



ICAO

UNITING AVIATION

NO COUNTRY LEFT BEHIND



SAFE TRAVELS

Committed to leave no one behind

*ICAO's Agenda for SAFETY
and AIR NAVIGATION*

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Deputy Director, Aviation Safety – ICAO



APANPIRG/29

Bangkok, 03 - 05 September 2018



**ZERO
FATALITIES**

Our
Aspirational
Safety Goal



We are not that far...

Regional Accident Statistics: 2013

RASG	Estimated Departures (in millions)	Number of accidents	Accident rate (per million departures)	Fatal accidents	Fatalities
AFI	0.7	9	12.9	1	33
APAC	8.6	19	2.2	1	49
EUR	7.9	21			
MID	1.1	2			
PA	13.8	39			
WORLD	32.1	90			

Regional Accident Statistics: 2015

RASG	Estimated Departures (in millions)	Number of accidents	Accident rate (per million departures)	Fatal accidents	Fatalities
AFI	0.8	6	7.3	0	0
APAC	9.8	24	2.5	3	98
			3.0	1	150
			2.5	1	224
			2.6	1	2
			2.8	6	474

For 2017
MID and AFI
(APAC 2 – PA 1)

ZERO fatalities

Regional Accident Statistics: 2016

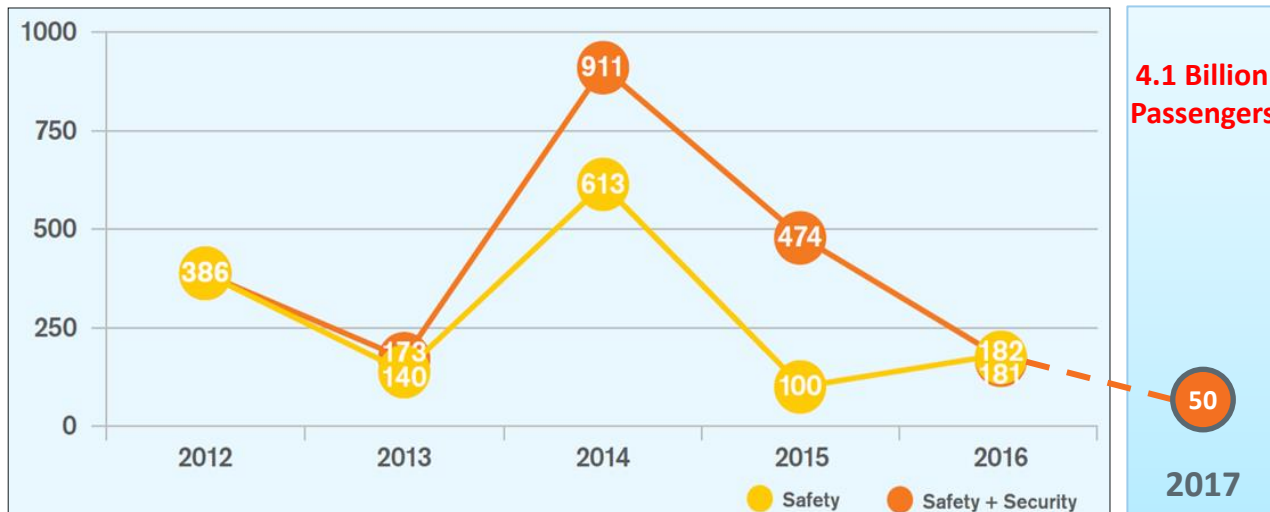
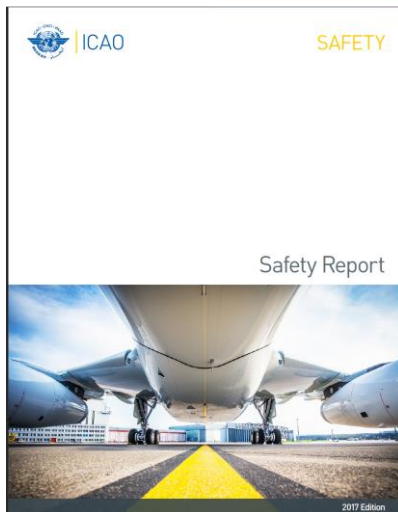
RASG	Estimated Departures (in millions)	Number of accidents	Accident rate (per million departures)	Fatal accidents	Fatalities
AFI	0.7	6			
APAC	10.2	18	1.8	3	449
EUR	8.9	26	2.9	1	298
MID	3.0	7	2.3	2	39
PA	9.9	41	4.1	0	0
WORLD	33	98	3.0	7	904

Regional Accident Statistics: 2016


RASG	Estimated Departures (in millions)	Number of accidents	Accident Rate (per million departures)	Fatal Accidents	Fatalities
			1.2	1	1
APAC	10.7	19	1.8	2	50
EUR	8.7	24	2.8	2	64
MID	1.3	3	2.3	2	67
PA	13.3	28	2.1	0	0
WORLD	34.9	75	2.1	7	182



Fatalities Trend for Scheduled Commercial Flights (2012 – 2017)



Fatalities showed a spike during 2014, and then recovered in 2015 & 2016



Air traffic is predicted to
double in the next 15 years

How can we ensure the
safe realization of this growth?



