

Implementing the Global Aviation Safety Roadmap Worldwide

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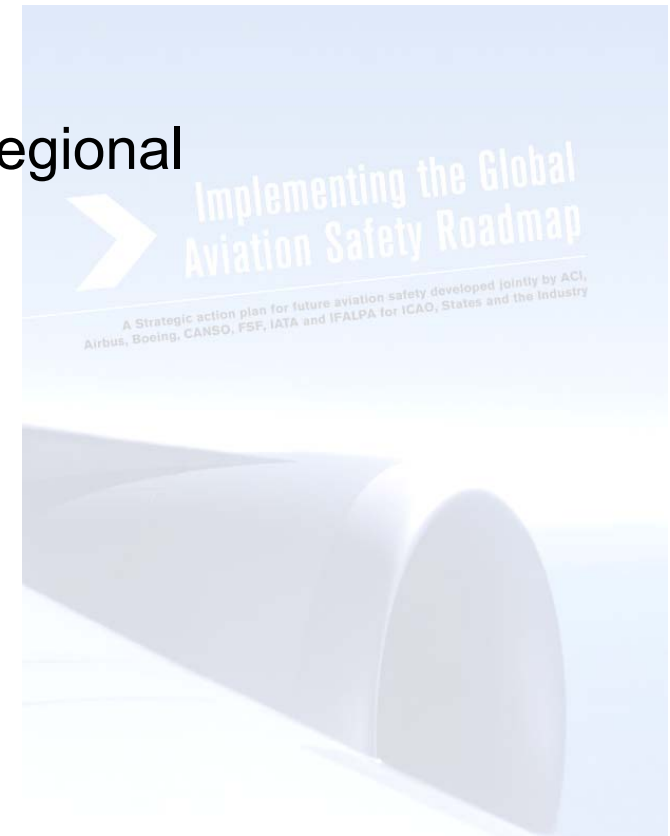
ATEC
Safety Management System Seminar
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Tokyo, Japan

Presentation to ICAO of Global Aviation Safety Roadmap



Presentation Overview

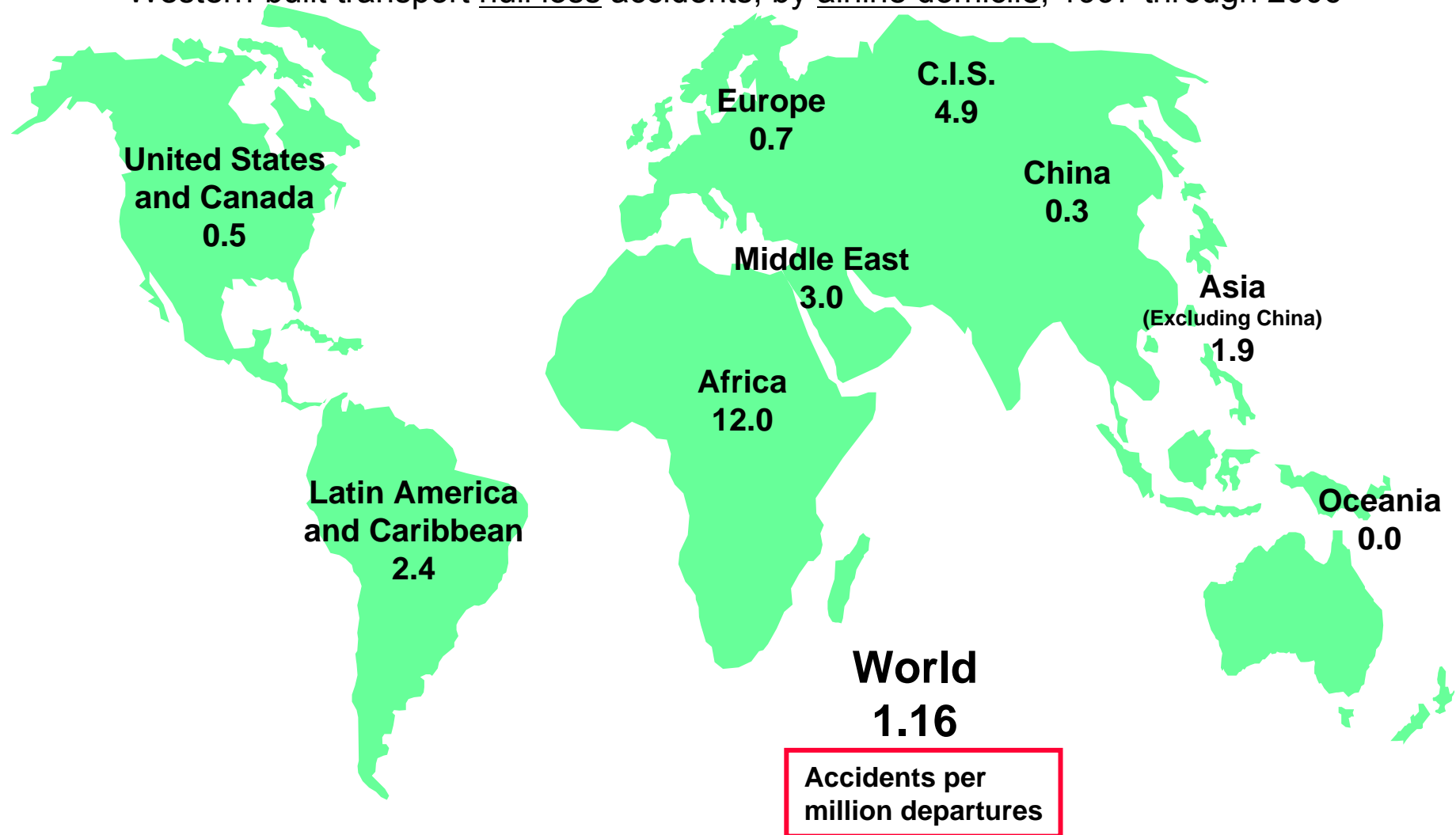
- The Regional Accident Risk
- Global Aviation Safety Roadmap Part 1 (Strategic Plan) Overview
- Global Aviation Safety Roadmap Part 2 (Implementation) Overview and Status
- ICAO Actions
- Industry Safety Strategy Group Regional Implementation Support:
 - Africa
 - Latin America
 - Middle East
 - Others
- Conclusion



