



# SSPIA 2023 OPS & AIR Lições aprendidas

Rio de Janeiro, 11 de março de 2023.



## Objetivos

- Apresentar uma visão geral dos resultados da SSPIA 2023 em OPS e AIR
- Apresentar os aprendizados resultantes da avaliação



### Roteiro

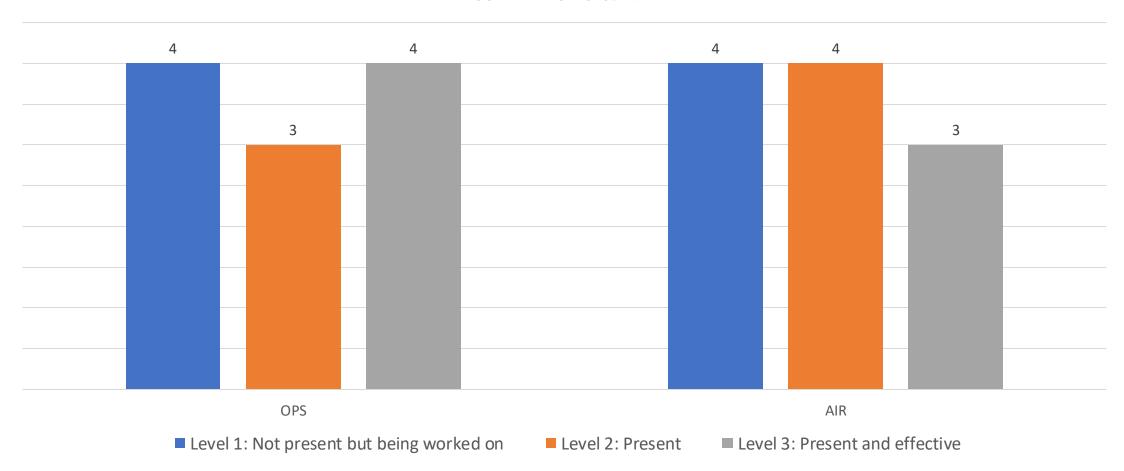
- Resultados gerais
- SSP.PQ.OPS
- SSP.PQ.AIR
- Aprendizados



# Resultados gerais



SSPIA – OPS & AIR





# ICAO SSPIA OPS Summary

SSPIA PQ	Level
<b>SSP.OPS.01.</b> What regulatory requirements have been promulgated by the State for operators of airplanes or helicopters authorized to conduct international commercial air transport to implement an SMS acceptable to the State?	2 → 3
SSP.OPS.02. What support has the State provided to air operators for SMS implementation?	3
<b>SSP.OPS.03.</b> How does the State ensure that the personnel responsible for the acceptance and monitoring of air operators' SMS develop the required competencies ?	1
<b>SSP.OPS.04.</b> What guidance and tools has the State provided to its personnel on the initial acceptance and continuous surveillance of air operators' SMS?	2
SSP.OPS.05. How does the State determine the initial and continued acceptability of the air operator's SMS?	1 <del>→</del> 2
<b>SSP.OPS.06.</b> How does the State assess the effectiveness of the hazard identification and risk management processes of air operators?	1
<b>SSP.OPS.07.</b> How does the State ensure that air operators monitor and analyze safety data to identify trends and take appropriate action when needed?	3
SSP.OPS.08. How does the State review and monitor SPIs, alert levels and target levels, when applicable, of individual air operators?	1
<b>SSP.OPS.09.</b> How does the State prioritize inspections, audits and surveys of air operators, towards those areas of greater safety concern or need?	3
<b>SSP.OPS.10.</b> How does the State use the safety performance-related information of its air operators to support the monitoring of the State's safety performance?	1
<b>SSP.OPS.11.</b> How does the State enable and promote the exchange of safety information among: 1) air operators; and 2) air operators and other sectors of civil aviation in the State?	2