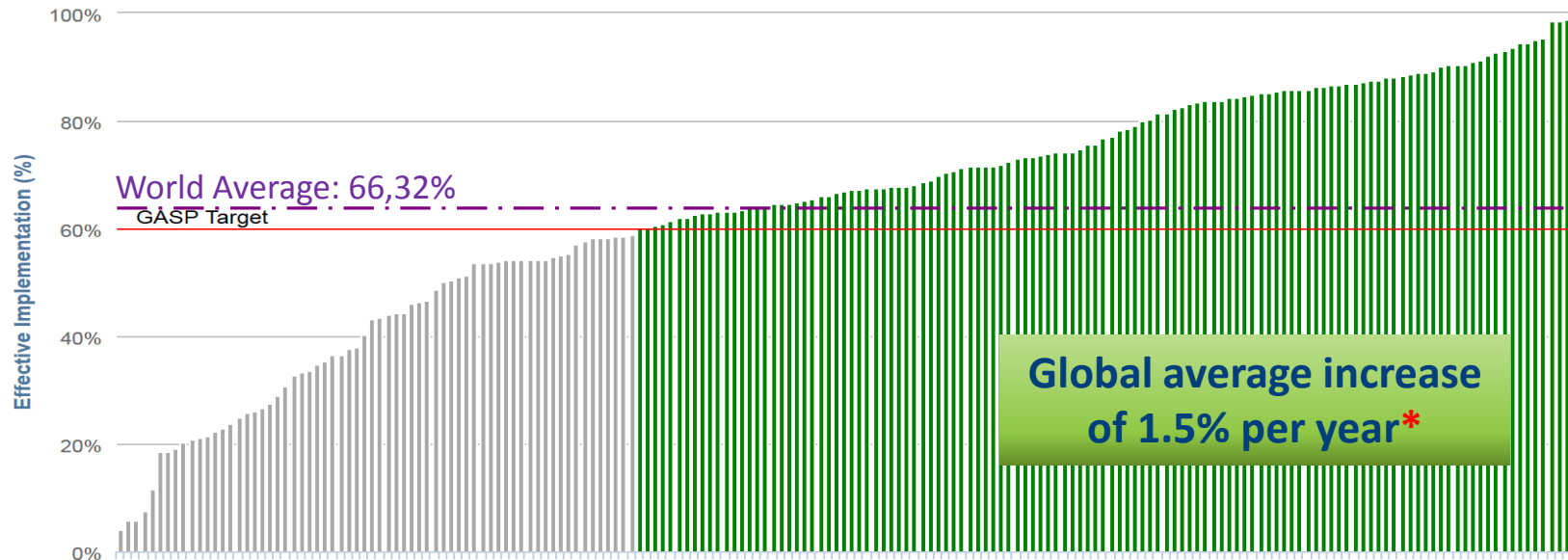
Risks/barriers to achieve our goal

- Effective Implementation of SARPs
- Operational Risks (ICAO's priorities)
- Current and emerging issues





Effective Implementation of State Safety Oversight



Effective implementation (%) results through USOAP CMA

* Based on the world average of EI from the period 2011 (60.17) to 2016 (64.74)



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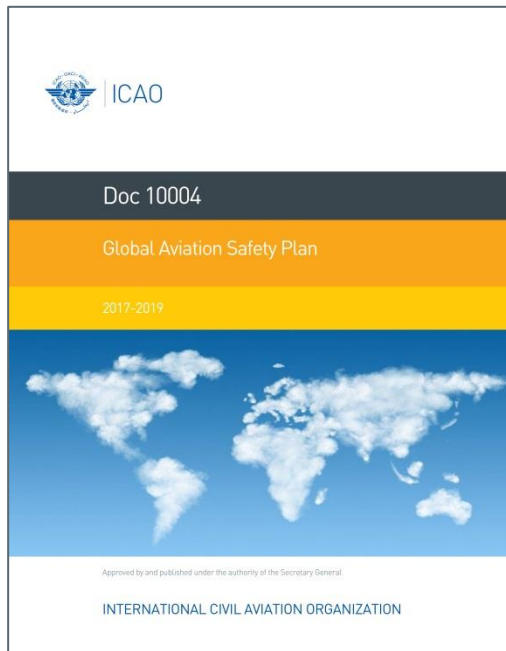
Safe Travels: ICAO's agenda for Safety and Air Navigation

WHAT WE HAVE TODAY

(Aiming for Effective Implementation of SARPs)



GASP 2017-2019/GANP 2016-2030

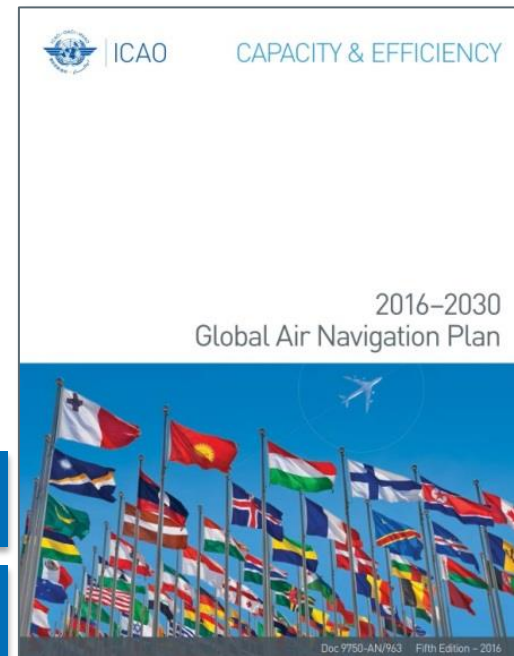


**GASP objectives and
associated timelines**

**Global aviation safety
roadmap diagram**

**Aviation System Block
Upgrades (ASBU) Methodology**

**Technology Roadmaps and
Module Dependencies**





Evolving Safety Performance

- **iMPLEMENT** is a data-driven decision making process that:
 - Assesses the current status of aviation (**Safety Briefings**)
 - Identifies the best solutions in order to maintain or improve the aviation capability of the State (**Solution Center**)
 - Evaluates the needs of the aviation system (money, people, infrastructure) (**CAA HR Tools, PAINT/iAID, etc.**)
 - Identifies resources through existing national, regional, or global mechanisms (**ASIAP, SAFE Fund, etc.**)
 - Showcases the real added value of air transport and the socio-economic return on investment of aviation

A 'NO COUNTRY LEFT BEHIND' Initiative:

iMPLEMENT

Facilitating Data-Driven Decisions for Aviation



State Safety Briefing



Regional Safety Briefing



Aerodrome Briefing



Solution Center





Safety Management SSP Foundation now available on i

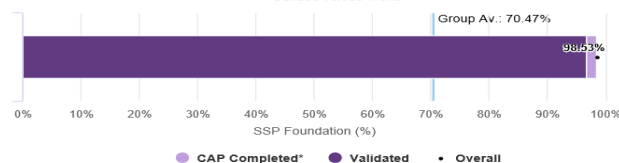
- The SSP Foundation Tool **complements the SSP oversight foundation** for SSP implementation
- A sub-set of 311 PQs (out of 1,099 total USOAP PQs) are grouped into **17 subject areas**. One of
- The tool can help States identify weaknesses in
- States should prioritize and ensure these PQs a

