CAAi
Above and beyond

ICAO ANNEX 19 (Second Edition) – SAFETY MANAGEMENT

Top Contributing Factors – Section 5

Middle East & North Africa Aircraft Accidents

LATENT CONDITIONS

	Percentage Contribution
Safety Management	36%
Regulatory Oversight	27%
Design	23%
Flight Operations	23%
Flight Ops: SOPs & Checking	18%
Maintenance Ops: SOPs & Checking	14%
Maintenance Operations	14%
Flight Ops: Training Systems	14%
Selection Systems	14%
Technology & Equipment	5%
Operations Planning & Scheduling	5%
Maintenance Ops: Training Systems	5%
Management Decisions	5%

FLIGHT CREW ERRORS

	Percentage Contribution
Manual Handling/Flight Controls	32%
SOP Adherence/SOP Cross-verification	27%
Callouts	18%
Automation	9%
Normal Checklist	9%
Pilot-to-Pilot Communication	9%
Abnormal Checklist	9%
Ground Crew	5%
Systems/Radios/Instruments	5%
Crew to External Communication	5%

Addendum C

Top Contributing Factors – Section 5

Asia/Pacific Aircraft Accidents

LATENT CONDITIONS

	Percentage Contribution
Regulatory Oversight	58%
Safety Management	40%
Flight Operations	22%
Flight Ops: Training Systems	18%
Flight Ops: SOPs & Checking	11%
Selection Systems	10%
Maintenance Operations	6%
Maintenance Ops: SOPs & Checking	6%
Management Decisions	4%
Design	4%
Change Management	3%
Technology & Equipment	3%
Maintenance Ops: Training Systems	1%
Ground Operations	1%

FLIGHT CREW ERRORS

	Percentage Contribution
Manual Handling/Flight Controls	43%
SOP Adherence/SOP Cross-verification	38%
Pilot-to-Pilot Communication	13%
Callouts	10%
Abnormal Checklist	4%
Crew to External Communication	4%
Air Traffic Control	3%
Ground Crew	3%
Automation	3%
Ground Navigation	3%
Systems/Radios/Instruments	1%
Briefings	1%

COUNTERMEASURES FOR THE OPERATOR AND THE STATE

Subject	Description	% of accidents where counter-measures could have been effective (2013-2017)
Regulatory oversight by the state of the operator	States must be responsible for establishing a safety program, in order to achieve an acceptable level of safety, encompassing the following responsibilities: • Safety regulation • Safety oversight • Accident/incident investigation • Mandatory/voluntary reporting systems • Safety data analysis and exchange • Safety assurance • Safety promotion	**33%**
Safety management system (operator)	The operator should implement a safety management system (SMS) accepted by the state that, as a minimum: • Identifies safety hazards • Ensures that remedial action necessary to maintain an acceptable level of safety is implemented • Provides for continuous monitoring and regular assessment of the safety level achieved • Aims to make continuous improvements to the overall level of safety	**27%**
Flight operations: Training systems	• Omitted training • Language skills deficiencies • Qualifications and experience of flight crews • Operational needs leading to training reductions • Deficiencies in assessment of training or training resources such as manuals or Competency-based Training (CBT) devices.	**12%**

ICAO Annex 19 – Second Edition

STATES

SERVICE PROVIDEERS

Foreword

Chapter 1 - Definitions

Chapter 2 - Applicability

Chapter 3 – State Safety Management Responsibilities

Chapter 4 – Safety Management System

Chapter 5 – Safety Data and Safety information collection, analysis, protection, sharing and exchange

Appendix 2 – Framework for a Safety Management System (SMS)

Appendix 1 – State Safety Oversight System Critical Elements

Appendix 3 – Principles for the protection of safety data, safety information and related sources

