Session 10

Global Aviation Safety Roadmap

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Overview

- Purpose & structure of roadmap
- ORG & OPS roadmaps
- Safety enhancement initiatives (SEIs)
- Use of roadmap in developing action plan
- Facilitated Exercise III

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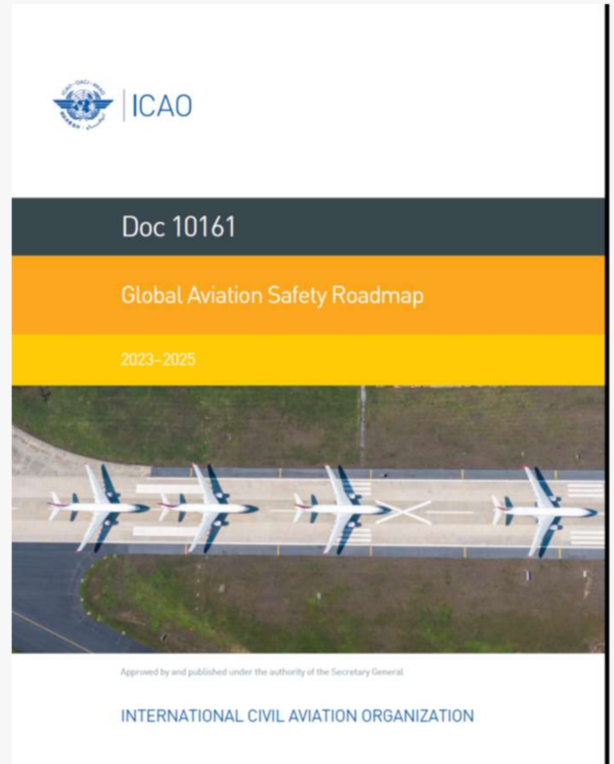
Purpose of Roadmap

- Roadmap serves as action plan
  - to develop RASPs and NASPs
  - in line with the GASP goals & targets
  - through structured, common frame of reference
  - for all stakeholders

- Defines how goals & targets may be achieved



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Structure of Roadmap

- Roadmap outlines specific SEIs
  - associated with GASP goals & targets
  - each SEI contains set of actions
- Includes SEIs for 3 stakeholders
  - States; Regions; Industry
- Roadmap is composed of 2 pieces
  - ORG challenges – ORG roadmap
  - Ops safety risks – OPS roadmap

Structure of Roadmap

- ORG roadmap provides SEIs to meet GASP targets related to global ORG challenges
  - State safety oversight capabilities
  - SSP implementation
    - incl. SMS implementation (industry)

- OPS roadmap provides SEIs to meet GASP targets related to global ops safety risks
  - G-HRCs
  - G-ORCs

ORG Roadmap

- Contains 2 distinct components
  - in line with GASP issues & targets
  - to address global ORG challenges

1. State safety oversight (SSO) system

2. SSP, including service providers' SMS

Layout of SEIs in ORG Roadmap

- All SEIs presented in standardized “roadmap template” format

- Covers following points
  - SEI - Description of specific safety enhancement initiative
  - Stakeholder - Entity to which SEI is addressed
  - Related GASP target - GASP target that SEI helps achieve
  - Actions - Description of tasks required for implementation of SEI
  - References - Documents & tools to assist stakeholders
    - in implementing SEIs and associated actions

Layout of SEIs in ORG Roadmap

Safety enhancement initiative	SEI-19 – Provision of the safety information to ICAO
Stakeholder	States
Related GASP target(s)	2.1; 2.2; 2.3; 3.1; 3.2; 5.2
Actions	☐ 19A – Update Universal Safety Oversight Audit Programme (USOAP) corrective action plan items ☐ 19B – Complete and submit the self-assessment checklist based on USOAP Continuous Monitoring Approach (CMA) Protocol Questions ☐ 19C – Complete and submit the State aviation activity questionnaire ☐ 19D – Complete and submit the compliance checklists on electronic filing of differences system ☐ 19E – Update documents and records, as required, in a timely manner, paying particular attention to the Global Organizational Challenges listed in the GASP
References	— Doc 9735, *Universal Safety Oversight Audit Programme Continuous Monitoring Manual* — Doc 10004, *Global Aviation Safety Plan*