Current Status

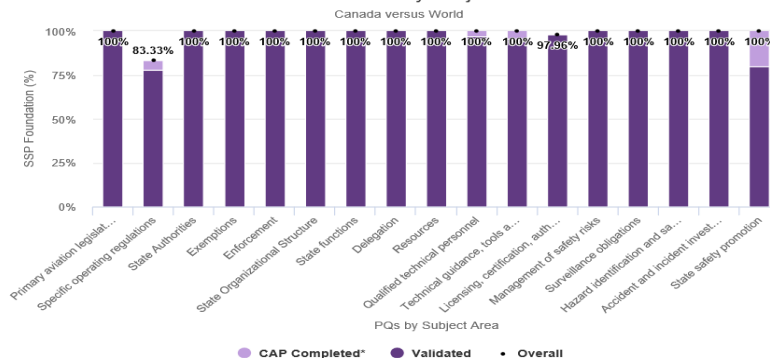
Canada in World group

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Overall SSP Foundation Canada versus World



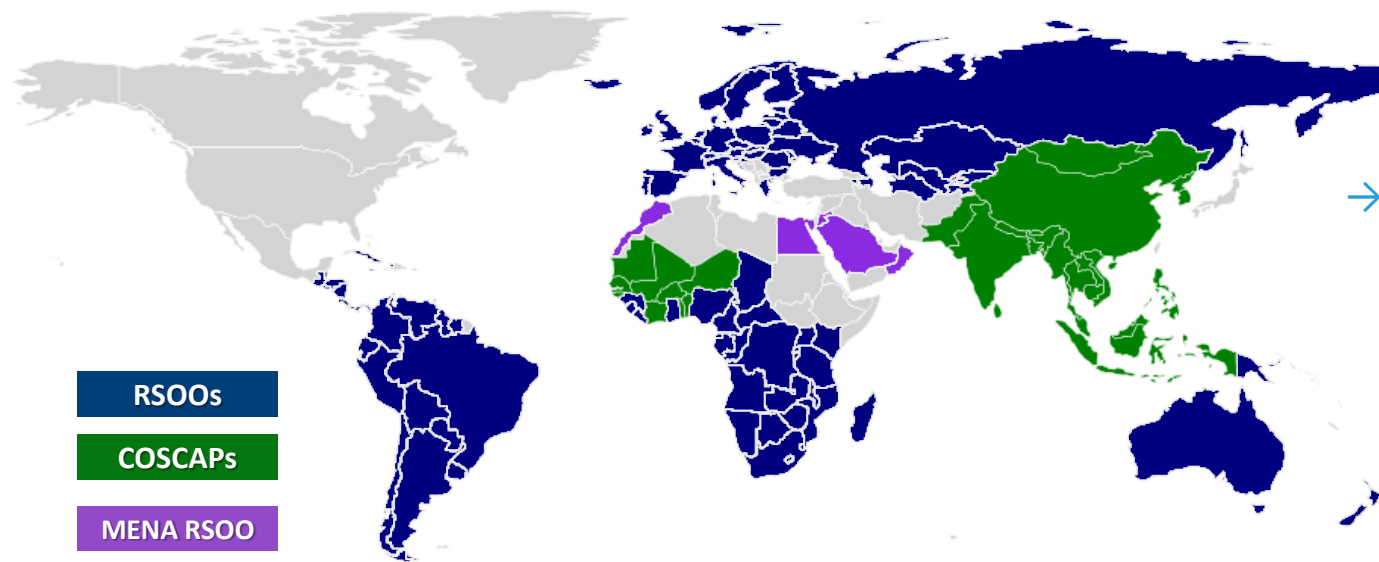
SSP Foundation by Subject Area Canada versus World



*CAP completed are corrective action plans as reported by the State using the USOAP CMA Online Framework.



RSOOs (including COSCAPs)



→ RSOOs need to improve, including more effective delegation and efficient financial sustainability



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Regional Aviation Safety Groups (RASGs)

Vision

To encourage the reporting of progress on the implementation of SSP and SMS provisions, which is essential to guide the future development of safety management provisions.

Mission

To identify activities, including required resources, to support the Annex 19 roll-out plan and the effective and continuing implementation of SMS and SSP provisions.

History

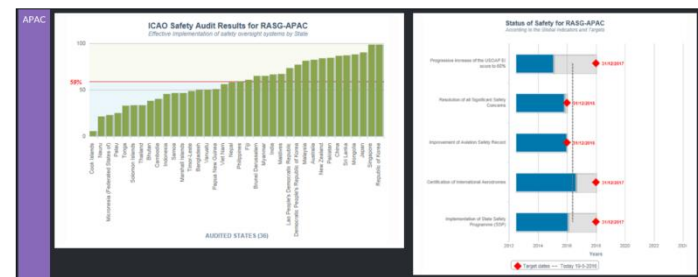
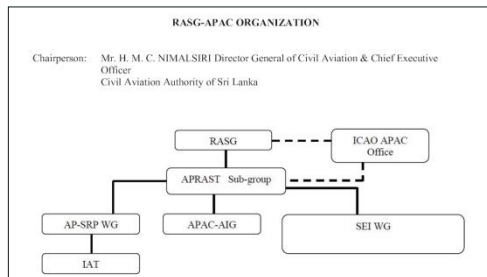
The RASGs exist in response to the C-DEC 190/4 taken in May 2010 to support a regional performance framework for the management of safety.

[Start](#)

Click Start to access the repository of RASG documents.

RASGs are an initiative of the International Civil Aviation Organisation which has headquarters situated in Montreal, Canada. There are 7 regional offices located in Bangkok, Cairo, Dakar, Lima, Mexico City, Nairobi and Paris, as well as 1 regional sub-office in Beijing.
Page last updated: 2015-04-11

