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UAE ALoSP Development

Fourth MID Region Safety Summit
2-3 October 2018
Mohammad Al Dossari
Director Air Navigation & Aerodromes
SSP Committee Chairman

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2008
Initial Development of SPIs

- Developed first set of SPIs for Air Navigation
- 5 years of data was available
- Very basic approach – qualitative only
- Higher-consequence SPIs only
- Increased focus on quality of reporting as a result
- Risks were becoming clearer

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2009
Trend Analysis Development

- Charting of results from first year
- Analysis of causal and contributory factors
- Identification of common factors
- Action plans developed for reduction of incidents

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2010
Reporting Systems

Aircraft Operations & Airworthiness

Aerodrome Operations

Air Traffic Control

Bird Strike & Wildlife Hazards

CNS Equipment Outage Report

2011

VORSY

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2011
Building the Database

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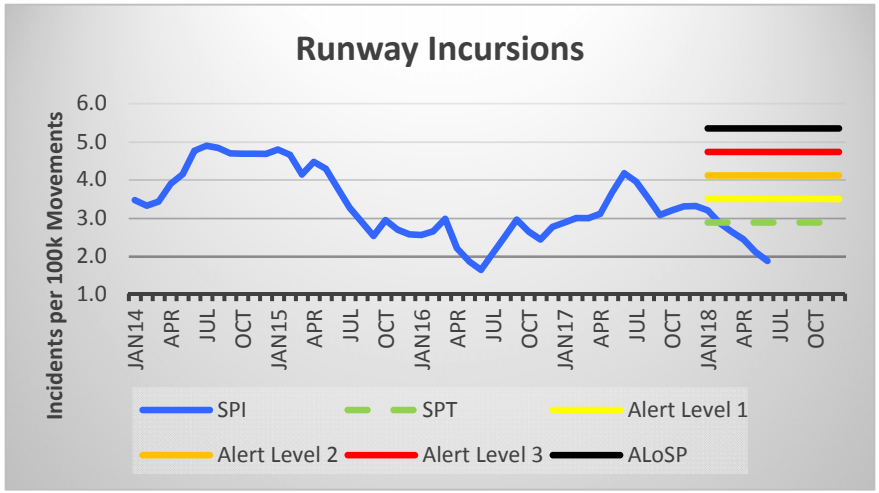
2012
Quantitative Performance Measurement

- Developed Safety Performance Measurement Calculator (SPMC)
- Modelled after examples in ICAO Doc 9859 First Edition
- Provided to service providers for assistance in determining SPIs, SPTs and Alert Levels
- Lagging indicators only



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2013
Refinement of Processes

- Refinement of quantitative method
- Adjustment of alert levels to create earlier triggers
- Refinement of inspector duties related to safety performance
- NTRA (National Targeted Risk Area) and LTRA (Local Targeted Risk Area) introduced - identification of areas requiring national or local attention

National Targeted Risk Areas (NTRA) and Local Targeted Risk Areas (LTRA) for 2018

Based on the safety performance achievements made during 2017, the following 2018 targeted risk areas were determined to drive continual improvement within the safety management system relating to these types of incidents.

NTRA: ATC-contributory Level Bust

LTRA : Taxiway Incursion (Dubai, Al Maktoum, Abu Dhabi)