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OPS Roadmap

- OPS roadmap addresses ops safety risks
- Contains specific SEIs to address 5 G-HRCs
  - + G-ORCs
- To develop action plan to mitigate risks
  - associated with N-HRCs
- Divided into 2 components: G-HRCs & G-ORCs
  - SEIs can be accomplished in parallel

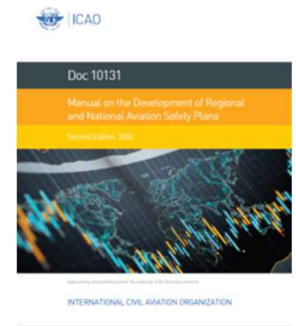
Layout of SEIs in OPS Roadmap

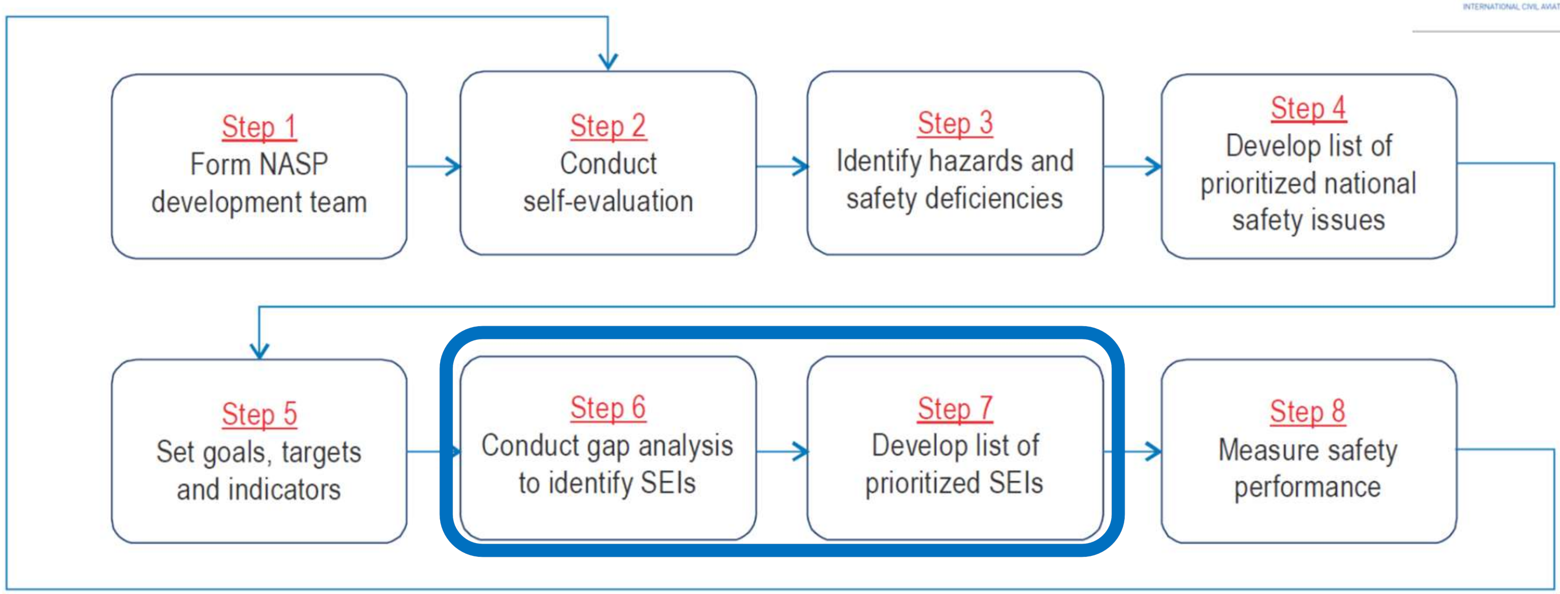
Safety enhancement initiative	SEI-6 — Mitigate contributing factors to CFIT accidents and incidents at the regional level
Stakeholder	Regions
Related GASP target(s)	1.1; 1.2
Actions	6A – Implement the following CFIT safety actions: a) Support the adoption of GPWS in accordance with Annex 6 – *Operation of Aircraft* b) Promote the wider use of GPWS beyond the requirements of Annex 6 c) Promote the adherence to GPWS warning procedures
References	– Annex 6 – *Operation of Aircraft* – ICAO Safety Report – Commercial Aviation Safety Team – Safety enhancements for CFIT – FSF ALAR Toolkit