Regional Perspective

Accident Rates Vary by Region of the World

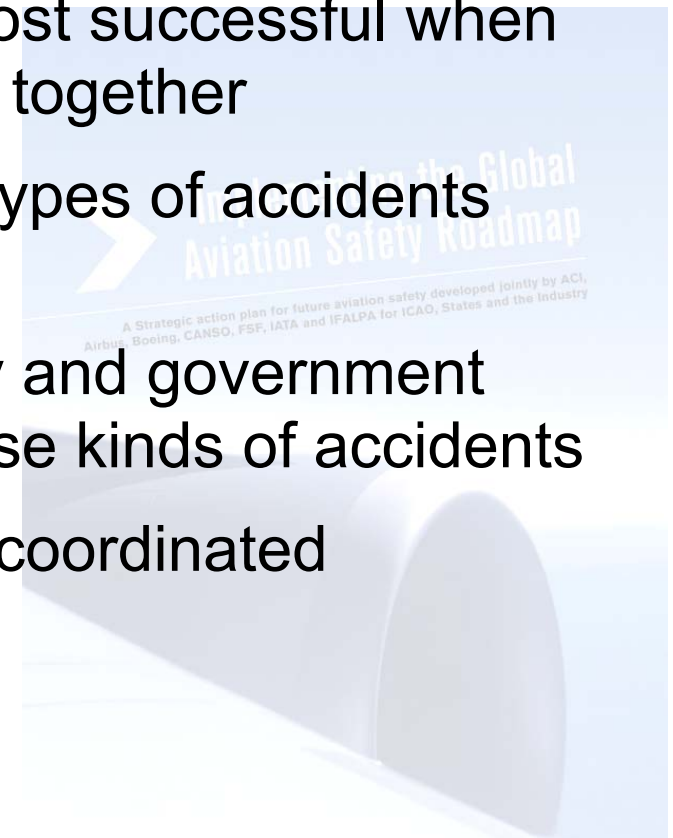
Western-built transport hull loss accidents, by airline domicile, 1997 through 2006*



Source: Boeing

Addressing the Regional Safety Risk

- Accident rates and numbers of fatalities differ dramatically in different regions of the world
- Efforts to improve safety have been most successful when industry and government have worked together
- We know how to prevent many of the types of accidents occurring today
- Better use and coordination of industry and government resources can dramatically reduce these kinds of accidents
- Current efforts are not efficient or well coordinated



Addressing the Regional Safety Risk

- Achieving the next major breakthrough in the regional accident rates requires moving beyond the traditional government-industry model, with its adversarial role-playing of regulator versus the regulated.
- An action plan of global dimensions was required, that clearly identified the roles played by the regulatory and industry elements, while emphasising their complementary nature.



ICAO Global Aviation Safety Roadmap

Background:

- **Inspired by 7th ICAO ANC Industry meeting May 2005:**
 - Desire to reduce accident rate, particularly in developing regions of the world
 - Need to harmonize best practices worldwide
 - Apply resources wisely



ICAO Global Aviation Safety Roadmap

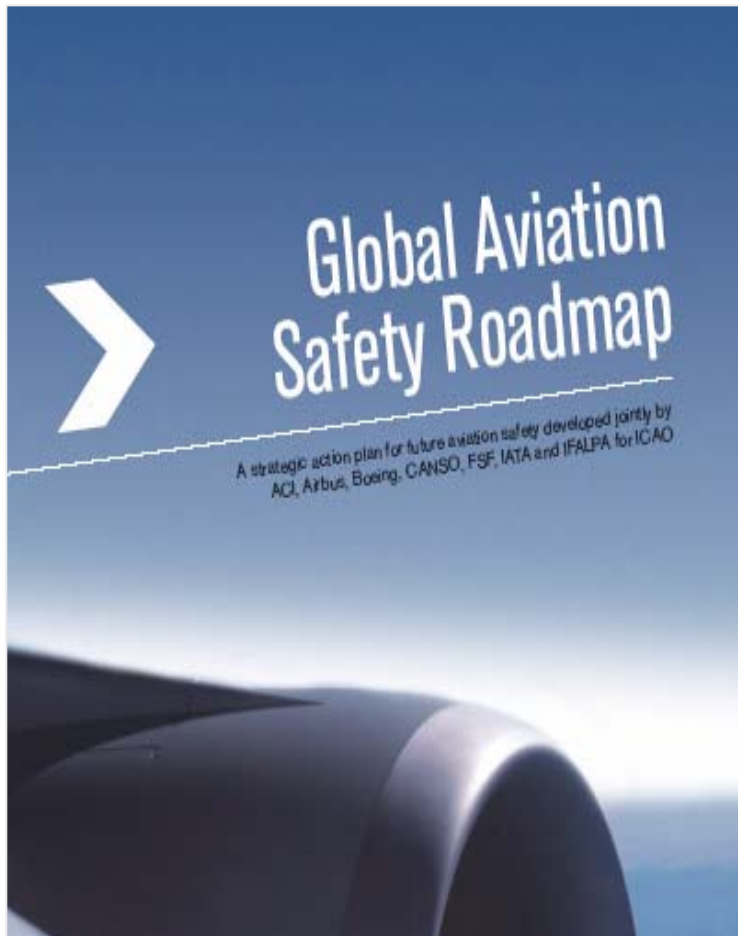
Background (cont.):

- Produced by the Industry Safety Strategy Group (ISSG) and ICAO:
 - Airbus
 - Airports Council International
 - Boeing
 - Council of Air Navigation Service Organizations
 - Flight Safety Foundation
 - International Air Transport Association
 - International Federation of Airline Pilot Associations



Global Aviation Safety Roadmap

Industry commits to unify plans through Roadmap



ICAO Global Aviation Safety Roadmap

Contents:

- Sets out a rationale and describes a general approach, based on metrics and risk measurement.
- Establishes 12 key focus areas
- Objectives are described for each focus area for near and mid-term accomplishment.
- Emphasizes aviation safety enablers (measures already in progress) in developing regions.