# ICAO SSPIA AIR Summary

SSPIA PQ	Level
<b>SSP.AIR.01.</b> What regulatory requirements have been promulgated by the State for approved maintenance organizations providing services to aircraft operators engaged in international commercial air transport (hereinafter referred to as AMOs) to implement a safety management system (SMS) acceptable to the State?	3
SSP.AIR.02. What support has the State provided to AMOs for SMS implementation?	2
<b>SSP.AIR.03.</b> How does the State ensure that the personnel responsible for the acceptance and monitoring of AMOs' SMS develop the required competencies?	1
<b>SSP.AIR.04.</b> What guidance and tools has the State provided to its personnel on the initial acceptance and continuous surveillance of AMOs' SMS?	3
SSP.AIR.05. How does the State determine the initial and continued acceptability of an AMO's SMS?	2
<b>SSP.AIR.06.</b> How does the State assess the effectiveness of the hazard identification and risk management processes of AMOs?	1
<b>SSP.AIR.07.</b> How does the State ensure that AMOs monitor and analyze safety data to identify trends and take appropriate action when needed?	2
<b>SSP.AIR.08.</b> How does the State review and monitor safety performance indicators (SPIs), alert levels and target levels, when applicable, of individual AMOs?	1
<b>SSP.AIR.09.</b> How does the State prioritize inspections, audits and surveys of AMOs, towards those areas of greater safety concern or need?	3
<b>SSP.AIR.10.</b> How does the State use the safety performance-related information of its AMOs to support the monitoring of the State's safety performance?	1
<b>SSP.AIR.11.</b> How does the State enable and promote the exchange of safety information amongst AMOs and other sectors of civil aviation in the State?	2



## SSPIA Report – OPS

### Key State Achievements

- 1. The substantial amount of guidance and diverse use of methods including the utilization of social media and virtual possibilities to facilitate the implementation and continuous maturation of air operators' safety management system (SMS).
- 2. The active monitoring of air operators' safety data and the utilization of these data to identify trends and emerging issues.
- 3. The implementation and utilization of the detailed risk-based surveillance process.

### Key State Opportunities for Enhancement

- Implement the competency-based approach to ensure, that Flight Operations Inspectors who are
  assessing air operators' SMS, acquire the necessary knowledge, skills and attitudes, including on-thejob training (OJT) and recurrent training to ensure that they remain competent over time.
- Reinforce the process and the performance-based nature of assessing air operators' SMS including enhancing the SMS evaluation tool and the harmonisation of the use of the tool amongst all sections within ANAC.
- 3. Utilize different forms of the safety data from air operators to support the monitoring of the State safety performance.



## SSPIA Report – AIR

### Key State Achievements

- 1. The well-structured and comprehensive regulations supported by a substantial amount of guidance to facilitate the implementation of SMS for AMOs.
- 2. The implementation and utilization of the detailed risk-based surveillance process.
- 3. The strong foundation and involvement in the promotion of safety amongst AMOs and also amongst other sectors of civil aviation.

### Key State Opportunities for Enhancement

- 1. Assess the SMS of all of the relevant AMOs, to ensure a comprehensive visibility of their risks and challenges is attained.
- 2. Implement the competency-based approach to ensure SMS assessors acquire the necessary knowledge, skills and attitudes, including recurrent training, to ensure that they remain competent over time.
- 3. Strengthen its internal process of assessing AMOs' SMS including enhancing the SMS evaluation tool and the harmonization of the use of the tool amongst all sections within ANAC.



# OPS



Present and effective

• SSP.OPS.01. What regulatory requirements have been promulgated by the State for operators of airplanes or helicopters authorized to conduct international commercial air transport (hereinafter referred to as air operators) to implement a safety management system (SMS) acceptable to the State?

State level directions specific to ANAC responsibilities **PSOE-ANAC** 

General principles to SMS

Sector-specific regulation **RBAC** 

SMS regulation

IS 119-002 Guidance and means of compliance

SMS Assessment tool Guidance and tool to assess the SMS **Enablers of scalability** 

How to deal with scalability How to evaluate scalability (complex and non-complex) Initial and continual monitoring



Present and effective

SSP.OPS.02. What support has the State provided to air operators for SMS implementation?