GroupType = PIRG (6)					
APANPIRG	Asia/Pacific Air Navigation Planning and Implementation Regional Group	APAC	IATA, IFALPA, ACI, CANSO, IFATCA, IBAC	CHAIRPERSON: Mr. Chansing Pongthong Chief Executive Director of Civil Aviation, New Zealand CAA E-mail: CSongthong@nzcaa.govt.nz SECRETARIAT: Mr. Anur Mishra - ICAO Asia and Pacific Office Regional Director Asia and Pacific (APAC) Office E-mail: anur.mishra@icao.int	APANPIRG Website
APIRG	AFRICA-INDIAN OCEAN (AFI) PLANNING AND IMPLEMENTATION REGIONAL GROUP	AFI	IATA, IFALPA, ACI, CANSO, IFATCA	CHAIRPERSON: Mr. Magueta Maramba Ndoe Director General of Civil Aviation, Senegal Tel: +221 338 856 001 E-mail: magueta.maramba@aircassm.sn SECRETARIAT: Mr. Barry Kuehmba - ESAF Region Director (ESAIF) Office E-mail: barry.kuehmba@icao.int	APIRG Website
EANPO	European Air Navigation Planning Group	EA	IATA, IFALPA, ACI, CANSO, IFATCA	CHAIRPERSON: Mr. Barry Kuehmba - ESAF Region Director (ESAIF) Office E-mail: barry.kuehmba@icao.int SECRETARIAT: Mr. Luis Faria - EUR/NAT Regional Director European and North Atlantic (EUR/NAT) Office E-mail: luis.faria@icao.int	EANPO Website
GREPECAS	EUROPEAN Regional Planning and Implementation Group	EUROPEAN	IATA, IFALPA, ACI, CANSO, IFATCA	CHAIRPERSON: Mr. Luis Faria - EUR/NAT Regional Director European and North Atlantic (EUR/NAT) Office E-mail: luis.faria@icao.int SECRETARIAT: Mr. Luis Faria - EUR/NAT Regional Director European and North Atlantic (EUR/NAT) Office E-mail: luis.faria@icao.int	GREPECAS Website
MIDANPIRG	Middle East Air Navigation Planning and Implementation Regional Group	MID	IATA, IFALPA, ACI, CANSO, IFATCA	CHAIRPERSON: Mr. Ahmed Al Jassar (First Vice Chairman) Director General Air Navigation E-mail: jacbour@yahoo.com SECRETARIAT: Mr. Mohamed Khafis Rahm - ICAO Mid Regional Director Middle East Regional (MID) Office E-mail: mohamed.khafis@icao.int	MID/MIDANPIRG Website
NAT SPIRG	North Atlantic Systems Planning Group	NAT	IATA, IFALPA, ACI, CANSO, IFATCA	CHAIRPERSON: Asger PALSSON, Director Air Navigation Services, ISAVIA, Reykjavik Airport, Iceland E-mail: Asger.Palsson@isavia.is SECRETARIAT: Mr. Luis Faria - EUR/NAT Regional Director European and North Atlantic (EUR/NAT) Office E-mail: luis.faria@icao.int	NAT SPIRG Website





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Safe Travels: ICAO's agenda for Safety and Air Navigation

WHAT'S NEXT ?





Proposals for Enhancement of GASP

- Balance EI & Ops Risk
- Establishment of GASP-SG
- Focus on implementation support





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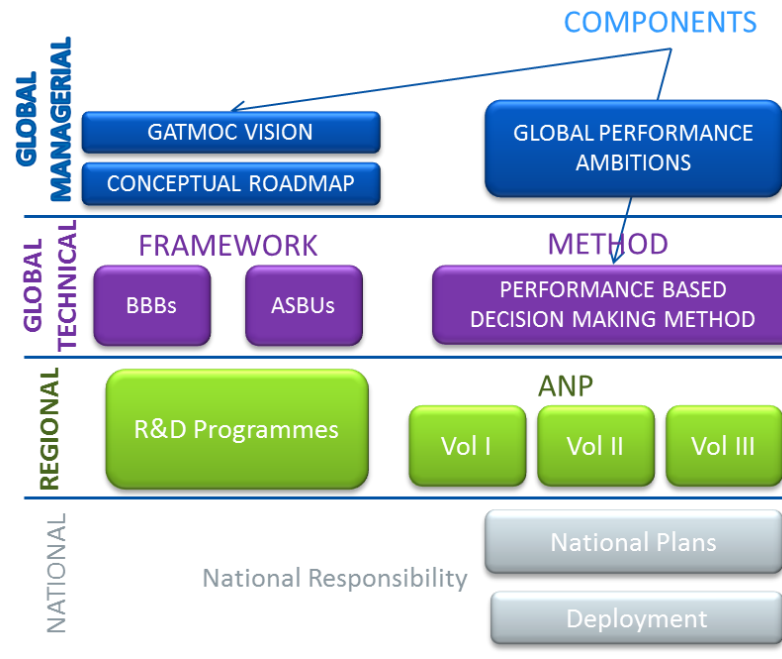
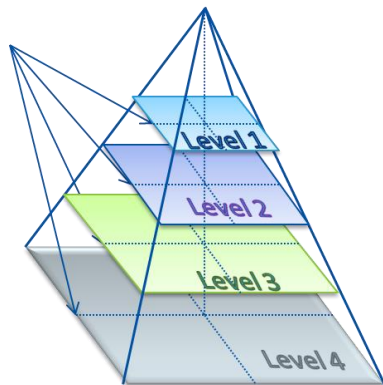