ICAO Global Aviation Safety Roadmap

Goals and Objectives:

- Provide a common frame of reference for all stakeholders
- Coordinate and guide safety policies and initiatives worldwide to reduce the accident risk for commercial aviation
- Avoid duplication of effort and uncoordinated strategies
- Encourage close industry and government cooperation on common safety objectives

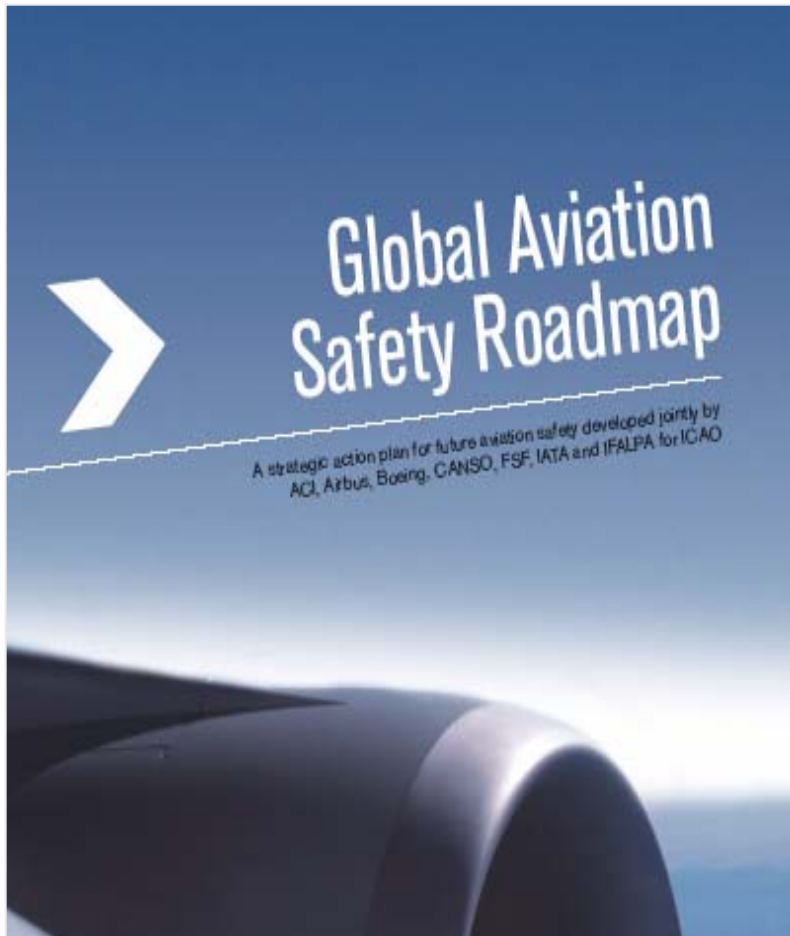
Timescale: Near (2006-10) and Medium Term (2010-14)



Global Roadmap's 12 Focus Areas: "The Roads"

Enable, Implement, Confirm, Integrate and Share

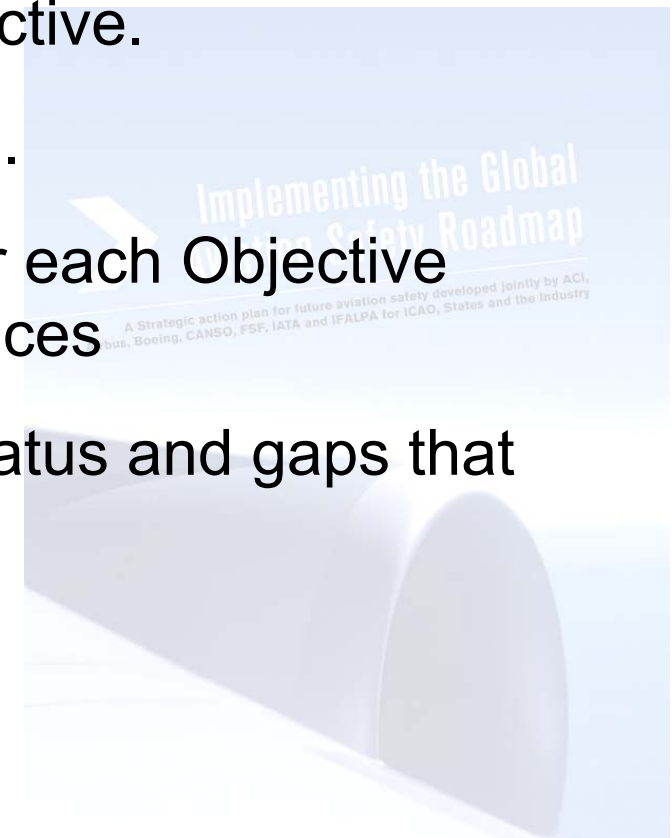
Focus Areas



- **States**
 - Consistent implementation of int'l. standards
 - Consistent regulatory oversight
 - No impediments to reporting errors/ incidents
 - Effective incident and accident investigation
- **Industry**
 - No impediments to reporting and analyzing errors/ incidents
 - Consistent use of Safety Management Systems
 - Consistent compliance with regulatory rqmts
 - Consistent adoption of industry best practices
 - Alignment of global industry safety strategies
 - Sufficient number of qualified personnel
 - No gaps in use of technology to enhance safety
- **Regions**
 - Consistent coordination of regional programs

