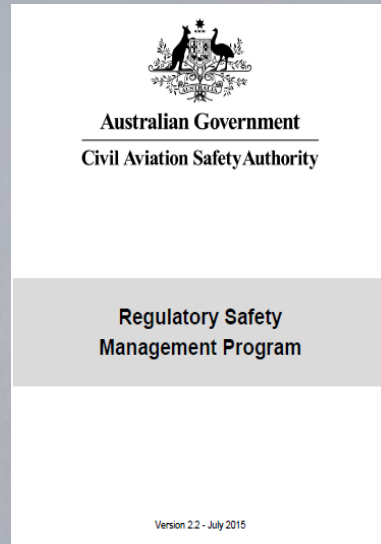


SSP and SMS INTEGRATION AND MEASUREMENT WORKSHOP

APRAST/8, Bangkok, 28 March 2016

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safe skies for all

Program

1015 – 1030	Workshop Opening	APRAST Co-chairs
1030 - 1345	Objectives	CASA
	Terminology	CASA
	SSP/SMS Relationship	CASA
	SSP Issues	CAAS
	SMS Issues	Lei Do'o PNG
<i>(Includes 1130 – 1245 Lunch Break)</i>		
1345 – 1515	Breakout session 1	
	SSP Assessment and Integration	Team A (Sri Lanka)
	SMS Evaluation and Integration	Team B (SIA Lead)
1515 – 1545	Coffee/tea Break	
1545 – 1715	Breakout Session 2	
	SPI Tier 3 workshop	Team A (Sri Lanka)
	SPI Tier 2 workshop	Team B (SIA Lead)

Objective(s)

The workshop objectives are:

- to increase all participants understanding of the relationships and interactions between SSP and SMS
- to capture current issues and concerns of participants regarding SSP and SMS
- to consider the best ways to assess and integrate either SSP or SMS into organisations with emphasis on identifying cultural and/or regional issues, and
- to consider and capture Safety Performance Indicators which might be valid in Regional and/or State and Service Provider contexts

Terminology

- It is important that NAAs and Service Providers are abreast of terminology associated with State Safety Programs and Safety Management Systems
- ICAO SMP and Safety Management International Collaboration Group (SM ICG) have produced papers (available on the web) which contain definitions, terms and concepts; others are being developed
- Following slides present a number which are pertinent to today's activities

Terminology

- SPIs - Tier 1: Mainly for reporting, strategic planning and public information. Describe the overall outcomes of the system.
- SPIs - Tier 2: Assist service providers (and perhaps regulators) to assess and mitigate safety risk as part of their SMS (SSP). They also have an impact on resource allocation.
- SPIs - Tier 3: Assist Regulators establish the performance of their SSP. They would guide on-going and future decision-making. They also support the processes of measuring and monitoring the safety performance of the SSP under the continuous monitoring approach (CMA).

Terminology

- **Safety objective** - no definition in Annex 19 or in Doc 9859:
Perhaps: *Brief, high-level statement of safety achievement or desired outcomes by an SSP or SMS*
- **Safety performance** - A State or service provider's safety achievement as defined by its safety performance targets and safety performance indicators (Annex 19)
- **Safety performance indicator** - A data-based parameter used for monitoring and assessing safety performance (Annex 19)
- **Safety performance target** - The planned or intended objective for safety performance indicator(s) over a given period of time (Annex 19)

Terminology

- **Alert (point or level?)**- Not formally defined as yet – perhaps *a level which separates acceptable from unacceptable performance in a safety context and can be used as a primary trigger for remedial action related to a particular indicator*
- **Acceptable level of safety performance (ALOSP)** - not yet defined in Annex 19 or Doc 9859. Doc 9859 does discuss acceptable level of safety performance, and frames the notion as follows: *“For the purposes of this Manual, ALoSP is the acceptable level of safety performance as defined by its SSP safety indicators and associated targets and alert levels. A State’s ALoSP should be pertinent to its safety policy and objectives.”* Doc 9859 does not include discussions on ALoSP in the context of SMS.