Proposals for Enhancement of GANP

2019 Update of GANP:

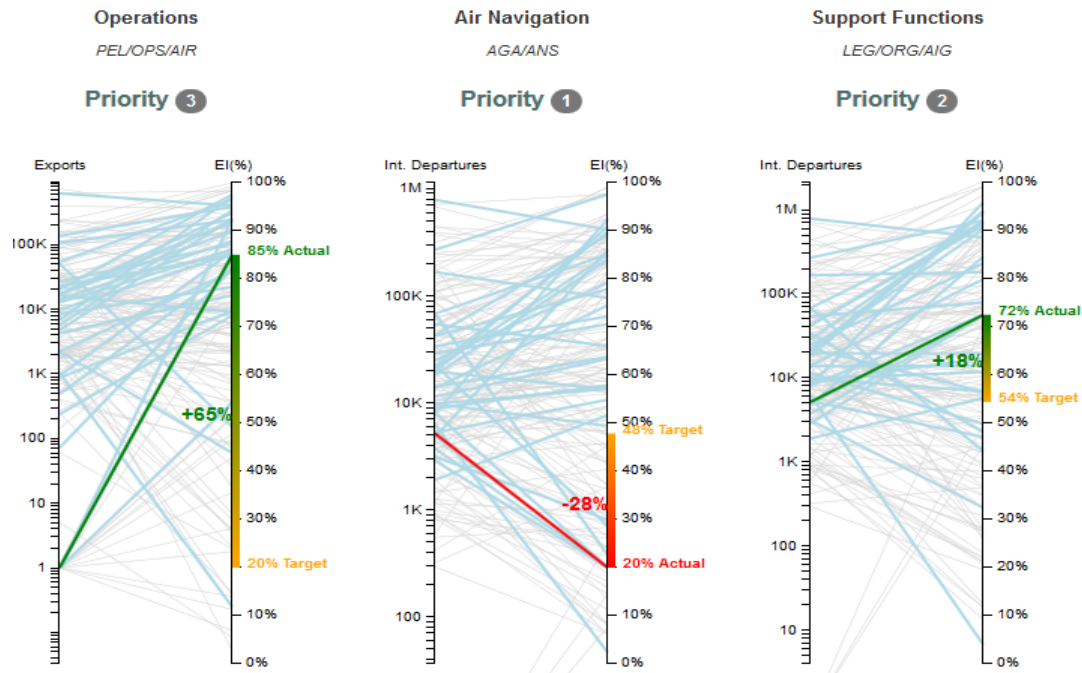
Creating a Multilayer Structure

LAYERS





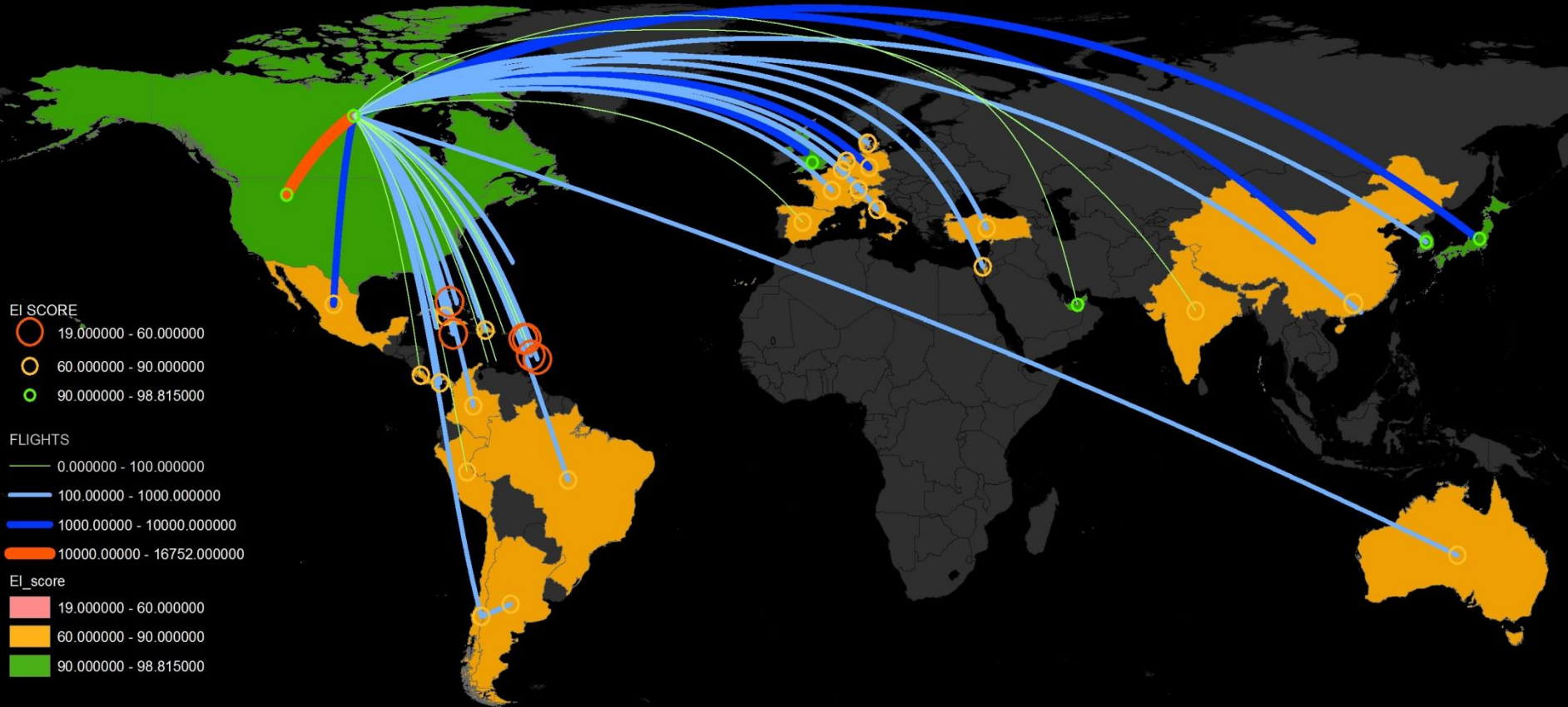
Evolution of Analysis: Safety Margins



Safety Margin

Risk-based prioritization model based on a State's Traffic and the level of Effective Implementation (EI) in the related technical areas at risk (Operations, Air Navigation, Support Functions)