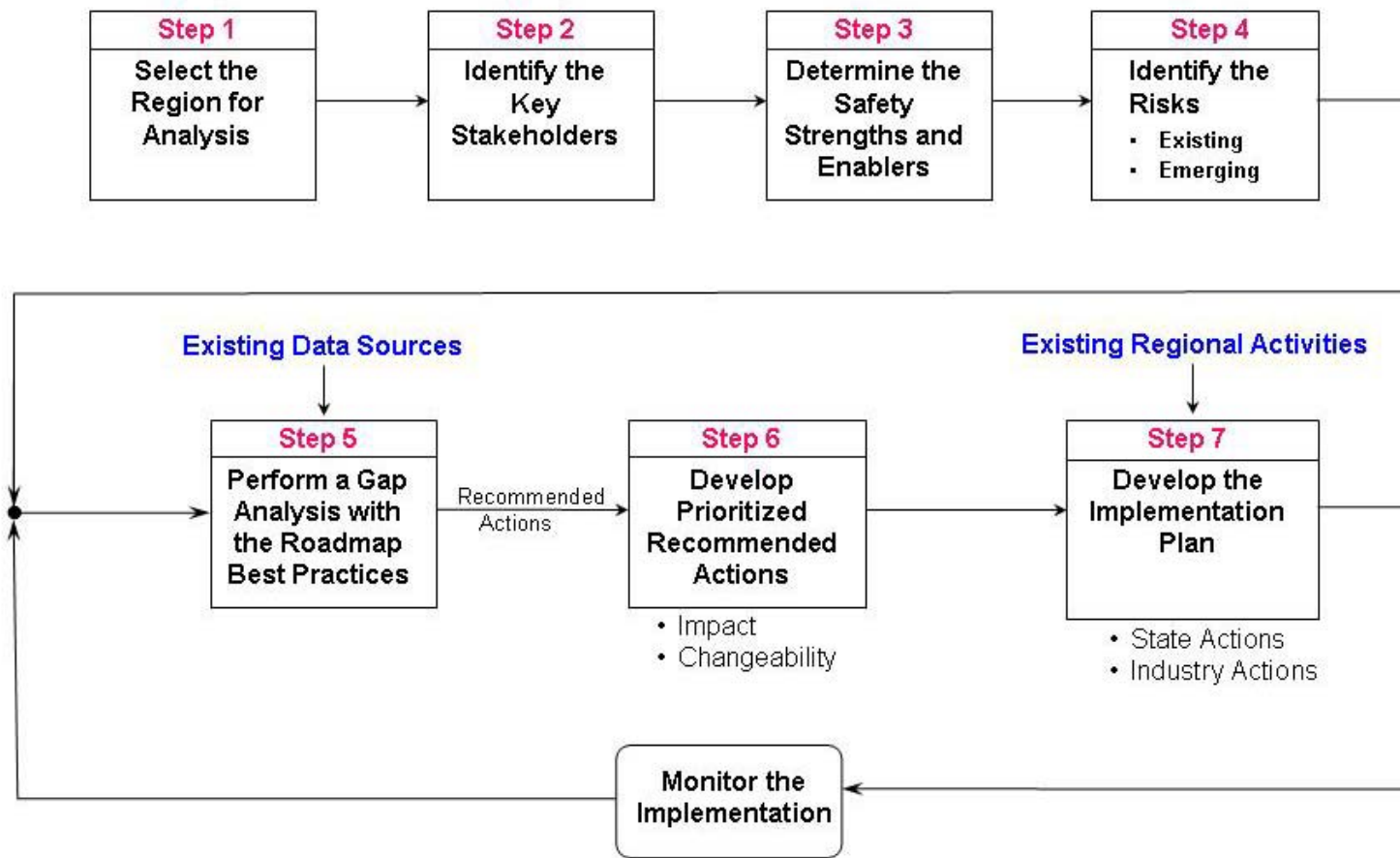
The Global Safety Roadmap: Part 2

- A detailed plan intended to guide Roadmap implementation plans by regional safety teams.
- Best Practices described for each Objective.
- Metrics provided for each Best Practice.
- A four-level Maturity Model provided for each Objective based on implementation of Best Practices
- Process described to assess current status and gaps that need to be addressed.



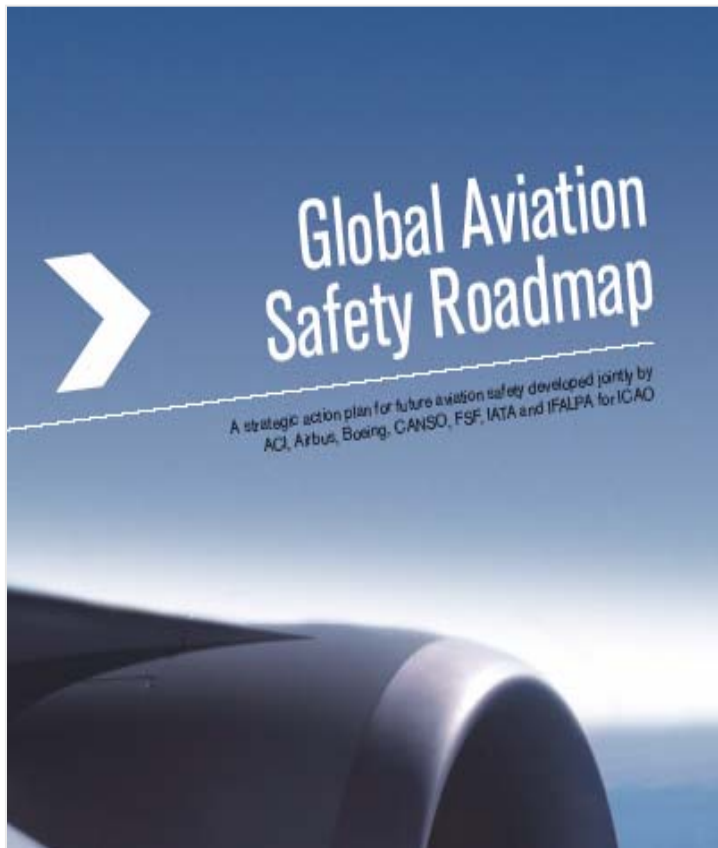
Implementing the Roadmap

Regional Safety Enhancement Plan Development Process



Global Roadmap's 12 Focus Areas: "The Roads"

Focus Areas



■ States

- Consistent implementation of international standards
- Consistent regulatory oversight
- No impediments to reporting errors/ incidents
- Effective incident and accident investigation

