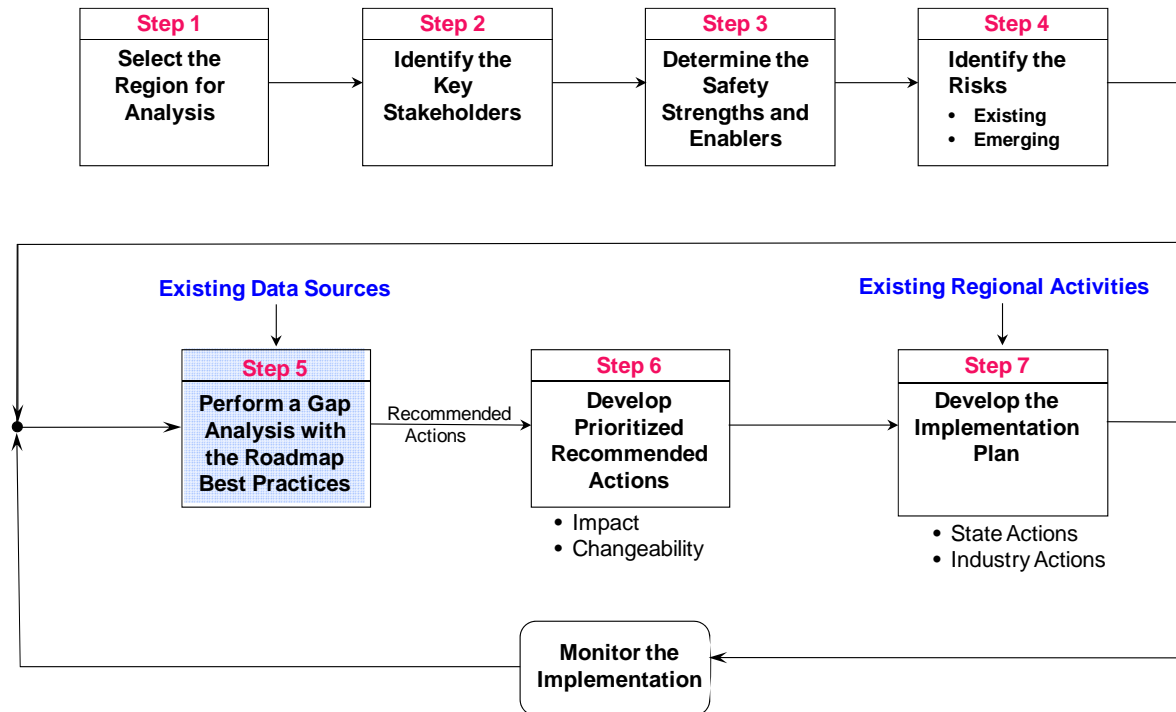


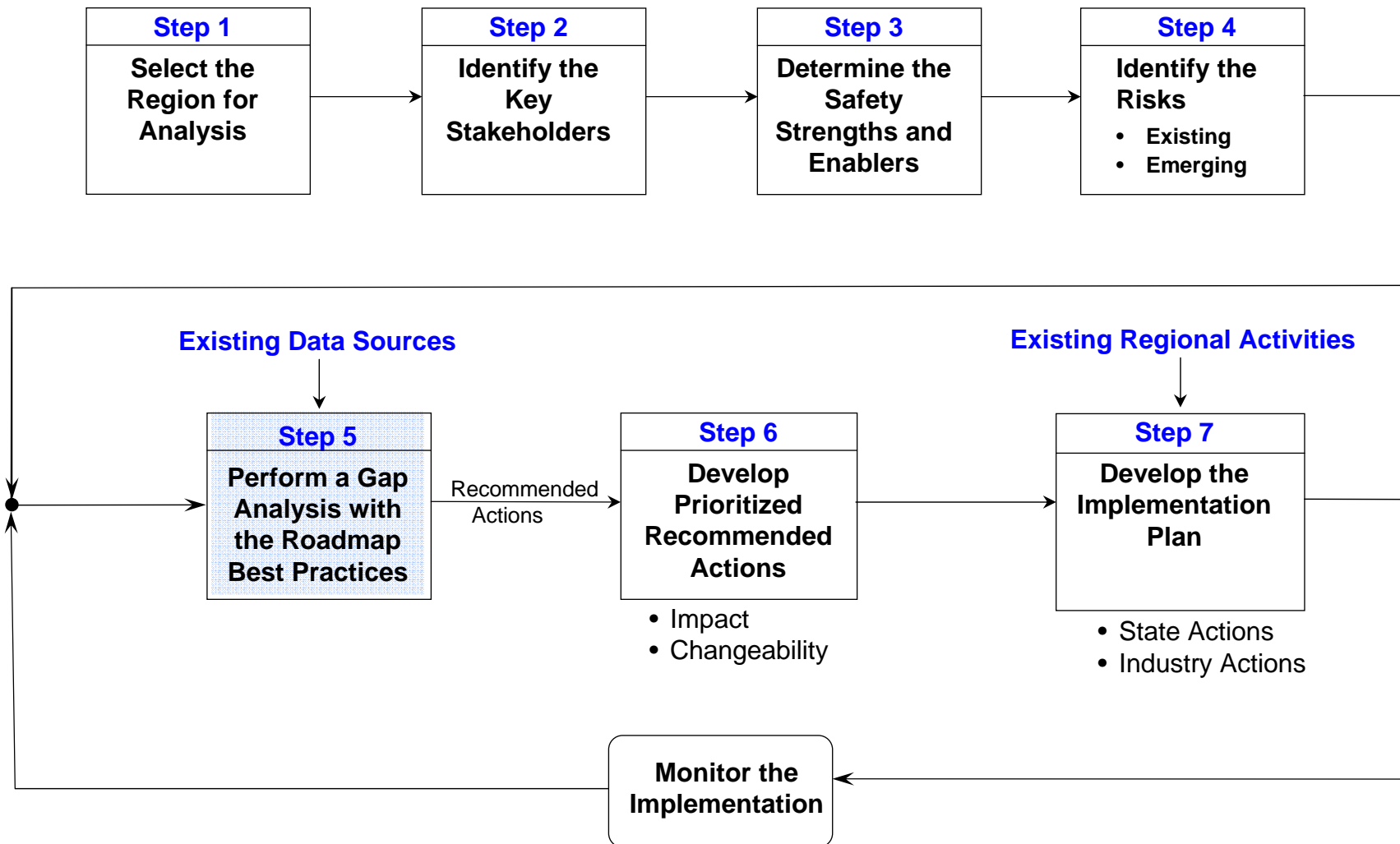
Global Aviation Safety Roadmap

Focus Area 12: Gaps in use of technology to enhance safety



Step 5 – Perform Gap Analysis

Step 5 – Perform a Gap Analysis



Performing a Gap Analysis

- Refer to *Global Aviation Safety Roadmap*, Section 3.1.5.
- “A Gap analysis is simply an evaluation that compares the existing situation to the desired one”
- Steps:
 1. Determine the implementation level for each Best Practice
 2. Determine the maturity level for the region
 3. Identify Recommended Actions

Determine the Best Practice Implementation Level

- For each Best Practice, Review the available data and determine the implementation level for the region. Document the difference between the current situation and the desired state.
- In addition to reviewing the Best Practices identified in the GASR, other regionally defined best practices can also be identified, if desired.

Focus Area 12 – Best Practice Implementation

Table 12a –Best Practices	Metrics	Implementation
<p>BP 12a-1 – <u>All stakeholders and actors maintain continuous awareness of safety threats within their region.</u></p> <p>a. Establish data-driven, prioritized list of known and highly likely regional aviation safety threats.</p> <p>b. Use consensus-based process to provide qualitative threat assessment as appropriate.</p>	<p>a. Data-driven current list of prioritized regional safety threats.</p>	<p><input type="checkbox"/> Complete</p> <p><input type="checkbox"/> Somewhat</p> <p><input type="checkbox"/> Little/None</p> <p><input type="checkbox"/> Not Applicable</p> <p>Discussion:</p>
<p>BP 12a-2 – <u>All stakeholders and actors identify and understand the safety benefits of available technologies that can address threats.</u></p> <p>a. Develop and continually update a listing of such technologies, for example:</p> <ul style="list-style-type: none"> •Retrofitable and installed aircraft technologies •ATM technologies •Airport technologies •Operations related technologies (maintenance, flight, ground, etc.) •Safety data technologies 	<p>a. Availability of a safety awareness information summary regarding eligible technologies.</p>	
<p>BP 12a-3 – <u>The organization conducts analysis to match integrated technology solutions to threats in most efficient, system-oriented manner.</u></p> <p>a. Identify specific regional requirements and needs that will provide greatest safety benefit.</p> <p>b. Avoid piecemeal “solutions” that do not recognize system issues that must be addressed to achieve safety success.</p> <p>c. Consult industry consensus for what is the best technology to deploy (Refer to Appendices E, F, and G).</p> <p>d. Determine the safety value of technological solutions vs. other more traditional solutions such as training, procedure modifications and/or safety awareness information, which could accomplish much of the safety benefit at lower cost and faster/wider implementation.</p>	<p>a. Regionally agreed integrated analysis matching technology solutions to identified threats across all domains.</p>	