Evolution of Analysis – seeing the Big Picture





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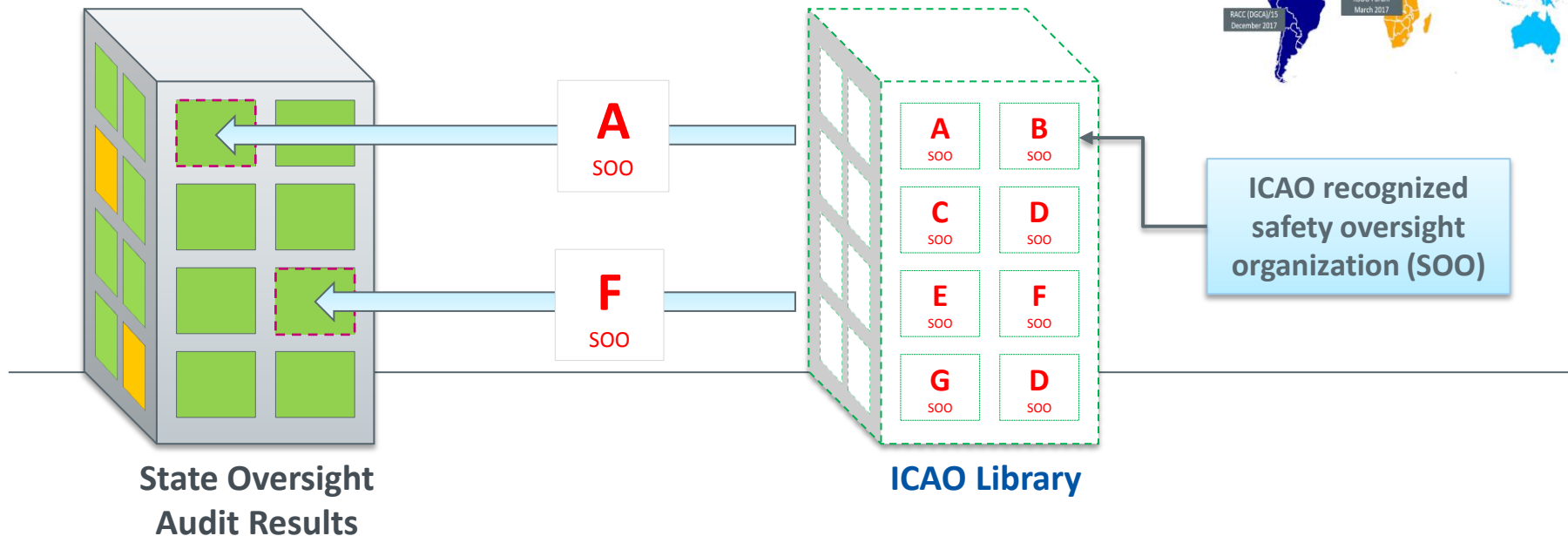
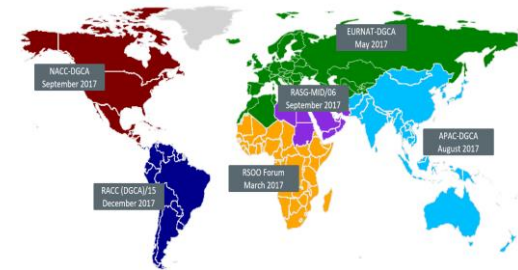
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Global Aviation Safety Oversight System (GASOS)



Concept endorsed globally - DGCA level





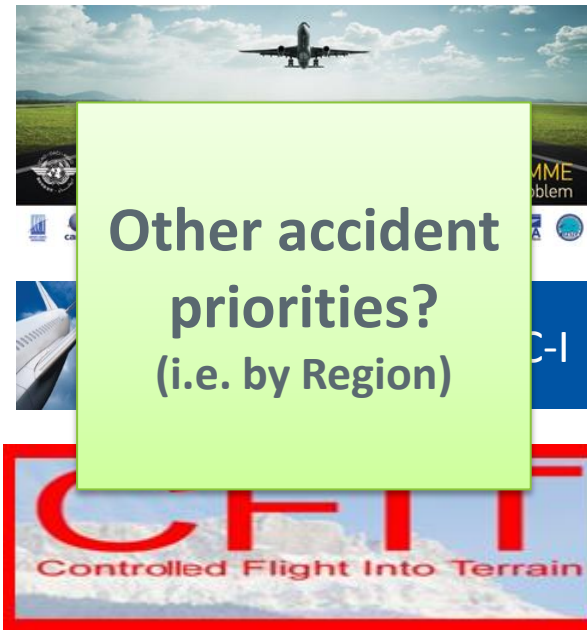
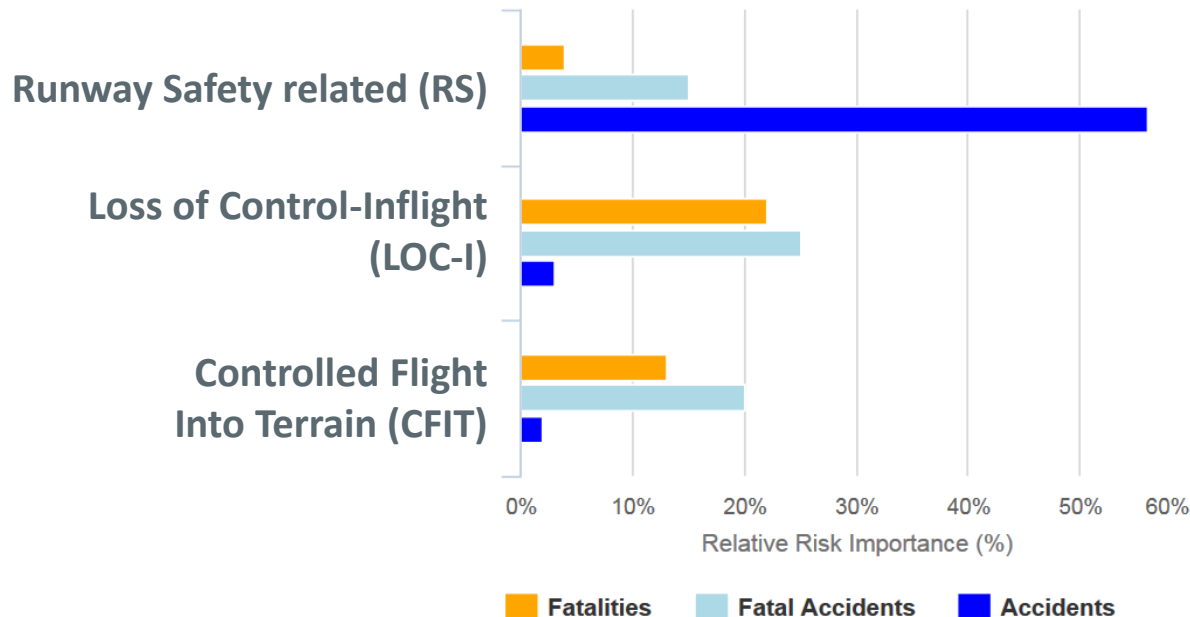
Risks/barriers to achieve our goal

- Effective Implementation of SARPs
- ICAO's Safety priorities:
Operational Risks
- Current and emerging issues