SEIs in OPS Roadmap

- OPS roadmap is not substitute for SRM activities
  - that need to be conducted as part of SSP & SMS
- OPS roadmap gives specific examples of potential contributing factors
  - not exhaustive
  - may not be applicable to all stakeholders or ops contexts

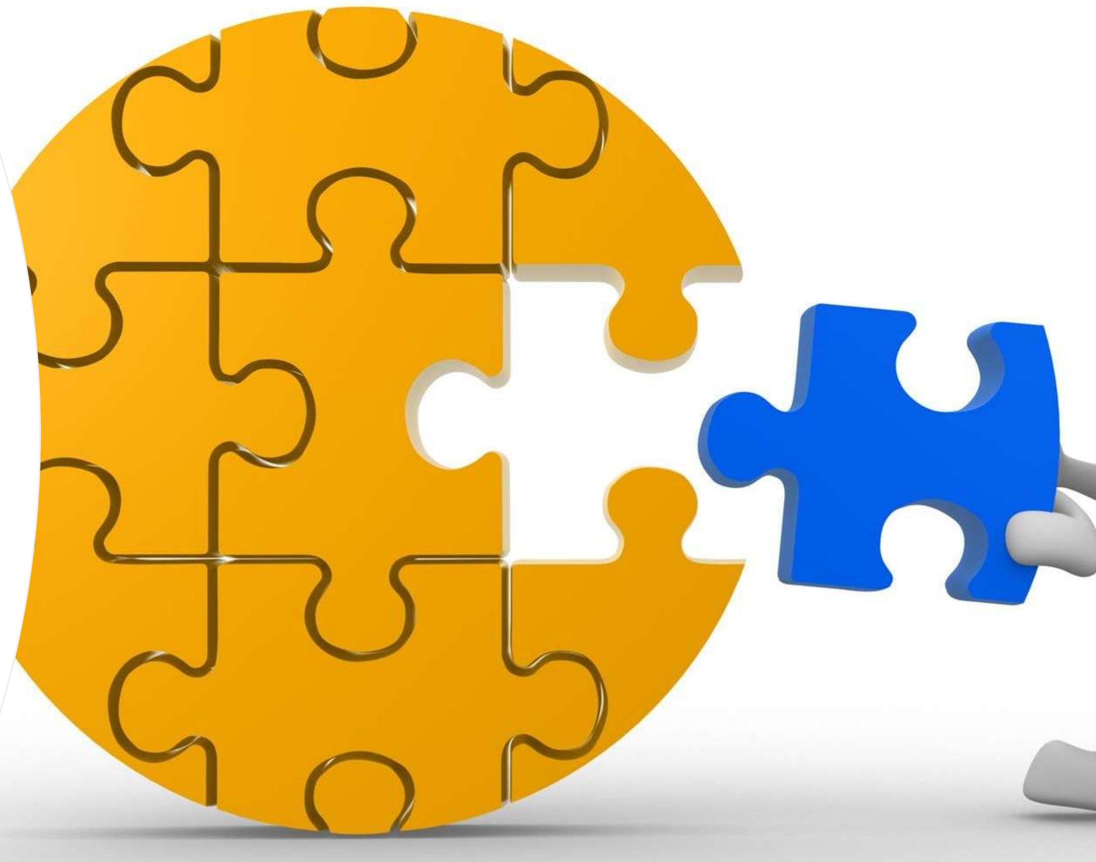
NASP Development Process





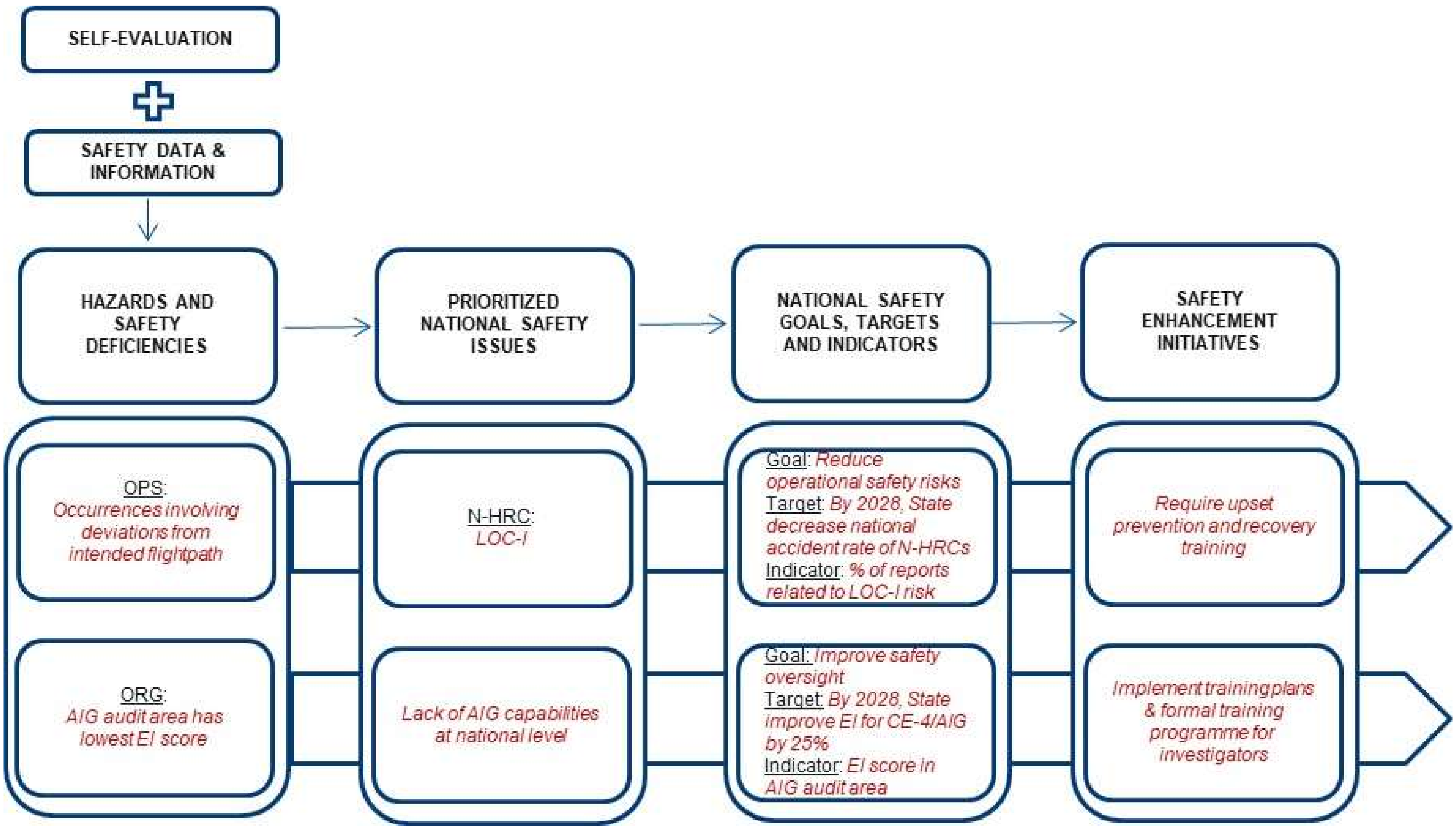
Conduct Gap Analysis for SEIs (Step 6)