Some examples of initiatives that support service providers

IS 119-002

**SMS training (ANAC)** 

**Guidance**, booklets, FAQ

**SMS** assessment

**SMS Brazil** 

**Semana Safety** 

Segurança em Foco

Youtube channel

Fale com a ANAC (*link*) – Normative Instruction IN nº 121

Virtual Technical Meetings (RTV)

SMS Brazil: <a href="https://www.gov.br/anac/pt-br/assuntos/seguranca-operacional/eventos-e-capacitacao/sms-brazil">https://www.gov.br/anac/pt-br/assuntos/seguranca-operacional/eventos-e-capacitacao/sms-brazil</a>

Semana Safety: <a href="https://www.gov.br/anac/pt-br/assuntos/seguranca-operacional/eventos-e-capacitacao/semana-safety">https://www.gov.br/anac/pt-br/assuntos/seguranca-operacional/eventos-e-capacitacao/semana-safety</a>

Segurança em Foco: <a href="https://www.gov.br/anac/pt-br/noticias/2020/seguranca-em-foco-confira-como-foi-a-primeira-edicao-do-evento-online">https://www.gov.br/anac/pt-br/noticias/2020/seguranca-em-foco-confira-como-foi-a-primeira-edicao-do-evento-online</a>

ANAC channel at Youtube: <a href="https://www.youtube.com/@OficialANAC/videos">https://www.youtube.com/@OficialANAC/videos</a>



Not present but being worked on

• SSP.OPS.03. How does the State ensure that the personnel responsible for the acceptance and monitoring of air operators' SMS develop the required competencies?

ICAO: Brazil has not benefitted of addressing initial acceptance and continuous monitoring differences and practises, as well as scalability and complexity factors, into the training contents. At the time of the conduct of the assessment, there was not available a K/S/A assessment method to assess air operator inspectors' competence levels and possible needs for additional training. Brazil has not benefitted having a structured recurrent training program to help SMS assessors stay abreast with the latest safety management information and practices, that would enable a more harmonised approach in SMS assessment.



Present

• SSP.OPS.04. What guidance and tools has the State provided to its personnel on the initial acceptance and continuous surveillance of air operators' SMS?

complex)

#### General guidance



Introduction

- SMS audit
- SMS auditor profile
- SMS oversight responsibilities
- SMS audit process
- SMS assessment Template

SMS assessment
Portaria 3024/2019

Initial and continual monitoring

How to deal with scalability

across different ANAC departments

Safety Office: coordination of ANAC different departments

Harmonized approach for the SMS assessment

How to evaluate scalability (complex and non-

**ANAC Safety Committee** 

SMS tool review Exchange of guidance, challenges, best practices harmonising the use of tool and completing integrated SMS-assessment between different technical areas, and sharing best practices, especially in cases, where an organization has a single integrated SMS system for different technical areas. Brazil has not befitted from the possibility to distinguish between complex and non-complex air operators and the scalability of the assessment in the

tool and guidance.

**ICAO:** Brazil has not benefitted

#### Guidance + tool



#### Maturity scale

- Present
- Suitable
- Operational
- Effective

Procedures: MPR/SPO-010 (RBAC 121) MPR/SPO-012 (RBAC 135)



Present

 SSP.OPS.05. How does the State determine the initial and continued acceptability of the air operator's SMS?

SMS assessment Portaria 3024/2019



Some aspects include operational items

Present Suitable Operational Effective

Surveillance

**ICAO:** After report review, no improvement feedback was provided.

Initial and continued acceptability

How to deal with scalability

How to evaluate scalability (complex and non-complex)

Item 6.3 "Como e quando utilizar o formulário de avaliação"

Surveillance



Deficiencies must be tackled



Corrective actions



**Continuous improvement** 

SMS assessment is part of the surveillance



Not present but being worked on

• SSP.OPS.06. How does the State assess the effectiveness of the hazard identification and risk management processes of air operators?

Present
Suitable
Operational
Effective

The different maturity levels established in the SMS assessment tool allow exploring how well structured the service providers' processes are and whether they are producing the expected results.

#### **SMS** assessment questions

- 1.5.2 Control of SMS records
- 2.1.1 Reporting system
- 2.1.2 Hazard identification
- 2.2.1 Risk assessment
- 2.2.2 Risk control
- 3.1.1 Safety performance evaluation and risk control effectiveness
- 3.1.2 Measurement and monitoring of safety performance
- 3.1.3 Internal audit

#### **SMS** assessment questions

2.1.1 Reporting system

2.1.2 Hazard identification

2.2.1 Risk assessmer

2.2.2 Risk control

- 3.1.1 Safety performance evaluation and risk control effectiveness
- 3.1.2 Measurement and monitoring of safety performance
- 3.1.3 Internal audit

**ICAO:** Brazil has not benefitted from utilizing the safety information and data, that could be derived from its air operators hazard logs and risk management processes. Brazil has not benefitted from developing more detailed tools, guidance and training for assessing air operators HIRM process, that would enable the flight operations inspectors to assess in depth, the air operators HIRM processes for hazard logs, risk assessments, residual risks, and could support the review of the Safety Data Collection and Processing Systems (SDCPS) to identify the use of proper safety information sources.



