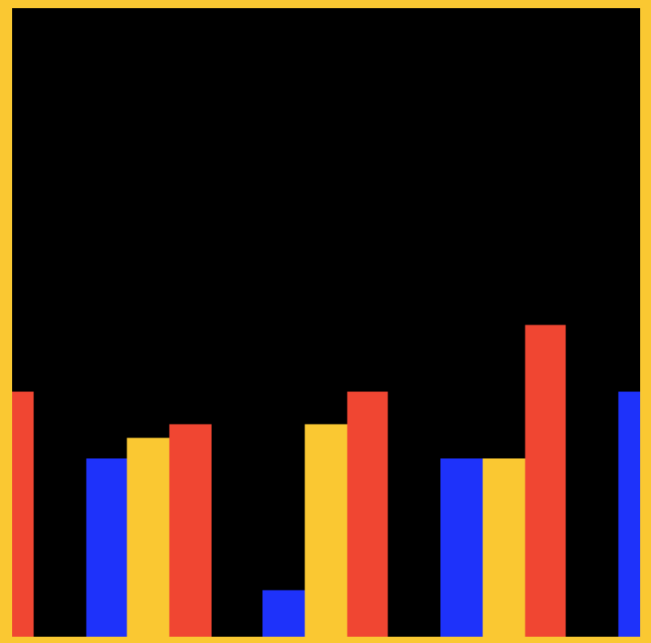
Safety Performance Indicators



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12 June 2019

TURKISH AIRLINES

IATA

Who are we?

Anabel Brough

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Global Aviation Data Management

What is GADM

IATA's Global Aviation Data Management (GADM) program is a data management platform to improve aviation safety.

What does GADM do

The GADM portfolio integrates all sources of global operational data from various channels and provides the industry with comprehensive and cross-database analysis.

GADM Databases and Analysis

Accidents

Database of commercial aviation accidents used to create the IATA Safey Report and to identify contributing factors in aviation accidents

FDX

Database of FDA (Flight Data Analysis) and FOQA (Flight Operations Quality Assurance) type events that allows the user to identify flight safety issues

more about FDX

GDDB

Database of ground damage incident reports, allowing participants to compare their performance to a baseline of global ground damage information

more about GDDB

STEADES

Database of airline incident reports, offering a secure environment for airlines to pool safety information for global benchmarking and analysis needs

more about STEADES

Databases

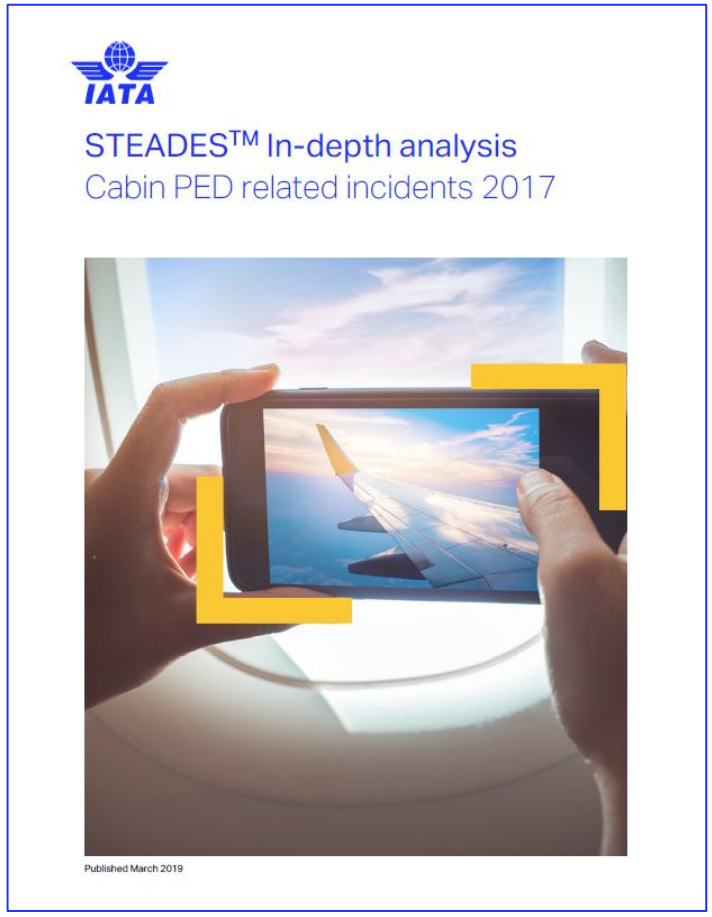
Data captured in GADM databases comprises accident & incident reports, ground damage occurrences and flight data from over 470 different industry participants.