- To develop list of SEIs for NASP
  - conduct gap analysis
  - using Doc 10161
- Purpose of gap analysis
  - to identify specific steps to take
  - to address national safety issues
  - and achieve each goal & associated targets
- Compilation of SEIs forms action plan
  - that supports safety strategy
  - presented in NASP



Use of Roadmap

- Select SEIs
  - and specific actions
  - to be implemented to close gap
- Based on
  - identified national safety issues
  - goals & targets
- Determine order of completion
  - sequence


SELF-EVALUATION
SAFETY DATA & INFORMATION
HAZARDS AND SAFETY DEFICIENCIES
PRIORITIZED NATIONAL SAFETY ISSUES
NATIONAL SAFETY GOALS, TARGETS AND INDICATORS
SAFETY ENHANCEMENT INITIATIVES
OPS: Occurrences involving deviations from intended flightpath
N-HRC: LOC-I
Goal: Reduce operational safety risks
Target: By 2028, State decrease national accident rate of N-HRCs
Indicator: % of reports related to LOC-I risk
Require upset prevention and recovery training
ORG: AIG audit area has lowest EI score
Lack of AIG capabilities at national level
Goal: Improve safety oversight
Target: By 2028, State improve EI for CE-4/AIG by 25%
Indicator: EI score in AIG audit area
Implement training plans & formal training programme for investigators

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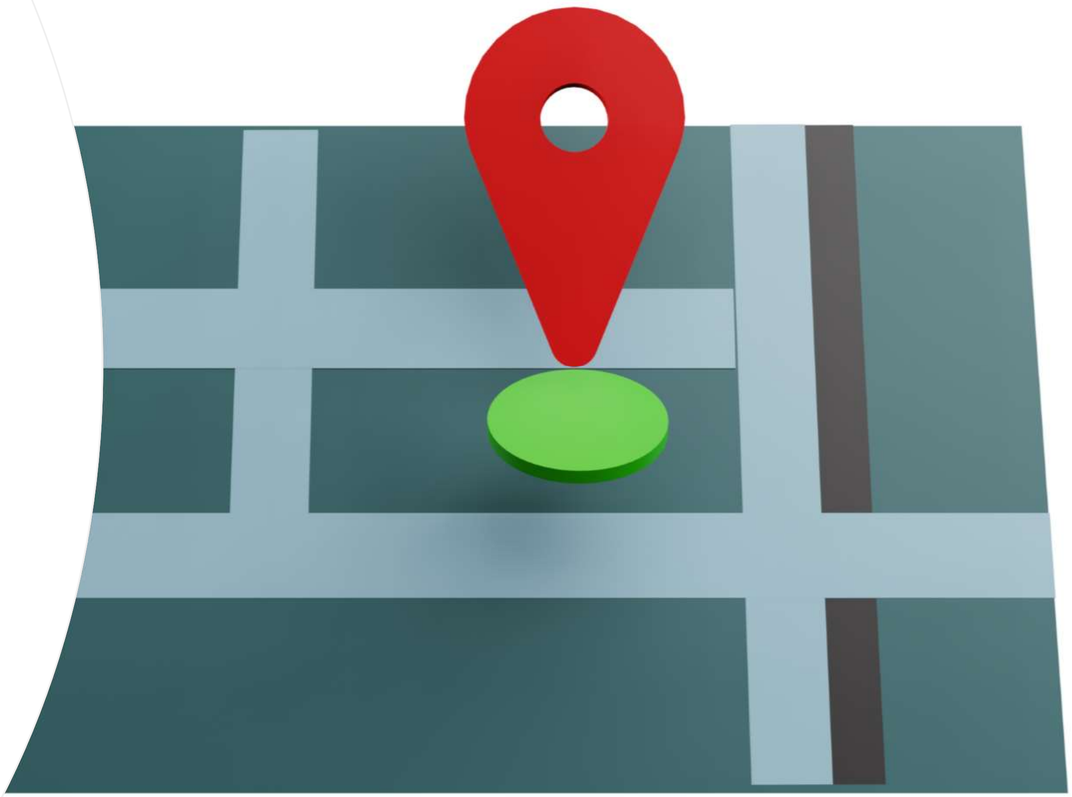
Use of ORG Roadmap