■ Regions

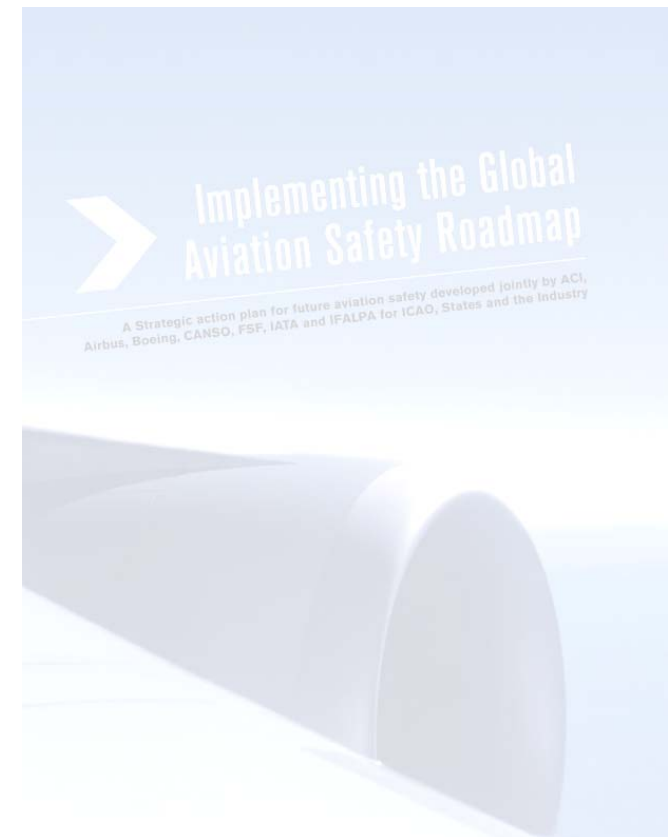
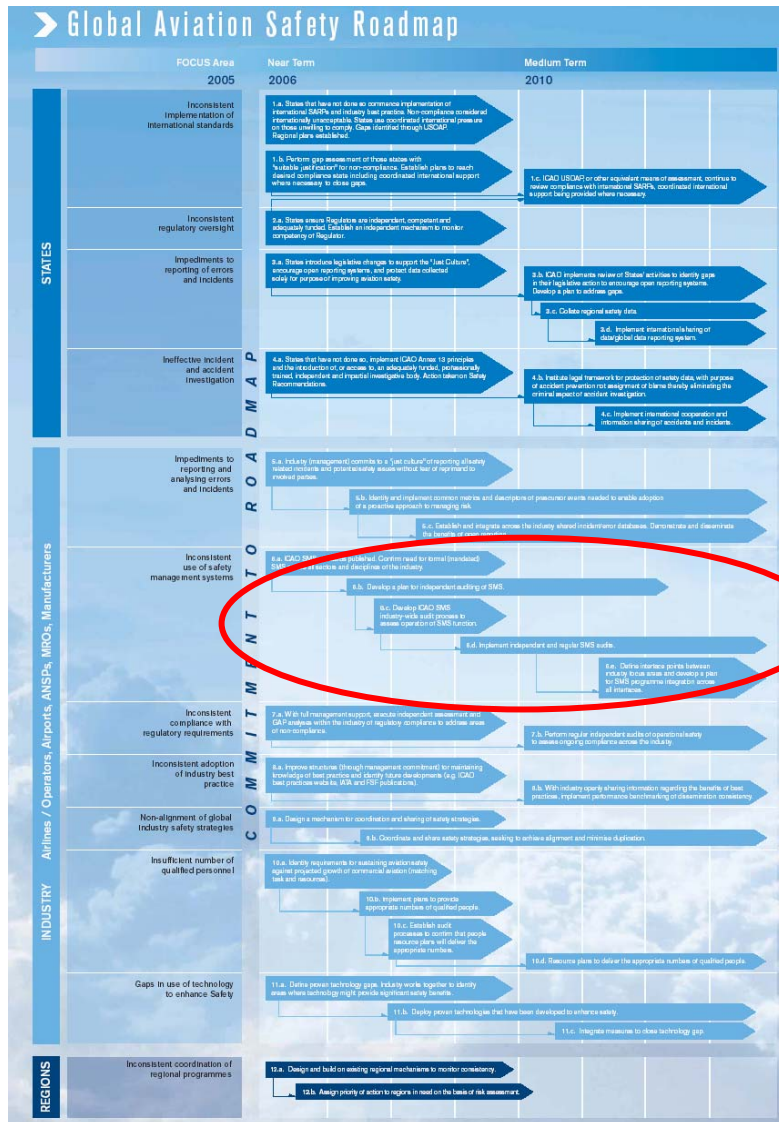
- Consistent coordination of regional programmes

■ Industry

- No impediments to reporting and analyzing errors/ incidents
- **Consistent use of Safety Management Systems**
- Consistent compliance with regulatory requirements
- Consistent adoption of industry best practices
- Alignment of global industry safety strategies
- Sufficient number of qualified personnel
- No gaps in use of technology to enhance safety



Developing A Best Practice Approach



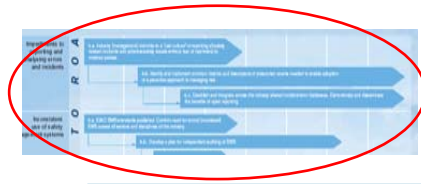
Focus Area 7 Objectives



Focus Area 7 – Inconsistent use of safety management systems (SMS)

- **Objective 7a – ICAO SMS standards published. Confirm need for formal (mandated) SMS across all sectors and disciplines of the industry.**
- **Objective 7b – Develop a plan for incorporation of SMS into audit process.**
- **Objective 7c – Develop audit processes to assess operation of SMS function**
- **Objective 7d – Implement review of SMS during audits.**
- **Objective 7e – Define interface points between industry focus areas and develop a plan for SMS programme integration across all interfaces.**