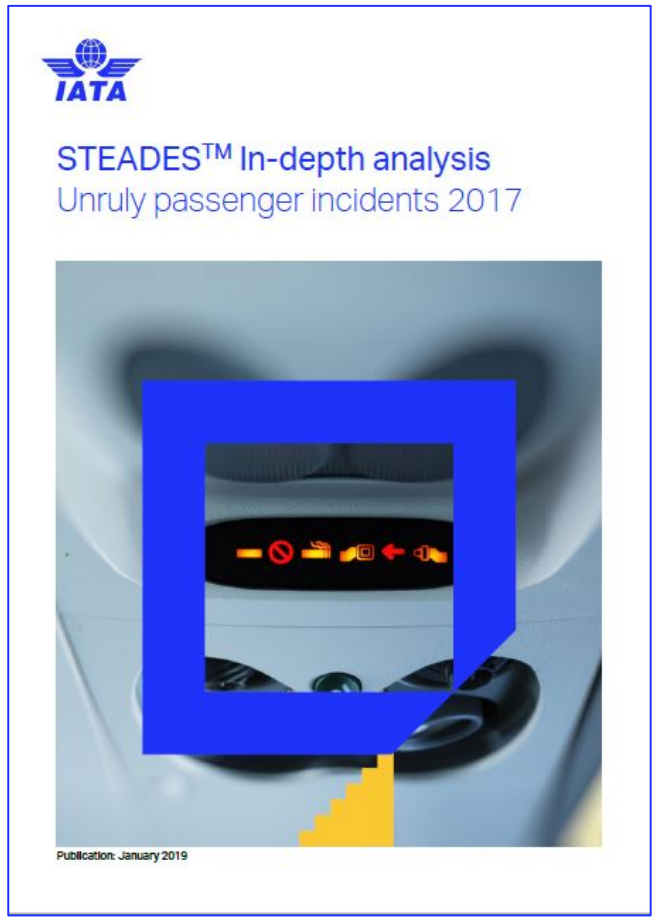
Safety Analysis

GADM provides safety analyses from its databases to derive insights to members.

GADM data contributors have access to benchmark dashboards and query tools to proactively identify safety risks.

Cabin Safety Analysis





IATA

Workshop objectives

1. Understand the differences between Safety Performance Objectives, Indicators and targets
2. Describe the difference between leading and lagging Safety Performance Indicators
3. Understand the six steps for SPI development and implementation
4. Recognize the benefits of data sharing across industry
5. Share ideas and suggestions for IATA's GADM cabin related SPIs and dashboard

GADM Data Quiz – An Icebreaker Activity

The most recent IATA analysis related to injuries sustained in the cabin found that the percentage of cabin crew incapacitation events attributed to turbulence encounters was:

A 2%

B 5%

C 10.5%

The same analysis identified that the leading cause of cabin crew injury on board was:

A Contact with extreme heat

B Slips, trips and falls

C Exposure to glass or sharp objects

In the most recent analysis of inadvertent slide deployments, what percentage were attributed to cabin crew?

A 38%

B 69%

C 75%

In the most recent analysis of PED related incidents in the cabin, how many of the devices which fell into seat mechanisms, became damaged as a result?

A 10, or 38%

B 31, or 69%

C 76, or 57%

Where are you now?