- To identify SEIs for ORG challenges
  - refer to ORG roadmap

- Using output from Step 5
  - list of goals, targets and indicators

- as well as those from Steps 3 & 4
  - list of prioritized safety issues
  - + hazards & safety deficiencies



Safety enhancement initiative	SEI-6 – Establishment of an independent accident and incident investigation authority, consistent with Annex 13 – *Aircraft Accident and Incident Investigation*
Stakeholder	States
Related GASP target(s)	1.1; 1.2; 1.3; 2.2
Actio	6A — Promulgate legislation in compliance with the provisions of Annex 13 – *Aircraft Accident and Incident Investigation*, which includes: – Establishing an independent accident investigation authority with the authority to access information, evidence, and recordings and conduct interviews – Requiring immediate reporting of aircraft accidents and serious incidents within the State to the accident investigation authority – Requiring the notification and investigation of aircraft accidents and serious incidents 6B — Develop and document a plan to ensure the State provides its investigators with all necessary investigation and protective equipment, appropriate facilities and office equipment, as well as all the necessary means of communications and transportation to enable the conduct of investigations 6C — Develop a system to promulgate technical guidance for technical personnel to effectively conduct accident and incident investigations
References	— Annex 13 – *Aircraft Accident and Incident Investigation*

Use of OPS Roadmap

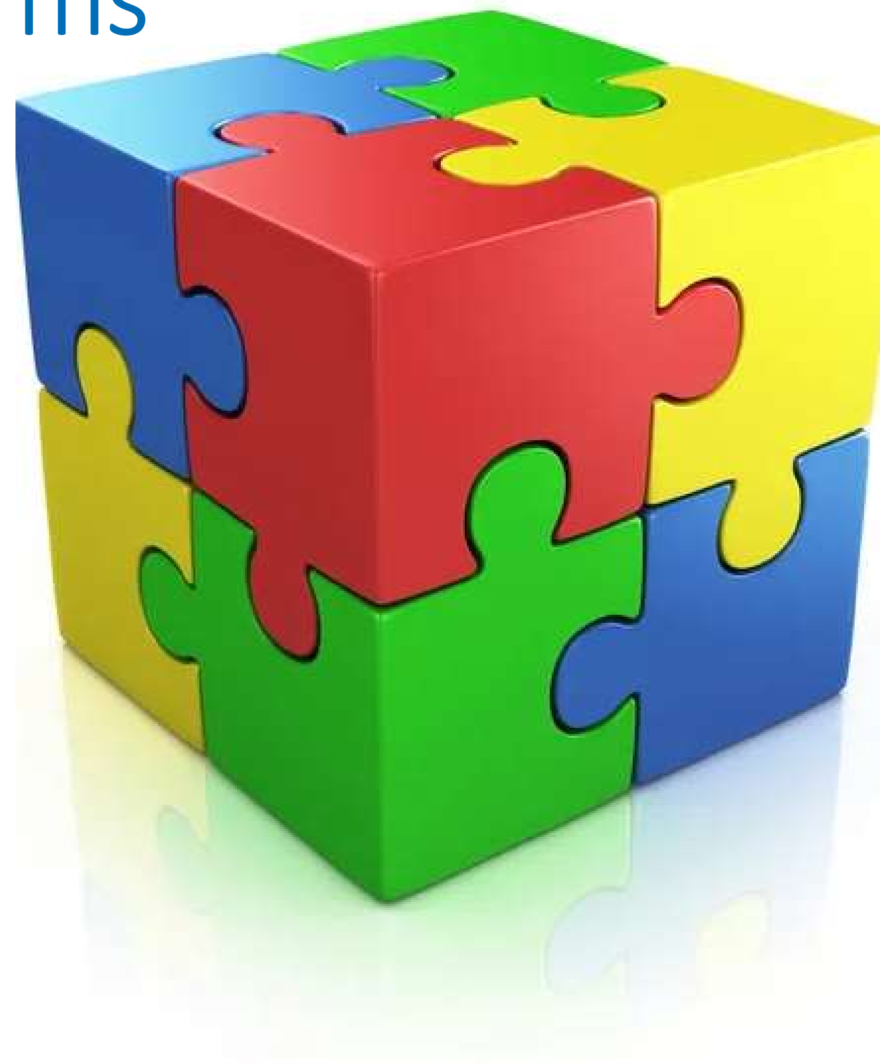
- Conduct similar review
  - of SEIs presented in OPS Roadmap
  - identify those not implemented
  - serve as risk mitigations for N-HRCs & ORCs