Safety Performance

- Achievements of the system, and
- Effectiveness of what is done within the system

Safety Performance Measurement

- Provides:
 - Direction
 - Control
 - Supervision
- Needs to be active
- Looks at the effectiveness of safety interventions

Acceptable Level of Safety Performance

- Annex 19 concept
- Demonstrated through:
 - Implementation and maintenance of SSP
 - Safety Performance indicators
 - Establishing targets (and measures to achieve, monitor and report them)
- Shows that safety is effectively managed
- Guidance needed for an effective process as concepts are further developed

Foundations of the Concept

- Risk
 - Understanding risk
 - Management of risk
- Data
 - Effective capture of data
 - Quality control of data
 - Analysis of data
- **USE THE DATA TO MANAGE RISK**

Suggested Sequence

- Introduce effective safety oversight first
- Implement an SSP
 - Include objectives
 - Look to ensure oversight of SMSs
- Develop a method to establish an ALoSP
 - What SPIs?
 - Targets and measures
 - Think reactive (current outcomes), proactive and predictive

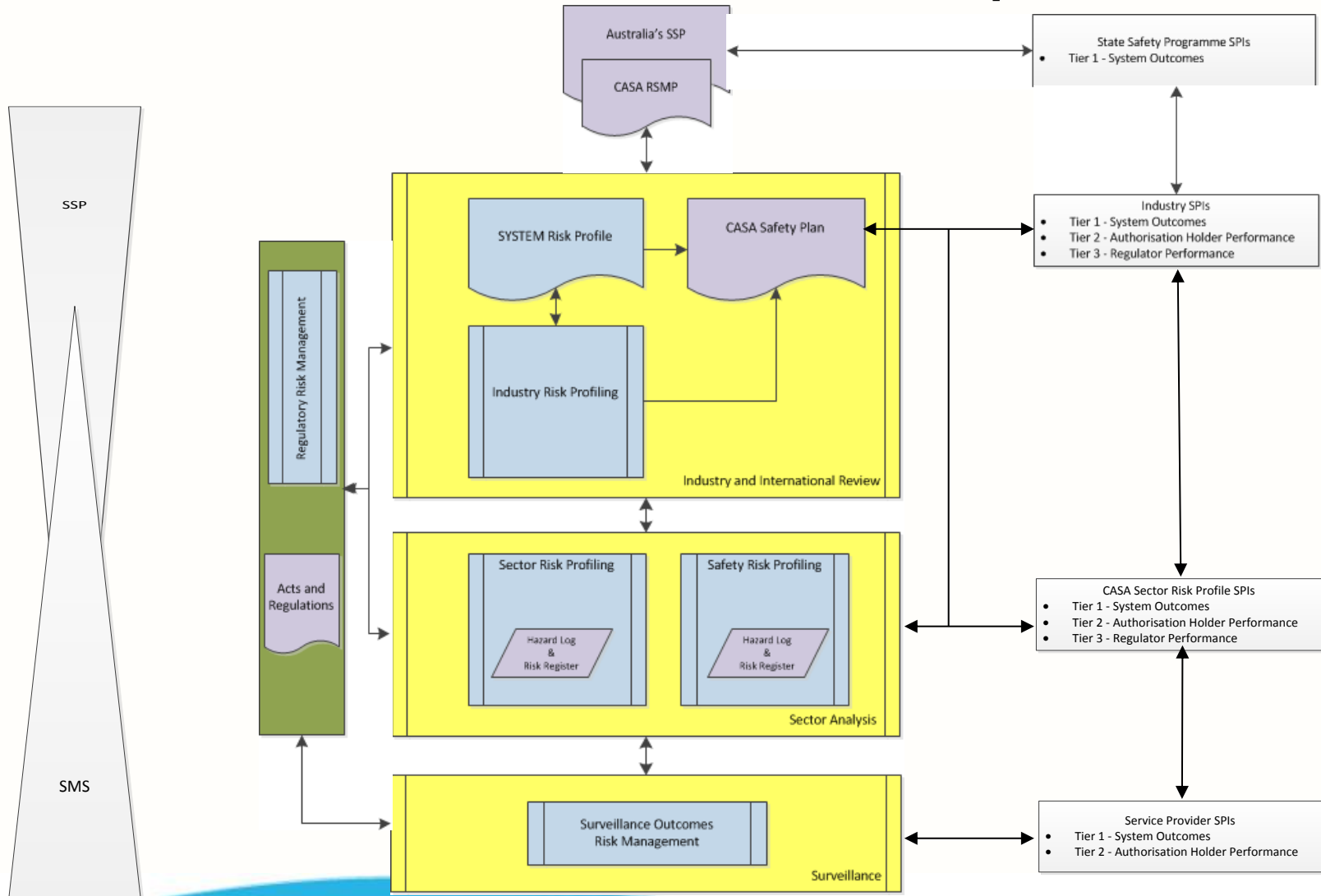
SSP/SMS Relationship

- Service providers use SMS to improve THEIR system so that safety outcomes improve
 - Never lose sight of objectives
- SSP is the State's SMS, but relies on service providers to hold up their end of the bargain:
 - Compliance
 - Improvement over time

SSP/SMS Relationship

- Problem areas
 - Timing of implementation
 - Reactive focus
 - Trust
 - Sharing data and information
- Key challenges:
 - Safety Risk Management
 - Safety Performance Indicators
 - Acceptable Level of Safety Performance

Australia's Concept



SSP Issues

- To be developed by Presenter

SMS Issues

- SIA to present, identifying issues they face from assessment, evaluation and integration aspects

Breakout Session 1

SSP Assessment and Integration

- SMP Paper 5
- How do you conduct assessment of an SSP?
- Who should be assessing the SSP?
- Can we grade the maturity of SSPs?
 - What items?
 - What measures?
- What cultural aspects need to be considered?
- Is an SSP focussed only on RPT operations and support?

Breakout Session 1

SMS Evaluation and Integration