Present and effective

• SSP.OPS.07. How does the State ensure that air operators monitor and analyze safety data to identify trends and take appropriate action when needed?

#### Air operators are assessed

- Identification of trends, safety risks and emerging risks
- Monitoring and analysis capability
- Use of diverse data-feeding sources
- Risk control actions

#### **SMS** assessment questions

- 2.1.1 Reporting system
- 2.1.2 Hazard identification
- 2.2.1 Risk assessment
- 2.2.2 Risk control
- 3.1.1 Safety performance evaluation and risk control effectiveness
- 3.1.2 Measurement and monitoring of safety performance
- 3.1.3 Internal audit

SMS assessment Portaria 3024/2019





Not present but being worked on

• SSP.OPS.08. How does the State review and monitor safety performance indicators (SPIs), alert levels and target levels, when applicable, of individual air operators?

#### **SMS** assessment questions

Portaria 3024/2019

1.1.5 Safety Objectives

1.5.1 SMS Documentation

3.1.2 Measurement and

monitoring of safety

performance

(certification and surveillance)

Harmonized safety indicators RBAC 121

Portaria 8757 SPO/2022

RBAC 135

ANAC reporting system

Follow-up meetings RBAC 121

Briefing GOAG RBAC 135 ICAO: Brazil has not benefitted from obtaining the safety information and data, that could be derived from its air operator's safety performance indicators (SPI), targets (SPT) and alert levels, which would allow the assessment of air operators SPIs more comprehensive and consistent manner, for example in quarterly organised 121-operator meetings. This could also support ensuring whether the operator's SPIs, alerts and targets are appropriately linked to its safety objectives, reflect the scope of its operations, include both leading and lagging indicators, and have also considered State Safety Performance Indicators (SSPI). This would also allow the assessment of the safety performance, trends and events possible connected to these SPIs.



Present and effective

• SSP.OPS.09. How does the State prioritize inspections, audits and surveys of air operators, towards those areas of greater safety concern or need?

# Relevant safety data and information used to plan surveillance activities:

- expansion or retraction of the organization,
- significant organizational changes,
- IOSA certification,
- SMS assessment results,
- safety occurrences,
- surveillance results,
- types of operations authorized (scheduled, offshore helicopter),
- size of aircraft,
- denouncement/complaints,
- and so on.





More stable during cycle





Performanceoriented activities



Can vary depending on the performance and can focus on specific areas within an individual air operator



Not present but being worked on

 SSP.OPS.10. How does the State use the safety performance-related information of its air operators to support the monitoring of the State's safety performance?

- Accidents, serious accidents, incidents
- Surveillance data
- Air operators self-reported indicators



**Brazil's Safety Plan** 

**Safety Committee** 

**ANAC's Safety Plan** 

**ANAC's Safety Committee** 

Surveillance plan

Meetings with air operators

**ICAO:** Brazil has not benefitted from having a mechanism to regularly receive, analyse and monitor safety-related information of air operators in a more comprehensive and consistent manner to support the State level safety performance monitoring. That could also support Brazil to recognize additional indicators generated by its air operators, that could contribute to the identification of key State risks and emerging issues and update State SPIs., such as, Long Landings, Un-stabilized Approaches and Deviations from intended flight path are events, which air operators are already tracking, while not being included into SSPIs.



Present

- SSP.OPS.11. How does the State enable and promote the exchange of safety information among:
  - 1) air operators; and 2) air operators and other sectors of civil aviation in the State?

- Brazilian Aviation Safety Team (BAST) Resolution No. 399/2016
  - Executive secretary → ANAC
  - Key stakeholders: ANAC, CENIPA, DECEA, air operators, design & manufacture, associations

Information is being exchanged and outputs being developed

- Safety promotion events "Semana Safety" and "Segurança em Foco"
- SMS Brazil
- Guidance material

ICAO: Brazil has not benefitted from collecting the feedback from BAST fora participants, and different safety events and users of different safety information channels, that would enable Brazil to further enhance methods and contents of safety information sharing.