- Implement series of SEIs to address contributing factors to N-HRCs & ORCs
  - some SEIs may be derived from OPS Roadmap
  - others may be identified through sources (investigations, safety risk assessments)

Develop List of Prioritized SEIs (Step 7)

- Review list of potential SEIs
  - reviewing gaps & SEIs
- Select SEIs relevant (prioritize)
  - safety impact
  - ability of State
  - or ease of implementation
- Generate prioritized list of SEIs
- List forms action plan of NASP

Producing Detailed SEI Forms



- Each SEI should be linked to a goal & target in NASP
- Roadmap only provides
  - overall SEI
  - associated actions
- Action plan in NASP to include (for each SEI/action)
  - Timeline
  - Responsible entity
  - Stakeholders
  - Metrics (different from indicators)
  - Priority
  - Monitoring activity

N-HRC 2: LOC-I							
Goal 1: Achieve continuous reduction of operational safety risks **Target 1.1: By 2028, State and its industry to decrease national accident rate**							
SEI	*Action*	*Timeline*	*Responsible entity*	*Stakeholders*	*Metrics*	*Priority*	*Monitoring activity*
Mitigate contributing factors to LOC-I accidents & incidents	Require upset prevention and recovery training in all full flight simulator type conversion and recurrent training programmes	Q1 2026 to Q4 2028	CAA	• Operators • ATO • Flight simulator product and service providers • Pilots' associations • CAA inspectors	• Training programmes updated with UPRT • Number of pilots completing UPRT • Upset occurrence rates in voluntary reporting • Stick-shaker activation events in FDA data • LOC-I occurrence rates	High	Surveillance of operator & ATO training activities

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Points to Remember

- Roadmap is action plan to assist in achieving GASP goals
- Provides structured, common frame of reference
- ORG portion for SSO & SSP
- OPS portion for HRCs & ORCs
- Use roadmap as basis to develop NASP SEIs (action plan)

Facilitated Exercise III

Develop List of Prioritized SEIs

Your Tasks

- Based on list of prioritized national safety issues (Ex I) & national goals, targets and indicators (Ex II)
  - review excepts from Roadmap (Appendix A)
- Select series of SEIs + actions
  - to achieve national targets
- Review list of selected SEIs & assign order of priority
  - select those for action plan as prioritized list of SEIs
- Complete Appendix B
  - Time allocated: 3h00