- SMP Paper 8
- How do you conduct assessment of an SMS?
- Who should be assessing the SMS?
 - What items?
 - What measures?
- What cultural aspects need to be considered?
- How do Service Providers develop compliance and improvement in SMS?

Breakout Session 2

Tier 3 Safety Performance Indicators

- Tier 3 SPIs look at the effectiveness of the mitigation measures put in place by the regulator. Tier 3 SPIs measure how well the safety initiatives of the regulator achieve their desired objectives. Safety outcomes and the behaviour of service providers all reflect on the regulator and, moving up the chain, effective regulator activities should motivate service provider behaviours that, in the aggregate, result in overall improvements in outcomes.

Discussion Points

- Data and Information (page A-6 Skybrary)
 - Quality etc
 - Attributes etc
- Data Management (pages A-9&10)
- Data access, availability and sources
- SPI effectiveness
 - Potential Pitfalls
 - SPI Validity
 - Measures and Targets
 - Leading and lagging Indicators

SPI Development

- Seven Steps

Breakout Session 2

Tier 2 Safety Performance Indicators

- Tier 2 SPIs address the behaviour of aviation service providers (operators, maintenance organizations, manufacturers, etc.). The SPIs in this tier can be distinguished among three different types:
 - – Data-driven performance and process SPIs take tier 1 SPIs as a starting point, but are developed further down the causal chain from the main outcomes. The approach aims to identify the main accident scenarios and related safety issues to identify targets for risk management;
 - – Scenario-based SPIs identify hazards derived from potential accident scenarios and apply them to development of SPIs where no accident or major incident has ever happened. These affect both tiers 2 and 3; and
 - – SPIs measuring the effectiveness of safety risk mitigations at the service provider level. Examples of this approach are implementation of Commercial Aviation Safety Team (CAST), Aviation Safety Information Analysis and Sharing (ASIAS) and European Strategic Safety Initiative (ESSI) recommendations.

Discussion Points

- Same as but with Service Provider perspective

Questions