# **AIR**



• SSP.AIR.01. What regulatory requirements have been promulgated by the State for approved maintenance organizations providing services to aircraft operators engaged in international commercial air transport (hereinafter referred to as AMOs) to implement a safety management system (SMS) acceptable to the State?

Present and effective

PSOE-ANAC

State level directions specific to ANAC responsibilities
General principles to SMS

RBAC 145

Sector-specific regulation
SMS regulation

Guidance and means of compliance

How to deal with scalability
How to evaluate scalability
(complex and non-complex)
Initial and continuous monitoring



SSP.AIR.02. What support has the State provided to AMOs for SMS implementation?

# Some examples of safety promotion initiatives that support service providers

- Supplementary Instruction IS 145.214-001
- Guidance Material / Safety Library
- SMS & AMOs Hotsite
- · Self assessment tool
- Seminars, workshops,...
- SMS Trainings
- Fale com a ANAC (<u>link</u>) Normative Instruction <u>IN nº 121</u>
- Virtual Technical Meetings (RTV)

SMS Brazil: (News: 2018, 2019, 2022)

Semana Safety

Segurança em Foco: (News: July-22, August-22)

ANAC channel at Youtube: "SGSO"

#### Present

ICAO: At the time of the conduct of the assessment, Brazil has not completed its initial SMS assessment of all its AMOs. ANAC has not benefited from the feedback and experiences by all its AMOs on their challenges in implementing SMS such that it is able continuously improve its support based on their changing needs.



• SSP.AIR.03. How does the State ensure that the personnel responsible for the acceptance and monitoring of AMOs' SMS develop the required competencies?



On the job training (OJT)

#### Not present but being worked on

ICAO: Brazil has not benefited from a comprehensive review of the training needs of SMS assessors to identify new competencies to further support AMO SMS assessors. Brazil has also not benefitted from a structured recurrent training program that may help SMS assessors stay abreast with the latest safety management information and practices.



• SSP.AIR.04. What guidance and tools has the State provided to its personnel on the initial acceptance and continuous surveillance of AMOs' SMS?

**PSOE-ANAC** 

**RBAC 145** 

IS 145.214-001

**SMS Assessment tool** 



#### General guidance

- Introduction
- SMS audit
- SMS auditor profile
- SMS oversight responsibilities
- SMS audit process
- SMS assessment Template



#### Scale

- Present
- Suitable
- Operational
- Effective



Procedures:

MPR/SPO-146

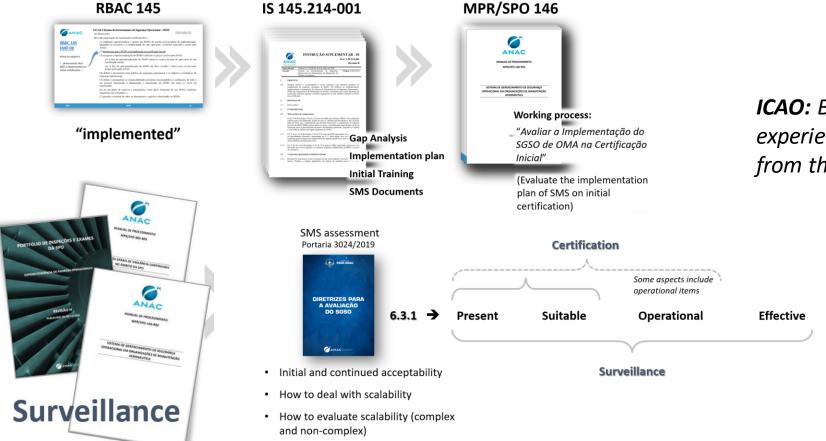
Present and effective



• SSP.AIR.05. How does the State determine the initial and continued acceptability of an AMO's SMS?

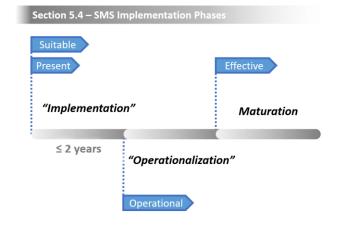
#### **Initial Acceptability**

**RBAC 145** 



IS 145.214-001

**ICAO:** Brazil has not benefited from the experience and accumulation of information from the assessments of all its AMOs.