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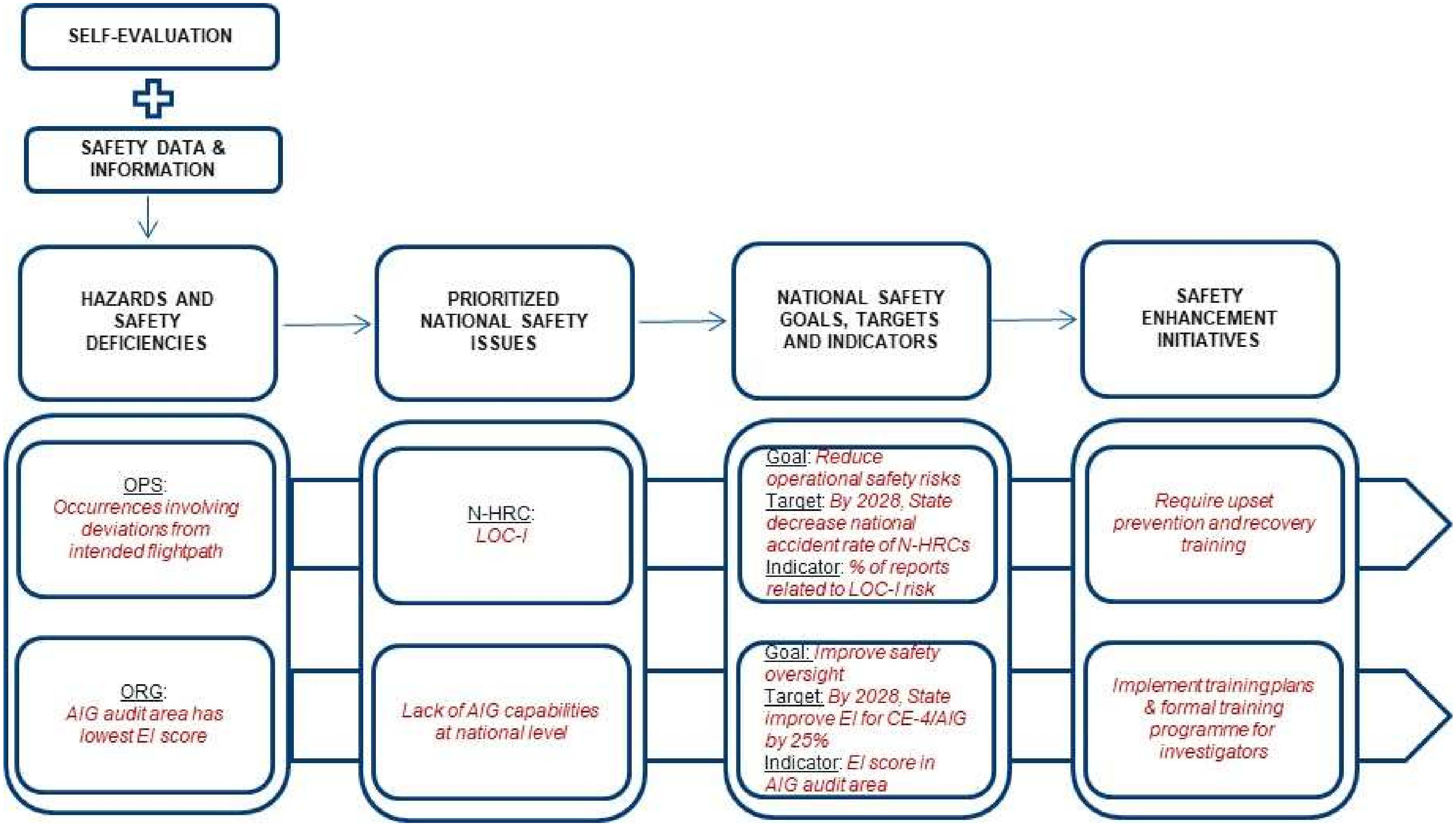
Safety enhancement initiative	SEI-5 – Corrective actions to resolve safety issues identified during surveillance activities
Stakeholder	States
Related GASP target(s)	2.3
Actions	☐ 5A – Establish and implement procedures to deal with deficiencies found during surveillance activities, including notifying regulated entities/services providers of identified deficiencies; the categorization of seriousness of the deficiency; and a deadline for corrective action ☐ 5B – Establish and implement a process to take corrective actions, including enforcement, if deficiencies found during surveillance activities are not rectified within a reasonable time by the regulated entities/services providers ☐ 5C – Establish and implement a process for the resolution of deficiencies or concerns identified during surveillance activities delegated to other entities or individuals
References	— Doc 9734, *Safety Oversight Manual*, Part A – *The Establishment and Management of a State Safety Oversight System*

SEI Number and Name	Actions	Priority (and why?)
Example, SEI-5 – Corrective actions to resolve safety issues identified during surveillance activities	Example, 5A, 5B, 5C	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