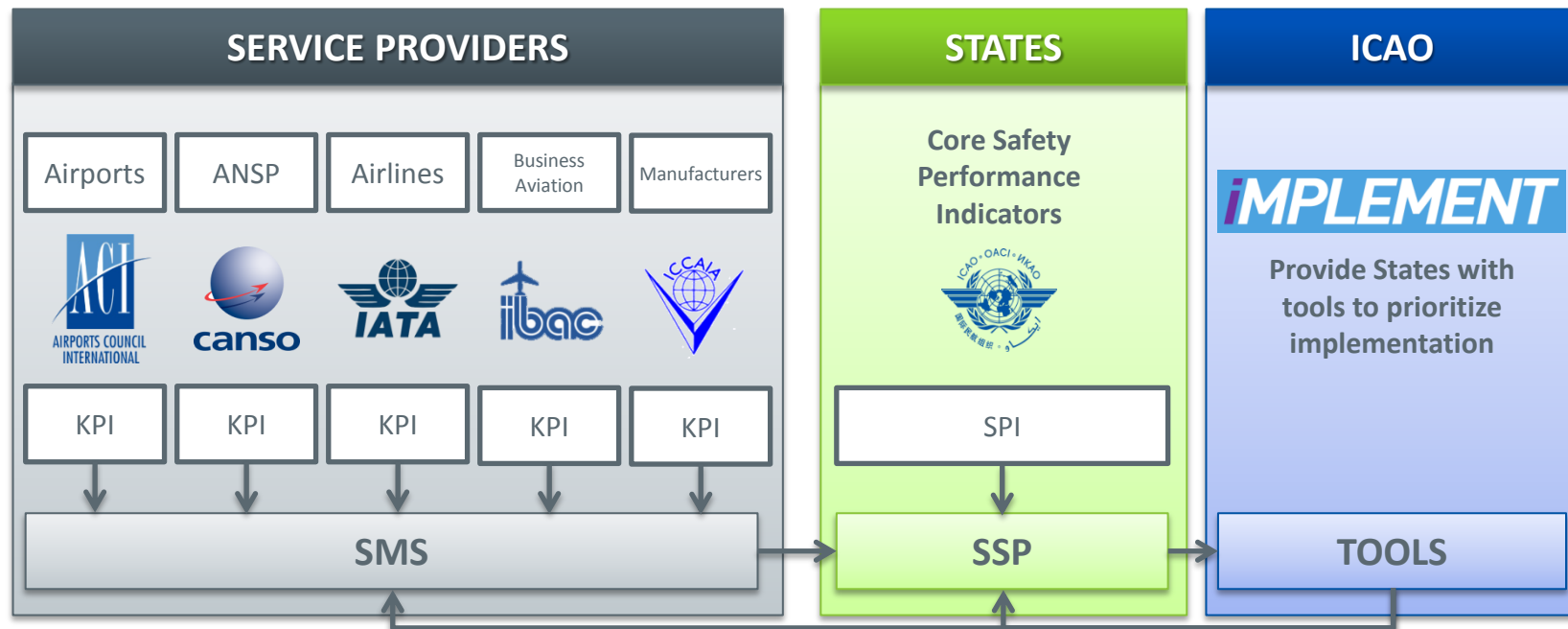


Safety Priorities: Operational Risks



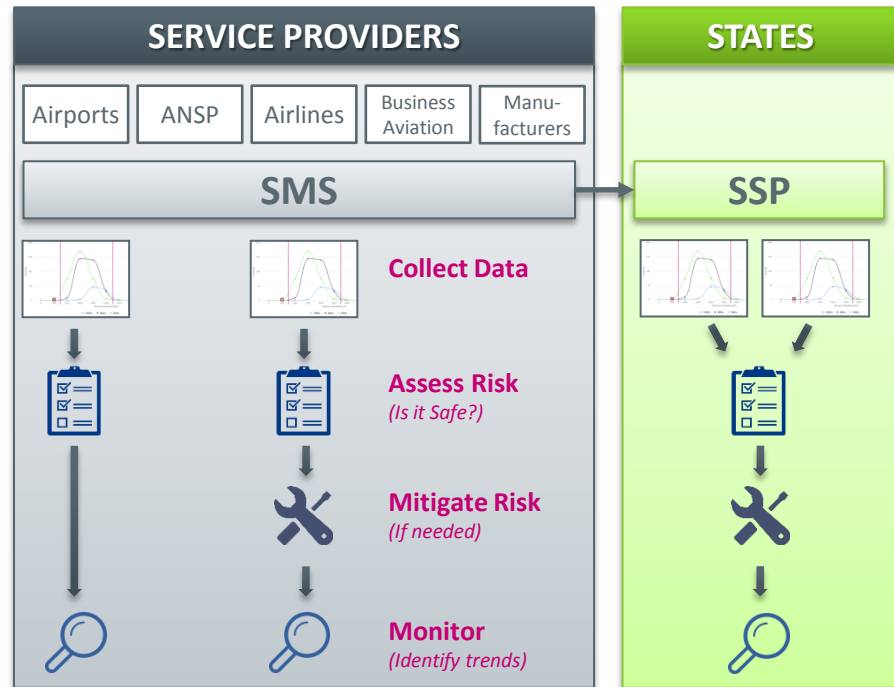
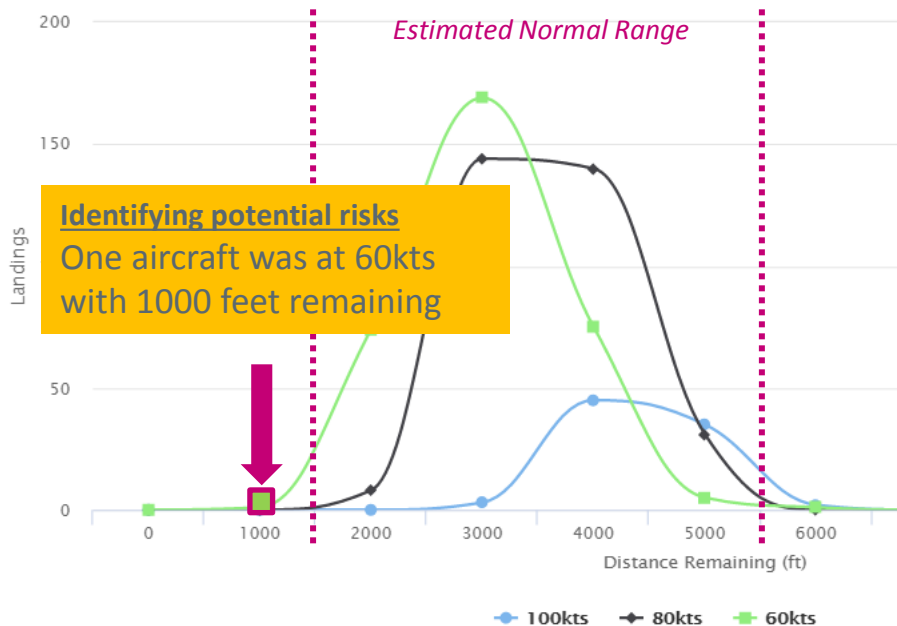