Group exercise

- In your groups, discuss the **SPIs you currently use** in cabin safety at your airline.
- **Agree on TWO SPIs** that you will **present to the room** and explain why and how you use them.

SPI review

- Are these SPIs useful?
- Are you confident that they are delivering the information you need?
- Are they relevant to all of us, or specific only to some?
- Which ones relate to safety events which have already happened?
- Which ones relate to situations or conditions which may affect safety?
- Is there anything missing?

Objectives, Indicators and Targets

IOSA CAB 1.11.5

The Operator shall have processes in the cabin operations organization for setting performance measures as a mean to monitor the safety performance of cabin operations and to validate the effectiveness of risk controls.

Setting performance measures that are consistent with safety objectives is an element of the Safety Assurance component of the SMS framework.

By setting performance measures, an operator is able to track and compare its operational performance against a target (i.e. the performance objective, typically expressed as a rate or number reduction) over a period of time (e.g. one year). Achievement of the target (or objective) would represent an improvement in the operational performance. The use of performance measures is an effective method to determine if desired safety outcomes are being achieved, and to focus attention on the performance of the organization in managing operational risks and maintaining compliance with relevant regulatory requirements. Performance measures in cabin operations might address, for example, inadvertent slide deployments, turbulence-related injuries in the cabin, fumes or fires, and rapid deplaning/emergency evacuation events.

Safety objectives, SPIs and SPTs

Objective

- **Why** are you monitoring this activity?

Indicator

- Data based
- **How** are you doing?

Target

- Data based
- **What** are you aiming for and by **when**?

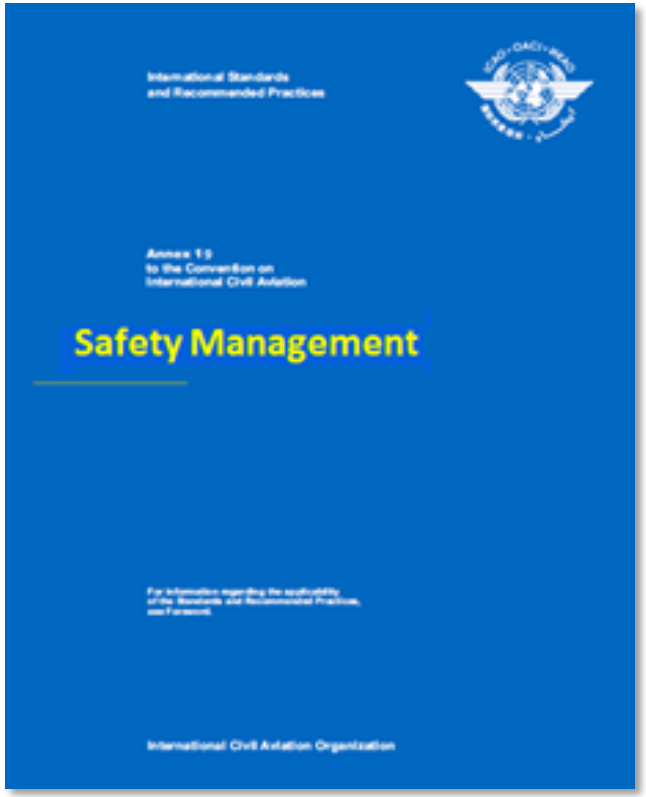
ICAO Annex 19

Safety Performance Indicator (SPI)

A data-based parameter used for monitoring and assessing safety performance.

Safety Performance Target (SPT)

The planned or intended objective for safety performance indicator(s) over a given period of time.



Safety objectives, SPIs and SPTs

Safety objectives must be aligned to SPIs and SPTs to facilitate monitoring and verify achievement

- **Safety Objective:**

  [Airline] will minimize incidents of cabin smoke

- **Safety Performance Indicator/s:**

  1) 0.90 oven smoke incidents per 1,000 departures
  2) 1.3 reports of foreign objects in ovens per 1,000 departures

- **Safety Performance Target/s:**

  1) Reduce oven smoke incidents to 0.65 per 1,000 departures within 1 year
  2) Reduce number of foreign objects discovered in ovens to less than 1 per 1,000 departures

Six steps to SPI management

The six steps at a glance

What are your current areas of concern?