• SSP.AIR.06. How does the State assess the effectiveness of the hazard identification and risk management processes of AMOs?

SMS assessment Portaria 3024/2019

Present
Suitable
Operational
Effective



The different maturity levels established in the SMS assessment tool allow exploring how well structured the service providers' processes are and whether they are producing the expected results.

#### SMS assessment questions

- 1.5.2 Control of SMS records
- 2.1.1 Reporting system
- 2.1.2 Hazard identification
- 2.2.1 Risk assessment
- 2.2.2 Risk control
- 3.1.1 Safety performance evaluation and risk control effectiveness
- 3.1.2 Measurement and monitoring of safety performance
- 3.1.3 Internal audit

#### Not present but being worked on

ICAO: Brazil has not benefited from the safety information and data that it is able to derive from its AMOs' hazard logs. Brazil's evaluation of the SMS of AMOs is still in progress; until this has been completed, it may not be able to identify unregistered hazards both at a State and individual AMO's level.



• SSP.AIR.07. How does the State ensure that AMOs monitor and analyze safety data to identify trends and take appropriate action when needed?

#### AMOs are assessed

- Identification of trends, safety risks and emerging risks
- · Monitoring and analysis capability
- Use of diverse data-feeding sources
  - Voluntary Reports
- Risk control actions

#### SMS assessment questions

- 2.1.1 Reporting system
- 2.1.2 Hazard identification
- 2.2.1 Risk assessment
- 2.2.2 Risk control
- 3.1.1 Safety performance evaluation and risk control effectiveness
- 3.1.2 Measurement and monitoring of safety performance
- 3.1.3 Internal audit

#### SMS assessment Portaria 3024/2019



#### Present

ICAO: Brazil has not benefit from ensuring the safety information and data derived from its AMOs' hazard identification and risk management processes of all it AMOs are comprehensively monitored and analyzed. At the time of the conduct of the assessment, Brazil has not completed its SMS assessments for acceptance of all its AMOs.



• SSP.AIR.08. How does the State review and monitor safety performance indicators (SPIs), alert levels and target levels, when applicable, of individual AMOs?

#### **SMS** assessment questions

Portaria 3024/2019

1.1.5 Safety Objectives

1.5.1 SMS Documentation

3.1.2 Measurement and monitoring of safety performance

(certification and surveillance)

#### **Safety indicadors**

Rework SPI



### AMOs Panel

Follow-up

- Rework Indicator

Harmonized SPI Project

#### Not present but being worked on

ICAO: Brazil has not benefited from the safety information and data that it is able to be derive from its AMOs' safety performance of all it AMOs. Brazil has not benefited from the review of the SMS evaluation tool and to consider the regularly monitoring the SPIs of its AMOs, that the SPIs includes alert levels and are balanced and accurately represent the risk picture of the AMO. Additionally, Brazil has not benefited from working with its AMOs to identify and report any safety data and information that may generate or contribute to a State level risk.



• SSP.AIR.09. How does the State prioritize inspections, audits and surveys of AMOs, towards those areas of greater safety concern or need?

#### **Inspection and Exams Portfolio**

Department of Flight Standards certification and surveillance activities



**Risk-based** surveillance manual



development of

surveillance plan MPR/SPO-006 MPR/SPO-243

Procedures for the

Present and effective

#### **Surveillance** plan



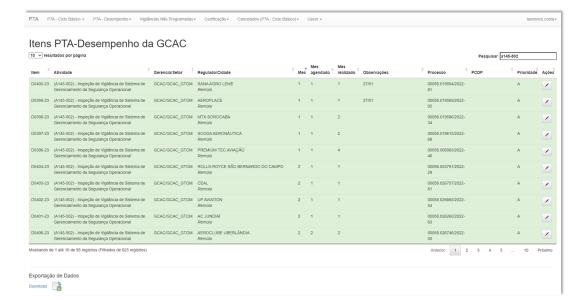
**Basic cycle** 



Performanceoriented activities



- COM Ratings
  - SCF-PP → Engine Rating
  - Size of aircraft → Airframe Class 2 & 4
- expansion or retraction of the organization,
- · significant organizational changes,
- FAA/EASA/TCCA/Foreign certification,
- SMS assessment results,
- · safety occurrences,
- surveillance results,
- denouncement/complaints (RIS),
- and so on.