Information Sharing and Exchange





Real-Time Performance Monitoring





Analysis to manage the hazards



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iSTARS 3.0

Integrated Safety Trend Analysis and Reporting System

OVER 30Applications for safety analysis and
Information**MORE THAN 3000+**

Registered users

www.icao.int/safety/ISTARS

State Safety Briefing



Solution Center



CAA HR Benchmark



Economic Dev. Indicators



Dashboards



Regional Safety Briefing



Approach Paths



Airport Briefing



Risks/barriers to achieve our goal

- Effective Implementation of SARPs
- ICAO's Safety priorities:
Operational Risks
- Current and emerging issues

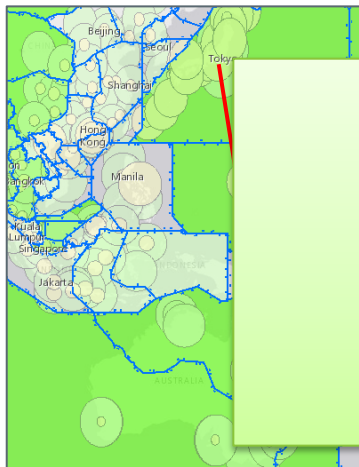




Current and Emerging Issues



Conflict Zones

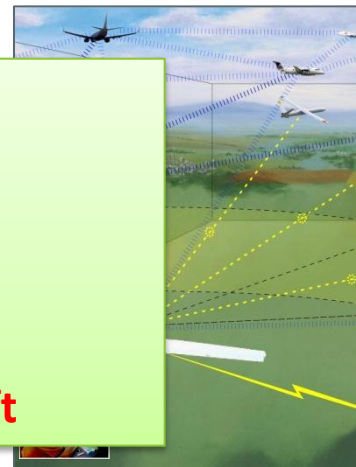


Global Tracking



What next?
Mental Health
UTM & 600+
GPS interruption
Cargo Safety
Supersonic aircraft

Cyber Safety



RPAS



Space Transportation



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Safe Travels: ICAO's agenda for Safety

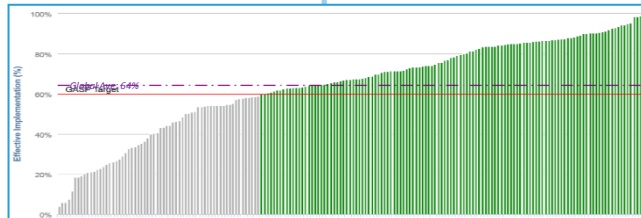
SUMMARY





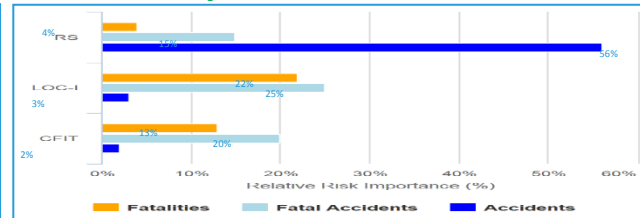
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Effective Implementation



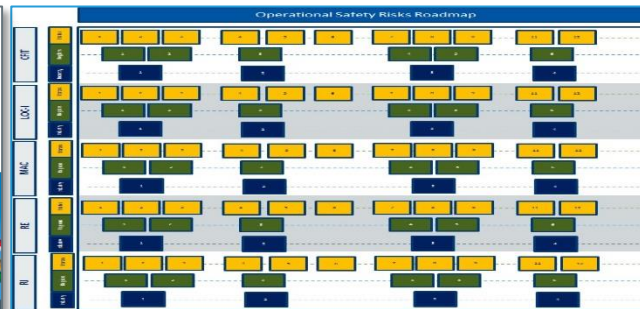
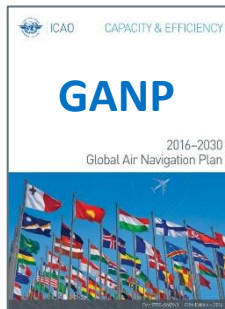
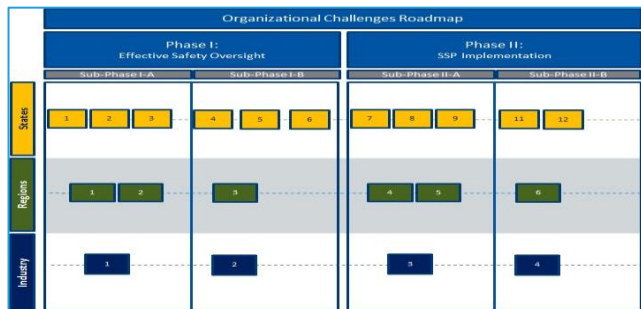
INFRA-
STRUCTURE
BBBs

Operational Risks



Performance
Monitoring
DATA

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Organizational - EI

Operational
Capabilities

Operational Risks

Performance
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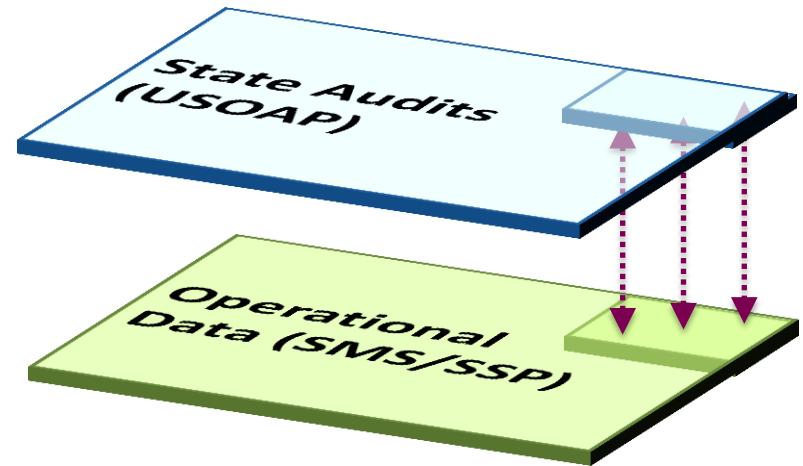
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Real-Time Monitoring Aviation's Health

Combining State audits with State/Industry operational data

- Through SMS and SSP
- Protection of information/operational data through Amendment 1 to Annex 19





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THANK YOU!