Identify key safety concerns

- In your groups, identify **four** current cabin safety risks and concerns which you might want to measure through SPIs.
- Identify and state a safety objective for each.
- Prioritize them and present to the rest of the group.

NETWORKING BREAK

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Istanbul , June 11-13

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Lagging SPIs

Lagging SPIs – Concept

Monitor safety events that have already taken place

High severity Low probability	Low severity High probability
• Accidents • Serious incidents	• Safety events that did not manifest in serious incidents or accidents

Lagging SPIs - considerations

Who will use the SPI as source of information?

How will the SPI be used to support decisions?

Lagging SPIs should be **action oriented**, e.g. *"Reduce oven smoke incidents due to foreign objects"*

Lagging SPIs – example 1

High severity/Low probability negative outcomes

Number of uncontained oven fires attributed to foreign objects being left in the oven, per 1,000 departures

Low frequency of these events at airline level – meaning that **aggregation** might be needed for meaningful analyses

- At industry level
- At regional level
- At national level

Lagging SPIs – example 2

Low severity/high probability negative outcomes

Number of oven smoke incidents caused by foreign objects per 1,000 departures

Monitor

- Specific safety concerns
- Effectiveness of safety interventions (e.g. *crew checks before switching ovens on, reminders to catering staff etc*)

Leading SPIs

Leading SPIs – Concept

Monitor information on prevailing situations and/or conditions that may affect safety performance

They may be Negative	Or Positive
• Monitor conditions with potential to contribute to a negative outcome	• Monitor conditions which contribute to safety

Leading SPIs - considerations

Who will use the SPI as source of information?

How will the SPI be used to support decisions?

Leading SPIs should be **activity oriented** e.g. *“safety briefing completion, seat belt checks etc.*

Leading SPIs – Examples

Negative leading SPIs

Number of reports received relating to crew discovery of foreign objects in the ovens, per 1,000 departures.

Positive leading SPIs

Percentage of compliance with oven clean checks, per 1,000 departures

Defining targets

Targets

- What is realistic?
- Can it be clearly measured?
- Over what timescale?
- What is the acceptable level of risk?

Gathering data

What data might be needed?

- Number of flights, departures, sectors?
- Number of passengers carried?
- Size of fleet?
- Safety reports?
- Training records?
- Specific aircraft tail number/registration?
- Other airline accidents/incidents?

Create a set of SPIs

- In your groups, **create a set of SPIs** relating to your **four** identified safety risks / concerns and respective objectives.
  - State your Safety Performance Indicator(s) and target(s) in each case.
  - Include examples of lagging and leading SPIs.
  - Describe from where you will obtain your data.

Managing results

Managing results

Gather data

- From where?
- How often?
- In what format?

Analyze data

- How often?
- By whom?

Report results

- To whom?
- How often?
- In what format?

Reporting results - Examples

Safar

Issue 499 | 30 May 2019

The newspaper for employees of the Emirates Group

EID MUBARAK Onboard festive offerings, traditional recipes and a chance to make a difference P.12–13

A SAFETY LANDMARK

In the past two years, we've had no Inadvertent Slide Deployments (ISDs) thanks to the efforts of our experienced cabin crew and enhanced safety processes P.3

ENHANCING THE MOBILE EXPERIENCE As we continue to introduce innovative features to The Emirates App, we've launched the Arabic language version P.5

P.6

A JOURNEY OF EXCELLENCE

EGS has become a global leader in aviation security through a systematic approach to boost quality and business excellence

P.6–7

A GREAT WINTER

A showcase of why the 2018-19 peak season was one of Arabian Adventures' busiest so far

P.8–10

10 HIDDEN GEMS YOU CAN'T MISS

To celebrate flydubai's 10-year anniversary on 1 June, we've rounded up 10 fantastic destinations for you

P.4 DON'T WAIT, HYDRATE

dnata's Beat the Heat campaign is aimed at keeping you and your colleagues safe and healthy in the summer sun

Emirates

Group Safety

You asked... We answered

You said... We did

SMS

Cabin Safety Survey

May 2019

A Cabin Safety SMS Survey was recently sent to all cabin crew to get feedback about our Safety Management System (SMS) and how you are involved.