• SSP.AIR.10. How does the State use the safety performance-related information of its AMOs to support the monitoring of the State's safety performance?

- Accidents, serious accidents, incidents
- Surveillance data
- AMOs self-reported indicators



**Brazil's Safety Plan** 

**Safety Committee** 

**ANAC's Safety Plan** 

**ANAC's Safety Committee** 

Surveillance plan

#### Not present but being worked on

ICAO: Brazil has not benefited from a comprehensive mechanism where it regularly receives, analyses and monitors safety-related information of AMOs that supports its safety performance monitoring. Brazil has also not benefited from reviewing its process of obtaining safety-related information and enlarge its sources of data including additional indicators generated by its AMOs to help in the identification of State level risks and emerging issues.



• SSP.AIR.11. How does the State enable and promote the exchange of safety information amongst AMOs and other sectors of civil aviation in the State?

- Brazilian Aviation Safety Team (BAST) Resolution No. 399/2016
  - Executive secretary → ANAC
  - Key stakeholders: ANAC, CENIPA, DECEA, air operators, design & manufacture, maintenance organizations, associations

Information is being exchanged and outputs being developed

- Safety promotion events "Semana Safety" and "Segurança em Foco"
- SMS Brazil
- Guidance material

#### Present

ICAO: Brazil has not benefited from using the safety information and intelligence it gets from the interactions with the industry to enable a collaborative decision-making in addressing safety issues. Brazil has also not benefited by regularly assessing the effectiveness of its exchange and promotion of safety information efforts.



# Aprendizados



## Aprendizados

- Estimular a ICAO a envolver os países na evolução do USOAP + SSPIA
- Promover o envolvimento das diferentes áreas que conduzem os processos do Safety Oversight System (atividades centrais das autoridades)
- Desenvolver as competências do pessoal
- Assegurar que processos robustos estejam presentes para:
  - avaliar SMS,
  - monitorar o desempenho, e
  - gerenciar risco
- Aprimorar e alavancar a capacidade das Autoridades com o conhecimento e informações dos regulados (perigos, riscos, indicadores etc.)

2023



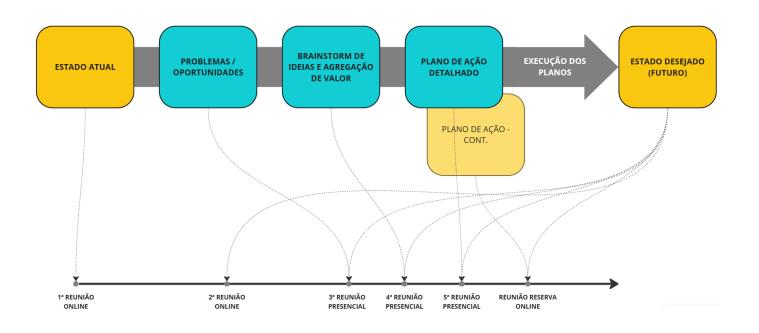
## Aprendizados (cont.)

- Importância da coleta de dados de todas as Autoridades e segmentos de mercado para alimentar o processo de medição e monitoramento do desempenho do país (Portal Único)
  - Isso é a fonte para o PNSO e será a fonte para cada autoridade desmembrar ações para seus segmentos de atuação
- Aprimorar como os dados mais granularizados de desempenho dos regulados alimentam os processos das áreas, das Autoridades e do PNSO
- Esforço elevado de preparação e desproporcional ao aprendizado obtido com a SSPIA
- Embora se proponha a uma abordagem voltada à avaliação de maturidade, certos aspectos são bastante prescritivos e forçam um caminho de solução enquanto outros seriam possíveis

2023



### Kaizen SGSO 145



#### **Projetos iniciais:**

- Aplicabilidade do SGSO em OMs
  - Onde o SGSO pode dar mais resultados?
  - Escalabilidade, política de incentivos
- Identificação de perigos e riscos
  - Aumento da cultura de SO
  - Compartilhamento de informações
  - Quadro de risco do Estado
- Plano de Resposta a Emergências
  - Necessidade do PRE
  - Alinhamento com o Anexo 19