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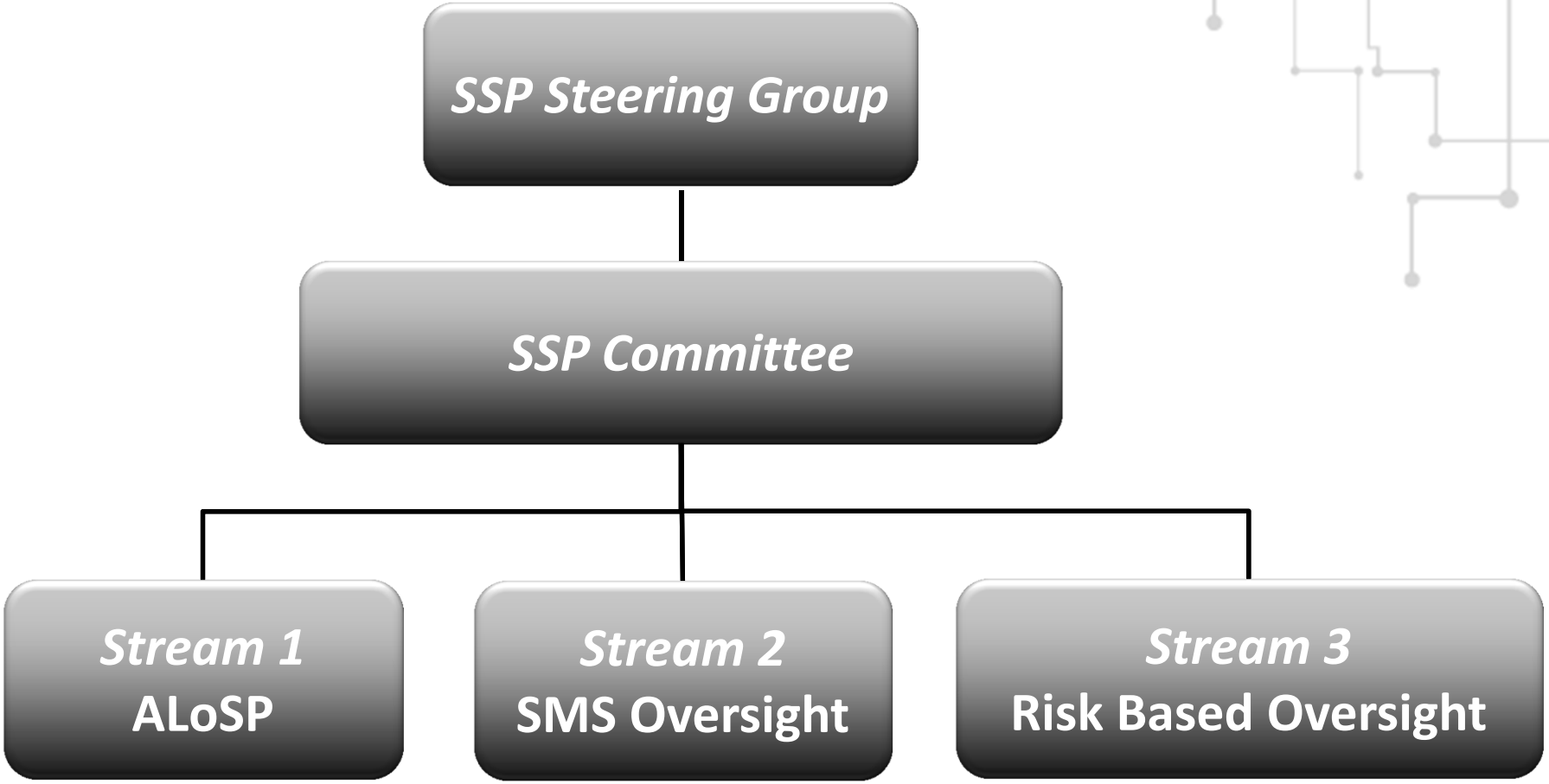
2014



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2015
State ALoSP

Procedures developed for

- Safety Performance Monitoring
- Acceptable Level of Safety Performance

Quarterly and annual reports

- Actual performance achieved for each indicator
- Alert level status
- Actions taken by service provider
- Actions taken by inspector

AVIATION SAFETY PROCEDURES MANUAL
Doc Ref: AS/PM/01

SECTION:	GENERAL TECHNICAL PROCEDURE	GTP-36
TITLE:	SAFETY PERFORMANCE MONITORING	

AVIATION SAFETY PROCEDURES MANUAL
Doc Ref: AS/PM/01

SECTION:	GENERAL TECHNICAL PROCEDURES	GTP-40
SUBJECT:	ACCEPTABLE LEVEL OF SAFETY PERFORMANCE (ALoSP)	

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2016
Safety Intelligence Team

Team formed to carry out safety intelligence objectives:

- Manage state safety occurrence reporting platform
- Establish effective safety metrics
- Monitor safety performance
- Highlight safety trends, safety targets
- Alert safety decision makers, based on safety triggers
- Establish safety presentation capabilities (e.g. safety dashboard)
- Identify factors and correlations
- Test assumptions
- Engagement with international bodies in matters related to SSP/SMS
- Develop predictive modelling capabilities