We really appreciate those of you who took the time to complete the survey. We received nearly 1,200 responses and all grades were represented.

It has given us plenty of good information to work with. The responses in the anonymous feedback sections were also very valuable.

As a result, we have put this newsletter together to provide you with more information based on your feedback and queries.

We have hopefully answered all of your queries and those that were not for the Cabin Safety team have been sent on to the relevant stakeholders such as the SEP, Security training, Cabin Crew Management and the Product Development teams. This included your feedback on:

- Security searches, asset tests and personal security at outstations
- MLE flights and flights of a similar flight time, rosters and crew rest
- ACIs
- CSA duties regarding the non-inclusion of SEP training
- Additional training to help understanding of Flight Time Limitations (FTL) and Flight Duty Periods

Acting on results

Acting on results

Lagging SPIs

- Targets not achieved
  - Identify reasons
- Do not wait for poor results

Leading SPIs

- Indicate good result, but lagging SPI does not
  - Reconsider leading SPI
- There may be a disconnect between the two

Evaluate and refine

Evaluating and refining SPIs and SPTs

Check	• Ongoing relevance to operation • Ongoing reliability of data • Are they precise enough to identify and recognize changes?
Update	• To address changing conditions such as new services, product, procedures etc.
Delete	• When SPIs are no longer relevant • When improvements result in stable conditions and performance

Summary quiz

Lagging Safety performance indicators relate to safety incidents or accidents which have already happened? Is this;

A True?

B False?

How many Safety performance Indicators should be assigned to each safety objective.

A Only **one**

B Always **two or more**

C As many as are useful to help support the objective

The very first step in SPI management is:

A Define leading SPIs

B Evaluate and refine

C Identify key safety concerns

Leading safety performance indicators must always relate to positive conditions. Is this;

A True?

B False?

Where next?

IATA's Safety Performance Indicators Training course (Classroom, 3 days)

https://www.iata.org/training/courses/Pages/safety-performance-indicators-tals50.aspx

IATA Safety Management Systems (SMS) for Airlines (Classroom, 5 days)

https://www.iata.org/training/courses/Pages/sms-airlines-tals01.aspx

IATA Integrated Risk Management Diploma

https://www.iata.org/training/diploma_program/Pages/integrated-risk-management-(irm)-diploma.aspx

Thank you

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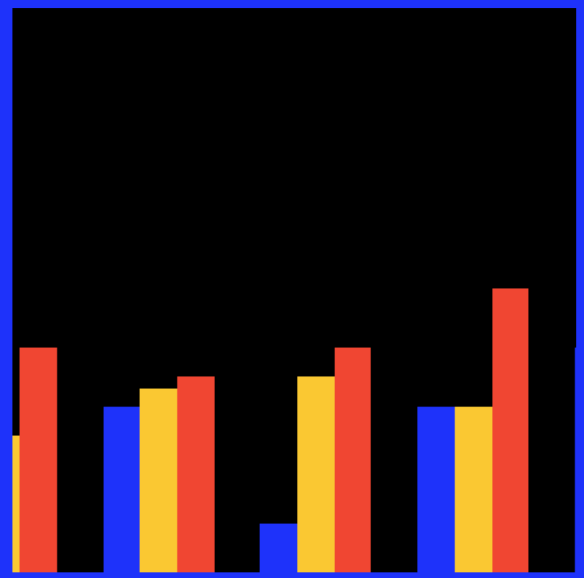

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