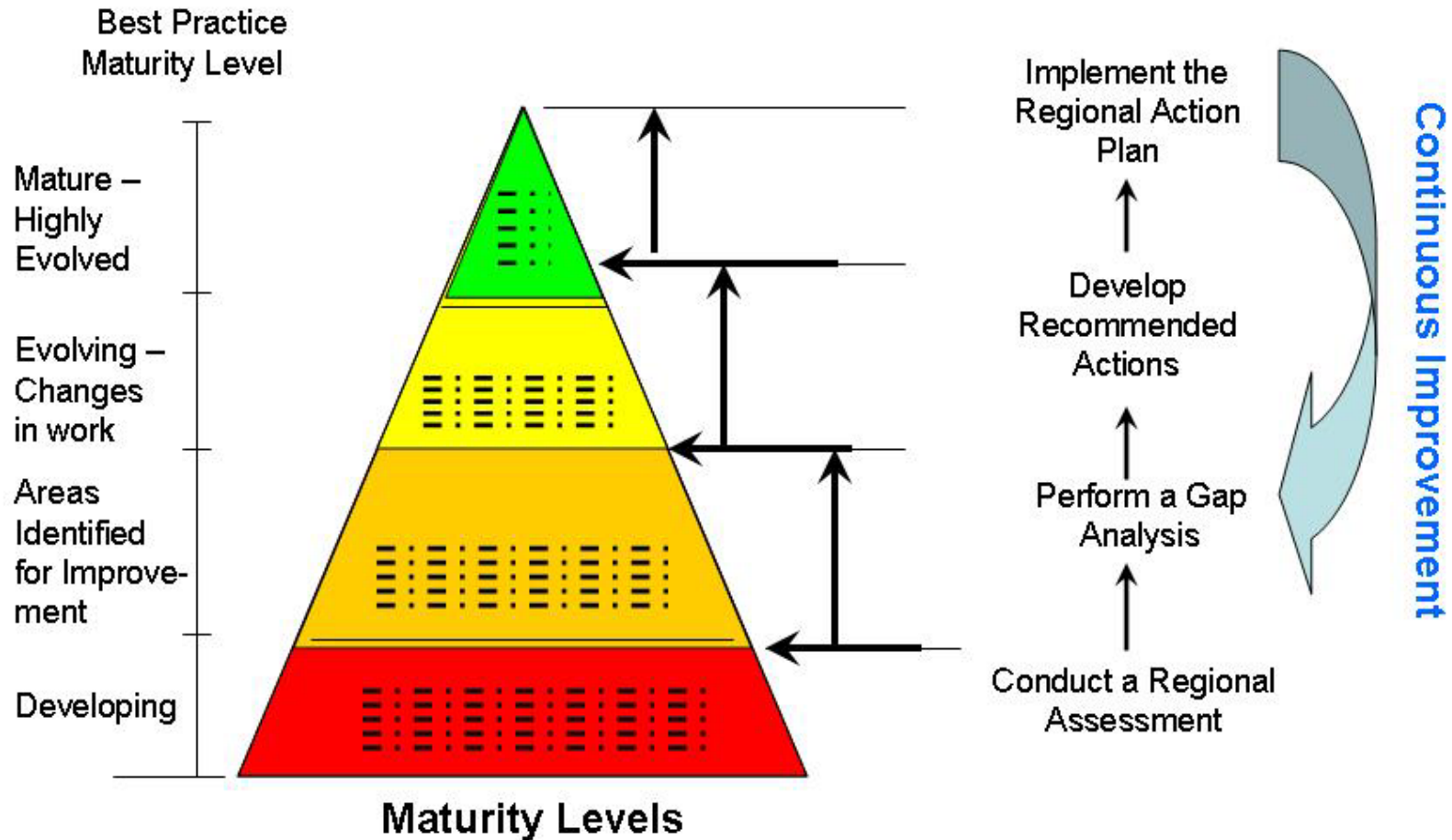
Implementing the Global Aviation Safety Roadmap
A Strategic Vision for the Future of Aviation Safety
Developed jointly by ICAO, Airbus, Boeing, CANSA, EASA, FAA, IATA and the industry



Best Practices: Objective 7 - SMS

Best Practices	Metrics
<p>BP 7a – Organizations within all sectors and disciplines of the aviation industry have their own formal SMS.</p>	<p>a. Existence of organisation’s SMS as per ICAO requirement.</p>
<p>BP 7b – Audit processes drive consistency in use of SMS both within and across industry sectors and disciplines.</p> <ul style="list-style-type: none"> a. The ICAO USOAP audits implementation and application of SMS to drive consistency and application amongst states. b. The IOSA process audits implementation and application of SMS to drive consistency within and across industry sectors and regions. c. Other recognized programs audit implementation and application of SMS to drive consistency within and across industry sectors and regions. 	<ul style="list-style-type: none"> a. Modified USOAP b. IOSA standards Manual 2nd edition Effective march 2007 c. Tailored audit processes in place
<p>BP 7c – An organization’s SMS recognizes external interfaces and contains the necessary procedures to manage them effectively.</p> <ul style="list-style-type: none"> a. Processes should be established within the SMS to ensure that regular communications take place between different sectors and disciplines to address safety issues across the interface. b. Procedures should be established within the SMS to ensure that risk assessment of change takes place in an integrated manner. 	<ul style="list-style-type: none"> a. Communication processes in place b. Procedures in place

Maturity Model to Guide Gap Analysis



Maturity Table: Focus Area 7 - SMS

Use of Safety Management Systems

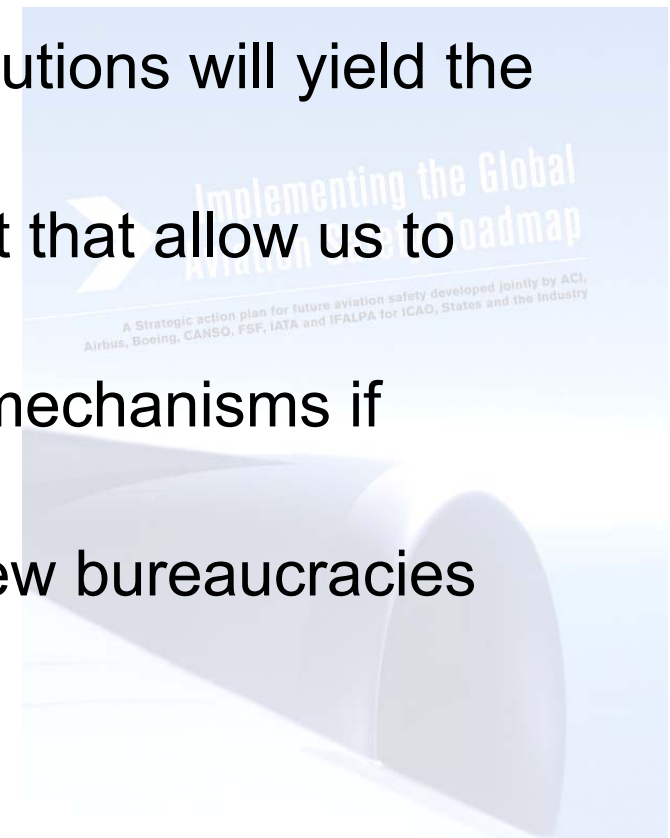
Maturity Level	Capability
Level 4 – Highly Evolved	<ul style="list-style-type: none"> • States <ul style="list-style-type: none"> ○ ICAO USOAP audit process covers the topic of SMS ○ SMS is regulated according to ICAO provisions and industry best practices ○ States and Regulatory authorities facilitate the sharing of SMS best practice as it evolves • Industry <ul style="list-style-type: none"> ○ Organizations within all sectors and disciplines of the aviation industry including suppliers of goods and services that impact upon aviation safety have their own formal SMS ○ Both internal and independent audits of the SMS take place ○ All sectors and disciplines work together effectively in an integrated manner to manage risk across boundaries ○ SMS best practice is shared across sectors as it evolves
Level 3 – Evolving Changes in work	<ul style="list-style-type: none"> • States – National legislation/regulations require all sectors and disciplines to implement an SMS • Industry – SMS implementation programs developed for sectors and disciplines not previously covered by SMS requirements
Level 2 – Areas Identified for Improvement	<ul style="list-style-type: none"> • States – current ICAO SMS requirements are communicated to industry sectors/disciplines • Industry – SMS implemented in those sectors and disciplines for which it is currently mandated
Level 1 – Developing	<ul style="list-style-type: none"> • States – Current ICAO SMS requirements not implemented and not communicated to the industry • Industry – SMS Systems not implemented

