Is Appropriate for the Audience		
7.3	Participate in Industry-Wide ASAP Data-Sharing Initiatives		
8.	Management of Multiple ASAPs		
8.1	Use Lessons Learned From Other ASAPs Within the Airline		
8.2	Standardize Processes and Tools Across ASAPs When Possible		
8.3	Consider the Needs of Each Program With Respect to the Represented Employee Group		
8.4	Establish a Collaborative Review Process for Multi-ASAP Reports		