Focus Area 12 – Best Practice Implementation

Table 12b –Best Practices	Metrics	Implementation
<p>BP 12b-1 – <u>The organization facilitates the ability to acquire technology.</u></p> <p>a. Develop a safety business case for new technologies (i.e., identify the economic benefit of safety technology).</p> <p>b. Explore non-traditional methods for acquiring resources (i.e., outside aviation-specific industry).</p> <p>c. Identify deployment-enabling steps.</p> <p>d. Seek/develop innovative approaches to allow wide access to safety-enhancing technologies.</p> <p>e. Identify existing funding mechanisms for the acquisition of new technologies (e.g. Cape Town Convention/Treaty and the Abuja Resolutions).</p>	<p>a. Safety business cases for planned technology acquisition.</p>	<p><input type="checkbox"/> Complete</p> <p><input type="checkbox"/> Somewhat</p> <p><input type="checkbox"/> Little/None</p> <p><input type="checkbox"/> Not Applicable</p> <p>Discussion:</p>
<p>BP 12b-2 – <u>The organization identifies the obstacles/barriers to the deployment of such technologies (e.g., owned vs. leased aircraft, infrastructure environment, etc.).</u></p> <p>a. Identify prerequisites for deployment of new safety enhancing technologies.</p> <p>b. Understand how to address and overcome the potentially significant barriers.</p> <p>c. Build measures into the deployment plan that address unique regional socio-economic and cultural issues.</p>	<p>a. Mitigation plan for addressing barriers included in technology deployment plans.</p>	
<p>BP 12b-3 – <u>The organization develops and implements a detailed plan for deploying proven technologies.</u></p> <p>a. Understand successful implementation paths and methods.</p> <p>b. Develop reasonable milestones that address issues related to corporate approval, finance, installation, certification, and training as well as those barriers that must be overcome.</p> <p>c. Implement plan and manage as part of overall business plan, including specific safety metrics that should be affected (both for the current fleet and new acquisitions).</p>	<p>a. Technology acquisition and deployment plans approved as integral part of organizations’ business plans.</p> <p>b. Introduction of new technology equipment to the fleet and/or infrastructures.</p>	

Focus Area 12 – Best Practice Implementation

Table 12c –Best Practices	Metrics	Implementation
<p>BP 12c-1 – <u>Regional stakeholders communicate and promote information about valuable safety-related technology, e.g., Aviation Safety World article on Precision-like Approaches.</u></p> <p>a. Seek information from knowledgeable sources both within and outside the region.</p> <p>b. Use high profile events to demonstrate how technology could prevent such accidents and incidents.</p> <p>c. Conduct meetings among stakeholders to discuss safety-enhancing technology.</p>	<p>a. Routine reliable communication plan developed by stakeholders in region.</p> <p>b. Meetings held among stakeholders</p>	<p><input type="checkbox"/> Complete</p> <p><input type="checkbox"/> Somewhat</p> <p><input type="checkbox"/> Little/None</p> <p><input type="checkbox"/> Not Applicable</p> <p>Discussion:</p>
<p>BP 12c-2 – <u>Each stakeholder in the region shares their action plan for the development, evaluation, and deployment of new safety enhancing technologies.</u></p> <p>a. Regulatory Authorities are involved in the deployment of new technologies to ensure that they understand the technology.</p>	<p>a. Agreed-upon process for sharing and updating information about action plans across region.</p> <p>b. Meetings held among stakeholders will include Regulatory Authorities.</p>	

