



Safety
Management
Summit
SMS - Brazil 2019

Development of Airports SPIs



Departamento
de Controle do Espaço Aéreo



ANAC AGÊNCIA NACIONAL
DE AVIAÇÃO CIVIL

Milestones

AIRPORTS SPI PROJECT

Definition of the safety indicators airports would monitor

PSOE-ANAC METHODOLOGY

ANAC's methodology to define safety performance indicators

BAIST GROUP

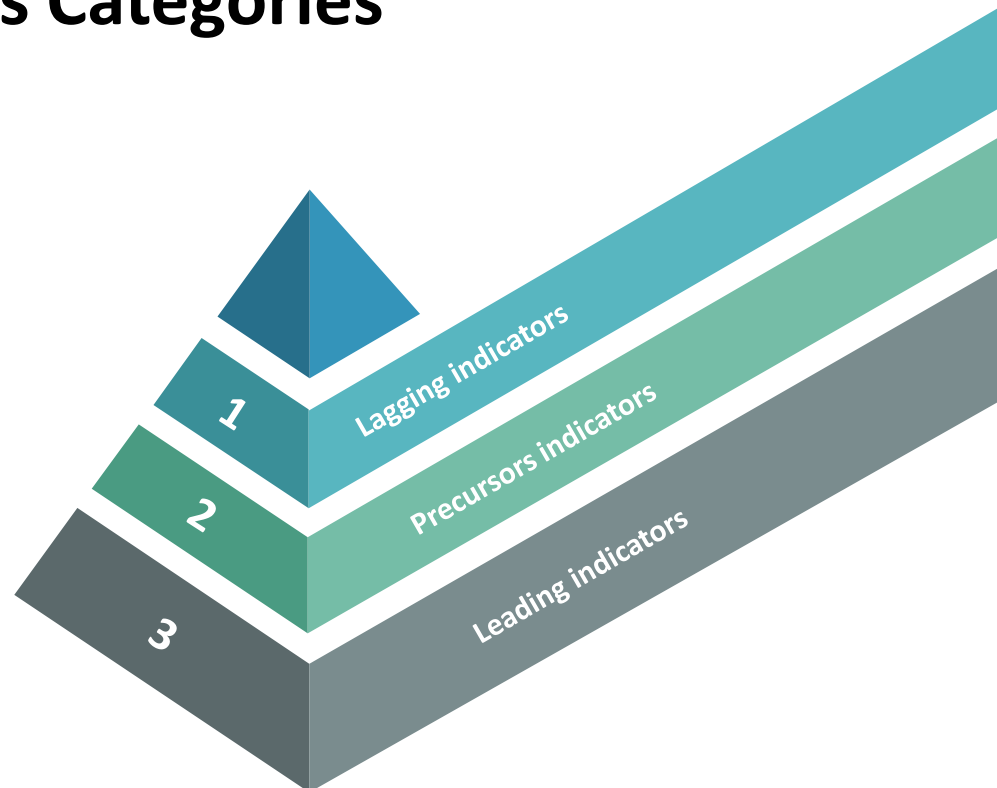
Creation of a Group within BAIST to study the indicators

SPI GUIDANCE MATERIAL

Best Practices to define airports safety performance indicators

Indicators Categories

- **Lagging indicators**
Measure events that have already occurred
- **Precursors indicators**
Measure outcomes that did not necessarily manifest themselves in a serious accident or incident
- **Leading indicators**
Measures that focus on processes and inputs that are being implemented to improve or maintain safety



Lagging Indicators

State Safety Objectives

Risk Areas that represent the desired **safety outcomes** that the **State** aims to achieve

Airport Related Risk Areas

Risk Areas that weren't listed in the State Safety Plan but are **critical to the airport's operation**

ADRM Occurrences

Occurrences involving **aerodrome** design, service, or functionality issues

Leading Indicators

Aerodromes have a **stable infrastructure**, and **different processes** between multiple operators. The indicator reflects the results of a questionnaire containing various **defenses for Runway Incursion**

Initially an indicator of **voluntary reports** was established until we implement the **SMS Effectiveness** evaluation tool

Risk Areas



01

Runway Incursion

- Runway incursion rate
- Questionnaire related to defenses for Runway Incursion



02

Bird

- Bird strike rate within airport limits
- Bird strike rate within a 20 km radius
- Proportion of bird strikes that caused damage
- Sighting of birds rate



03

Wild

- Wildlife collision rate
- Sighting of wildlife rate



04

Runway Excursion

- Runway Excursion rate

Risk Areas



05

External Interference

- Sighting of external threats (drones, kites, balloons, laser)



06

Aerodrome Occurrences

- Aerodrome occurrences rate
- Collected FOD debris



07

Ramp Occurrences

- Ramp occurrences rate
- Vehicle collisions rate
- Fuel spilling rate



08

SMS

- Voluntary Reports rate

Next Steps

Refine risk
areas

Monitor
the results

Define
actions

Questions?

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