Is your SMS this mature? Where is the GAP?

Maturity Level	Capability
Level 4 – Highly Evolved	<ul style="list-style-type: none">• States<ul style="list-style-type: none">○ ICAO USOAP audit process covers the topic of SMS○ SMS is regulated according to ICAO provisions and industry best practices○ States and Regulatory authorities facilitate the sharing of SMS best practice as it evolves• Industry<ul style="list-style-type: none">○ Organizations within all sectors and disciplines of the aviation industry including suppliers of goods and services that impact upon aviation safety have their own formal SMS○ Both internal and independent audits of the SMS take place○ All sectors and disciplines work together effectively in an integrated manner to manage risk across boundaries○ SMS best practice is shared across sectors as it evolves

What Makes the Roadmap Unique

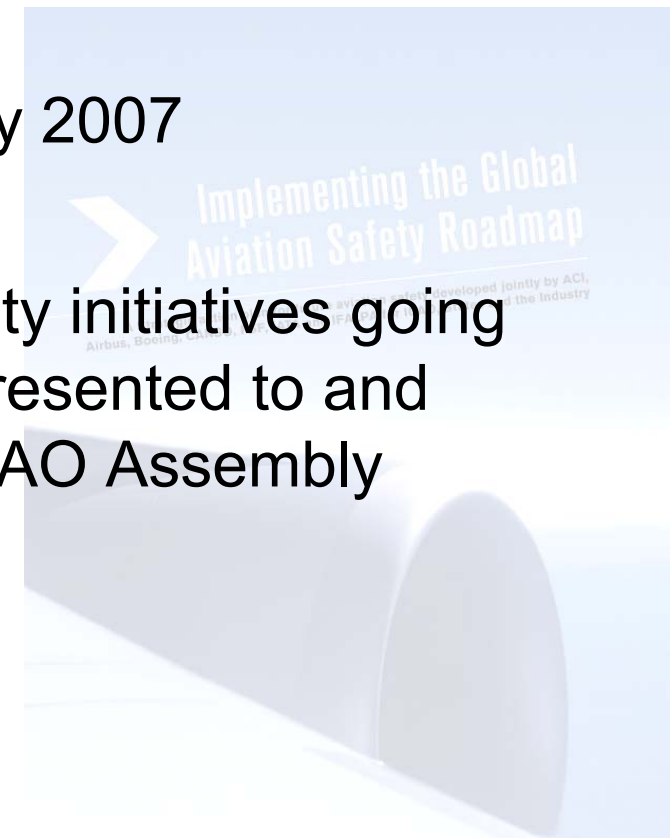
- The Roadmap helps us focus on doing the most important things first
- Does not impose specific standards or levels of safety
- Requires that a logical process is followed
- Reassures donors that their contributions will yield the maximum results
- Provides metrics and measurement that allow us to rigorously manage improvement
- Optimizes efforts through existing mechanisms if possible
- Attempts to avoid the creation of new bureaucracies



The Global Safety Roadmap: Part 2

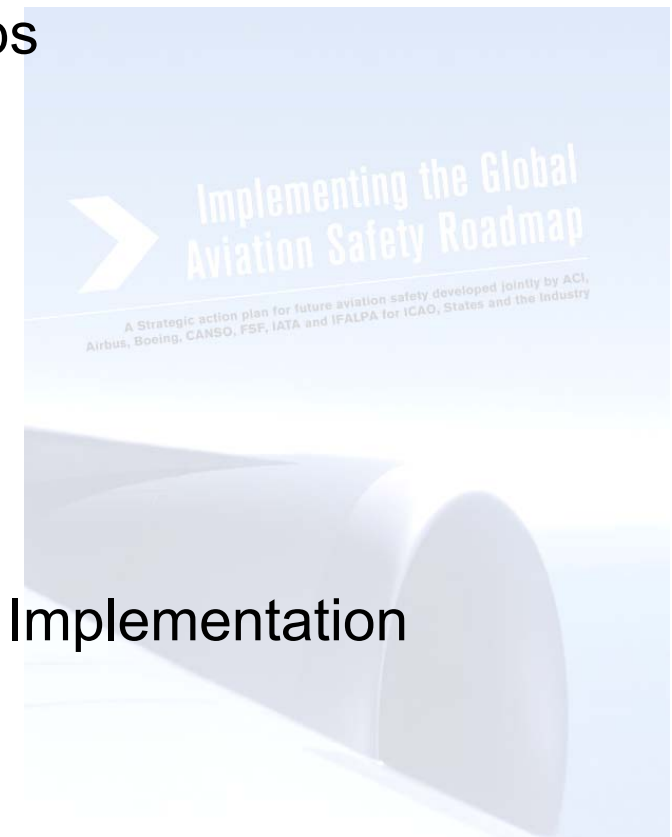
Follow-on ICAO Actions –

- ICAO formed a working group to integrate the Roadmap into its Global Aviation Safety Plan
- GASP was accepted by ICAO in July 2007
- GASP forms the basis of ICAO Safety initiatives going forward, including the Africa Plan, presented to and endorsed at the September 2007 ICAO Assembly