Focus Area 12 – Other Best Practices

Best Practices	Metrics	Implementation
<p>Other Best Practices</p> <p>O</p> <p>O</p> <p>O</p> <p>O</p>		<p><input type="checkbox"/> Complete</p> <p><input type="checkbox"/> Somewhat</p> <p><input type="checkbox"/> Little/None</p> <p><input type="checkbox"/> Not Applicable</p> <p>Discussion:</p>

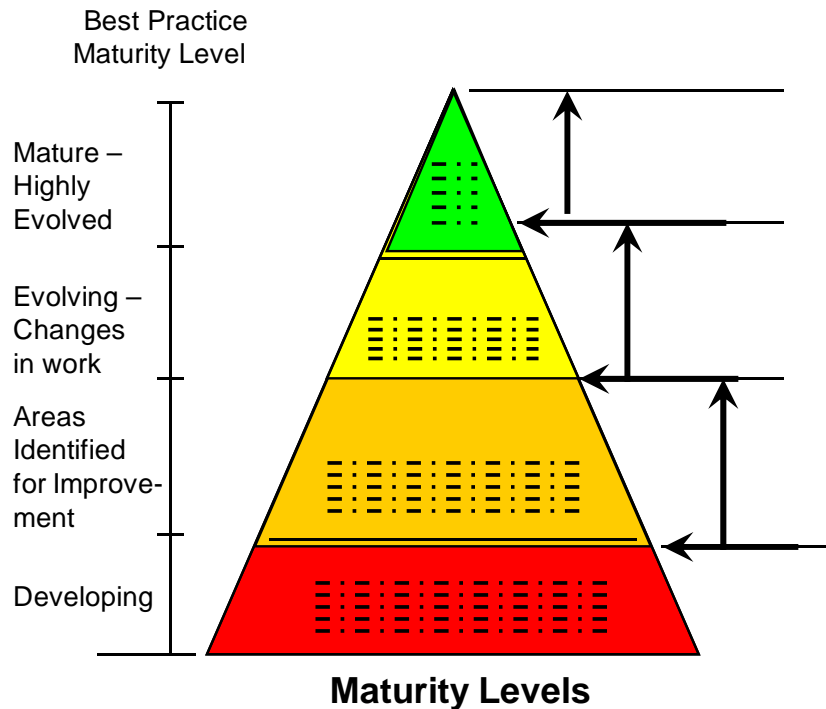
Identify the Regional Maturity Level

Using the information gathered in the evaluation of the Best Practice implementation, discuss the maturity model on the next slide and reach consensus on the regional maturity level. Draw a line on the table to indicate the consensus maturity level.

Focus Area 12 Maturity Model

Maturity Level	Capability
Level 1 – Developing	<ul style="list-style-type: none"> •No identification of threats. •No identification/lack of understanding of safety-enabling technologies. •No plan for or deployment of safety-enabling technologies. •No integration efforts to communicate or share knowledge or planning
Level 2 – Areas Identified for Improvement	<ul style="list-style-type: none"> •Threats are identified. •Safety-enabling technologies acknowledged and capabilities are understood. •Initial efforts to plan for deployment of technologies. •Initial deployment of technologies by limited numbers of operators/airports/air traffic control centers. •Initial efforts to integrate information and analyze how safety-enhancing technologies may have prevented regional/organizational accidents.
Level 3 – Evolving – Changes in work	<ul style="list-style-type: none"> •Safety-enhancing technologies deployed in at least 50% of the commercial fleet/airports/air traffic control centers. •Integration and sharing of information regarding the benefits safety-enhancing technologies. •Regulatory requirements being developed/implemented to mandate installation of safety-enhancing technologies.
Level 4 – Highly Evolved	<ul style="list-style-type: none"> •Safety-enhancing technologies deployed in a large majority of the commercial fleet/airports/air traffic control centers. •High degree of integration and information-sharing among organizations, including Regulatory Authority regarding safety-enhancing technologies. •Regulatory requirements exist regarding installation of safety-enhancing technologies.

Identify Potential Recommended Actions



- Using the identified maturity level and the identified gaps, list the Recommended Actions necessary to move to the next level of maturity
- Using the group knowledge and consensus, identify other potential safety actions that should be considered.

Identify Potential Recommended Actions

Recommended Actions
<ul style="list-style-type: none">••••••••••••

Step 5 Output – Recommended Actions