SSP vs SMS

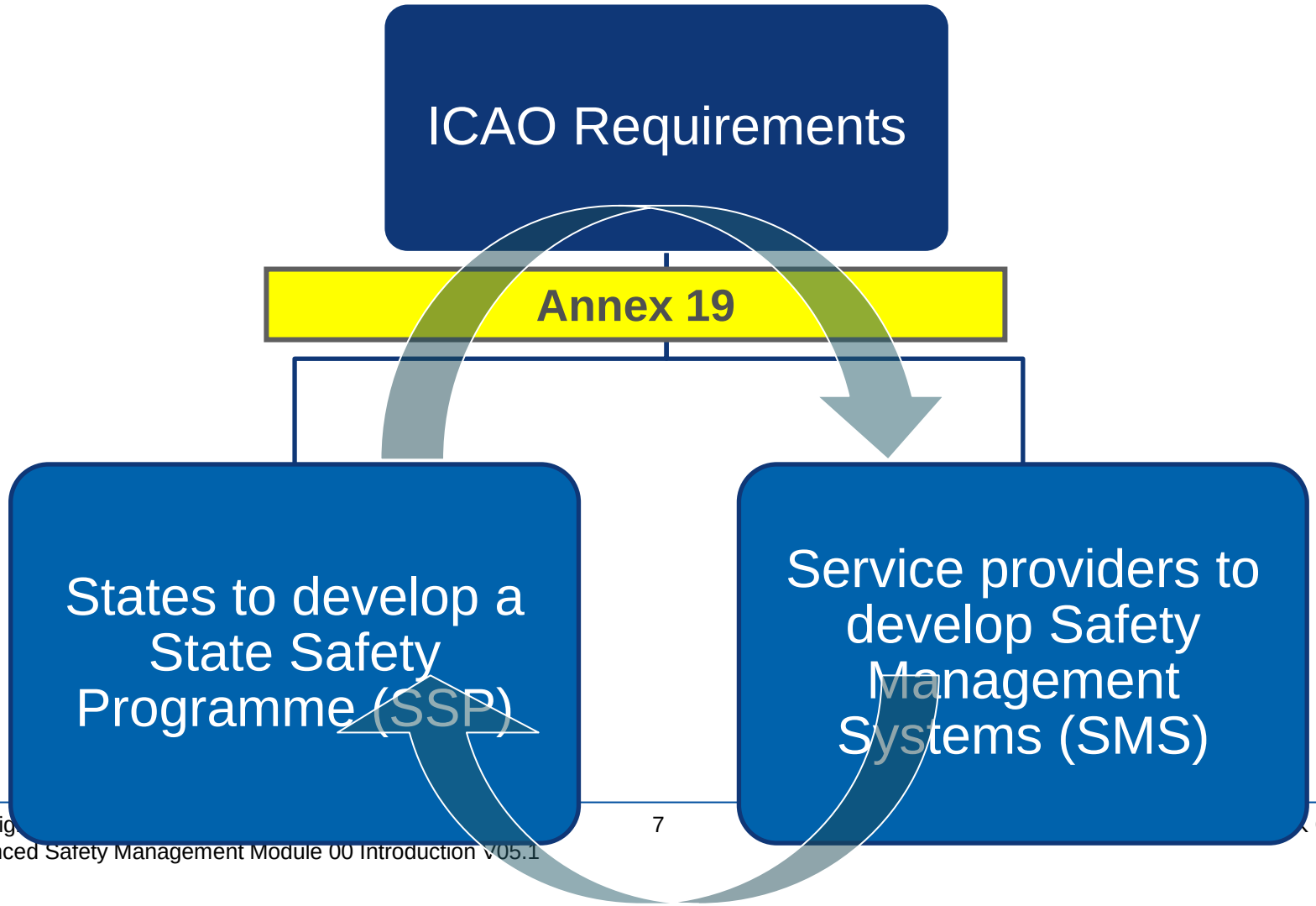
- State Safety Programme (SSP).

An integrated set of **regulations and activities** aimed at improving safety. (Chapter 3 of Annex 19)

- Safety Management System (SMS).

A systematic approach to managing safety, including the necessary **organizational** structures, accountabilities, policies and procedures. (Chapter 4 of Annex 19)

ICAO Safety Management Requirements



Thank You.