Industry Safety Strategy Group -- Next Steps

- Continued Coordination with ICAO in order to update the GASP and the Roadmap as required.
- Continue to promote Roadmap awareness
- Provide support to Regional Action Groups
 - Africa
 - Latin America
 - Middle East
 - Southeast Asia
- Identify and Support additional Roadmap Implementation opportunities



Africa - Status

- **ICAO Africa Plan presented to and endorsed by the ICAO Assembly in September – integrates a number of international initiatives under one common plan.**
- DGCA Nigeria, will organize and host Global Aviation Safety Roadmap workshop under the BANJUL Accord COSCAP – Proposed for 4th quarter 2007.



Latin America - Status

- **Global Aviation Safety Roadmap Workshop scheduled for October 22-26 in Bogota, Colombia**

- Attendees to include representatives of Regulators, Airlines, Airports, and Air Traffic Control organizations, as well as from ICAO and the ISSG

- Objectives of the Workshop:

- Inform participants about the Roadmap and their role in its implementation.
- Assess current regional safety mechanisms and opportunities to implement the process.
- Identify mechanisms for self-sustained implementation of the Roadmap.



Middle East - Status

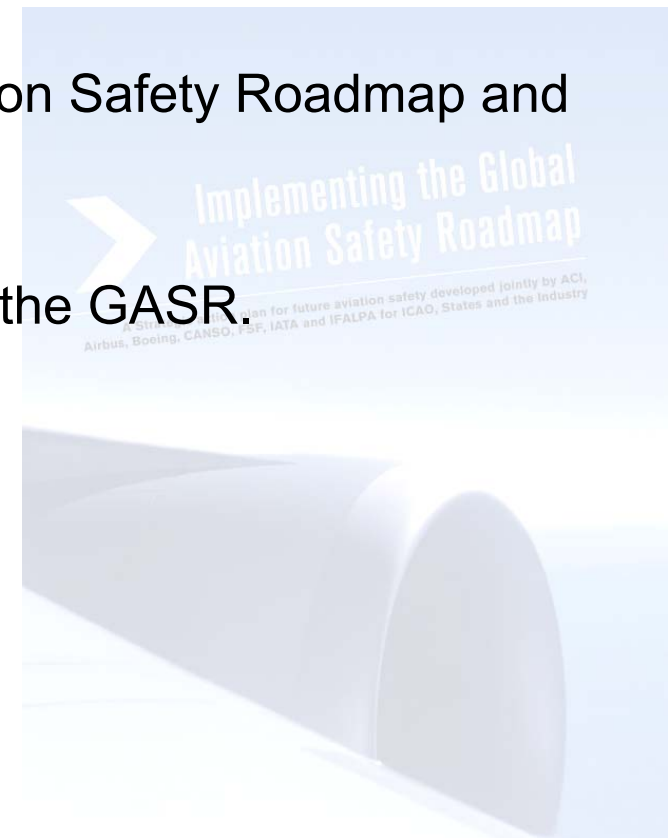
- **UAE-Sponsored Global Aviation Safety Roadmap Implementation Workshop scheduled for January 22-23, 2008 in Dubai.**
 - Attendees to include representatives from Middle Eastern and North African regulators, airlines, and airport authorities
 - Flight Safety Foundation leading the ISSG effort to support the workshop



Southeast Asia - Status

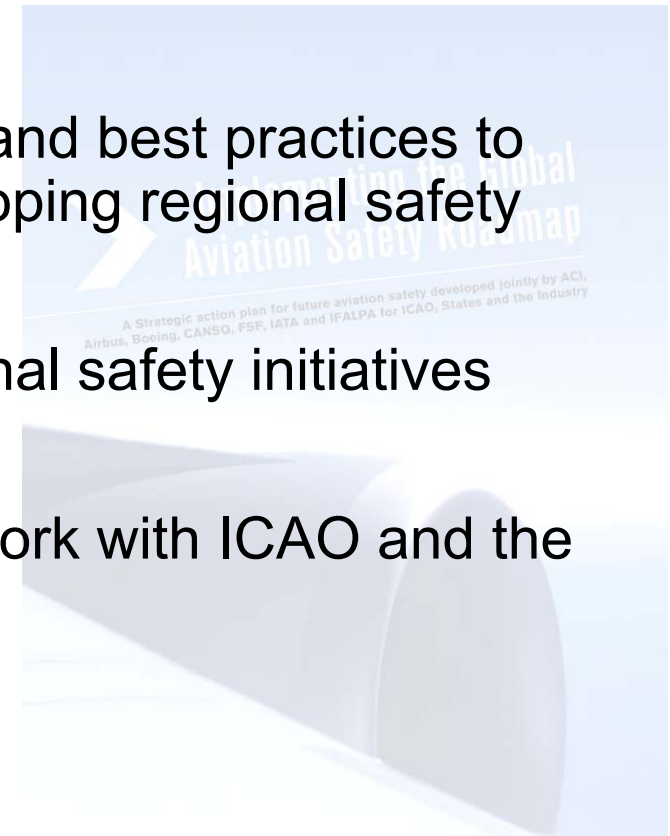
- **July 2-3 Indonesian DGCA “Strategic Summit on Aviation Safety”**

- Presented an overview of the Global Aviation Safety Roadmap and how it could help Indonesia
- Offered ISSG support of those efforts IAW the GASR.



Conclusion – Industry and ICAO Are Committed to the Roadmap process

- GASP/GASR is the primary guide for industry and States to work together to improve global aviation safety.
- Most major gains in safety have come from:
 - Close cooperation between industry and government
 - Sharing best practices
- Regions and States can use its objectives and best practices to engage international stakeholders in developing regional safety plans.
- Future industry support of global and regional safety initiatives will be tied to the Roadmap process.
- We invite Regional Groups and States to work with ICAO and the ISSG to implement GASP.



Thank You!