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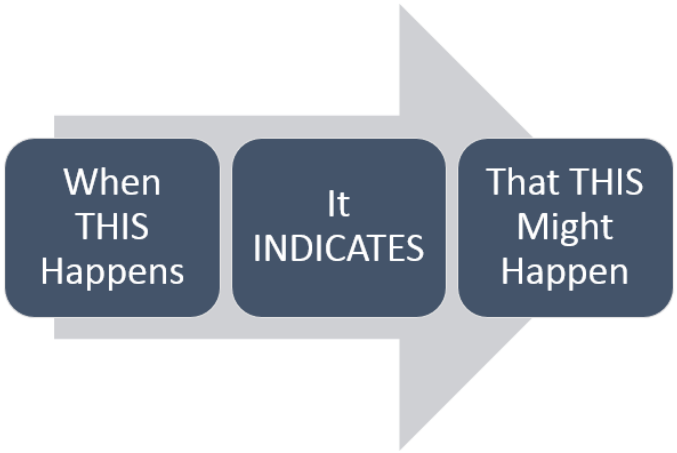
2017
Leading Indicators

- Addition of ALoSP leading indicators
- Examples:
  - Number of audit non-compliances
  - SMS effectiveness score
  - Number of Air Operator inspections
- Further identification of causal and contributory factors
- Promotion of risk analysis



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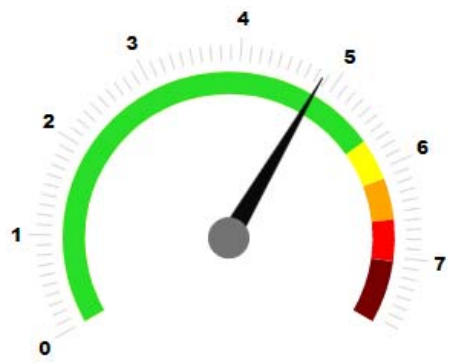
2018
Safety Performance Dashboard

UAE GCAA - ALoSP Performance

Compare it...

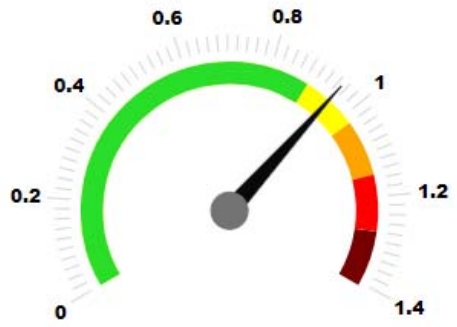
Jun-2018
ASMI
per 100,000 Movements
UAE



Target Zone
Alert Level1-> **5.64**
Alert Level2-> **6.11**
Alert Level3-> **6.58**
ALoSP-> **7.05**
Actual SPI-> 4.86

Compare it...

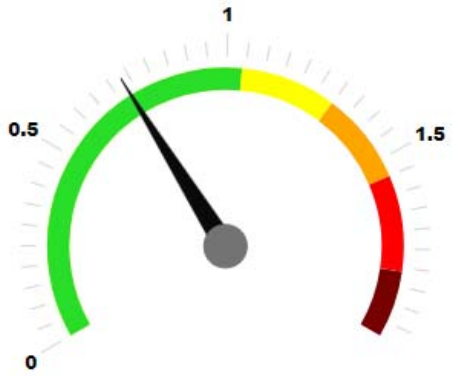
Jun-2018
ATC-Contributary Level Bust - LB ATC
per 100,000 Movements
UAE



Target Zone
Alert Level1-> **0.89**
Alert Level2-> **1.02**
Alert Level3-> **1.15**
ALoSP-> **1.28**
Actual SPI-> 0.95

Compare it...

Jun-2018
Loss of Runway Separation -LRS
per 100,000 Movements
UAE



Target Zone
Alert Level1-> **1.04**
Alert Level2-> **1.3**
Alert Level3-> **1.55**
ALoSP-> **1.81**
Actual SPI-> 0.73

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“Shoot for the moon. Even if you miss, you'll land among the stars.” –
Norman Vincent Peale

- ✓ Process and procedures must be established and revisited
- ✓ Sufficient and reliable supporting data is required
- ✓ Inspector training must be completed and expectations defined
- ✓ Recognition that not all inspectors are SMS inspectors
- ✓ Trial and error should be expected
- ✓ Development does not happen overnight
- ✓ Include lagging and leading indicators
- ✓ Alert levels can be set too high
- ✓ Remain flexible to adjust targets and ALoSP as needed
- ✓ Acceptance of change

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