

The mitigation actions taken for the main risks identified by our SMS

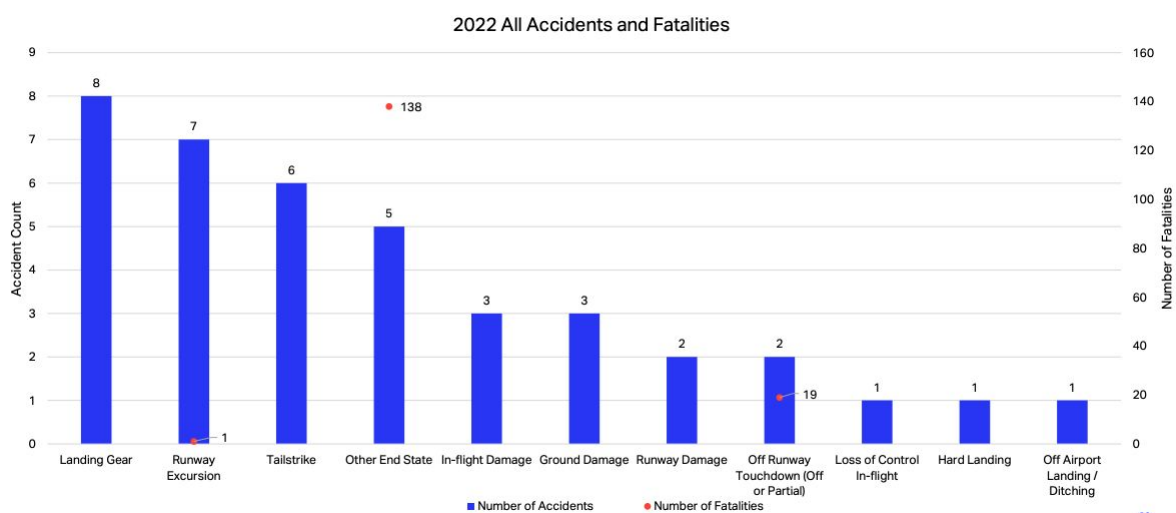
At LATAM Airlines Group, we continuously strive to assure the highest levels of safety. With a mature Safety Management System (SMS), based on the concepts of the ICAO Safety Management System, LATAM Airlines Group uses different strategies to identify and to mitigate potential operational risks.

Using information from worldwide flight safety events, information shared through IATA Global Aviation Data Management (GADM), IATA Accident Data Exchange (ADX) and IATA Flight Data Exchange (FDX), LATAM Airlines Group can adopt appropriate countermeasures to avoid incidents and accidents in our operations. Another important measure taken by our Safety Department is to annually review key operational risk areas, which then permit us to set priorities and reevaluate safety management system objectives.

In 2022, the airline transportation industry experienced a significant recovery following the unprecedented challenges brought about by the COVID-19 pandemic and it was marked a gradual return to normalcy for the sector.

According to the IATA 2023 Safety Report, the year of 2022 the commercial aviation industry suffered 39 total accidents in 2022, an increase from 29 in 2021. The all accident rate rose from 1.13 per million sectors in 2021 to 1.21 in 2022. Five accidents in 2022 resulted in fatalities, compared with seven in 2021. As a result, the fatal accident rate improved from 0.27 per million sectors in 2021 to 0.16 for 2022, which was also ahead of the 5-year fatal accident rate of 0.20. Despite the reduction in the number of fatal accidents, the number of fatalities rose from 121 to 158. The LATAM/CAR accident rate of 4.07 rose from 1.06 accidents per million sectors in 2021, and was also above the 5-year average of 2.24 accidents per million sectors.

To give further details about the 2021 industry safety performance, the following graph illustrates the relationship between accident frequency and number of fatalities per category.



The accident categories in 2022 listed in order of the number of fatalities (with the number of accidents in brackets) were:

- Other End State(1) with 138 fatalities
- Off Runway Touchdown with 19 fatalities; and
- Runway Excursions with one fatality

The accident categories in 2022 listed by the frequency of nonfatal accidents were:

- Landing Gear (8);
- Runway Excursion (6);
- Tail Strike (6);
- Ground Damage (3);
- In-flight Damage (3);
- Runway Damage (2);
- Other End State (2);
- Hard Landing (1);
- Off Runway Touchdown (1);
- Loss of Control — In-flight (1);
- Off-Airport Landing/Ditching (1);
- Mid-Air Collision (0);
- Fuel Exhaustion (0);
- Controlled Flight into Terrain (0).

The performance of Safety at LATAM Airlines Group is defined in terms of achieving the Safety goals associated with its Safety Performance Indicators, or SPI. These indicators are reviewed periodically, both at a corporate and local level, in the following instances: Safety Review Board (SRB), Safety Action Group (SAG) and the Executive Committee.

In 2022, LATAM Airlines Group, through its internal Safety Department, focused on the prevention and implemented mitigations to avoid events related to Loss of Control in Flight (LOC-I), Runway Safety (RS) (including Runway Excursion, Hard Landing and Undershoot) and Controlled Flight into Terrain (CFIT). Other areas related to Flight Operations, not necessarily confined to the cockpit, were also considered, such as the accidental deployment of evacuation slides, cabin crew and passenger injuries, unruly passengers, smoke and fumes events, flight planning/weight and balance incidents and portable electronics devices (PED) incidents.

(1) The Other End State is used by IATA where:

- Information available at the ACTF meeting was not enough to determine the accident end state. For example: – Aircraft is missing;
- The investigation is still ongoing or report not available and the ACTF is unable to assign an end state classification
- The End State does not fit into other categories

Countermeasures

As stated previously, LATAM Airlines Group has defined a series of Safety Performance Indicators (SPIs), which serve as an effective method to evaluate the Airline's safety performance and adherence to the safety objectives. The Flight Operations Safety Performance Indicator shows an improvement of 6% in comparison to the 2021 safety performance and 44% better than the pre-pandemic (2019) performance.

The continuous monitoring of these SPIs allows us to focus our attention on the performance of the organization's safety in terms of operational risk and ensuring regulatory compliance. These indicators are reviewed periodically in the Safety Action Groups, Safety Review Boards and Executive Committees, both at a corporate level, and internally within each subsidiary of LATAM Airlines Group.

Additionally, LATAM Airlines Group Safety Department continues to work on new tools to improve operational resilience, for example

SAFETY II- In 2022, several milestones were reached in the Safety II project, including the development of the entire infrastructure to integrate different databases into one big data for safety, including data from Flight Data Monitoring, Flight Dispatch Systema, Weather Information, Maintenance reports, Flight Crew Alertness levels and others. This database currently includes more than thousand flights and has the capacity to process and run analysis of approximately 600 thousand flights in just one hour. 2022 was also marked by the preliminary development of the Safety Performance Index II, which aims to measure operational performance in all phases of flight. The Safety Performance Index II will be used in conjunction with the indicators already available in the company, in order to have a holistic view of the operation

MHP- Mental Health Program: Program by which a pilot can get confidential help related to mental wellness problems or stress. Guarantee integral assistance to the physical and emotional health of the technical crew, with excellence and stealth, seeking the welfare of these and the safety of the operation;

Fatigue Risk Management System :The State established Prescriptive limitations remain mandatory and FRMS are optional. LATAM manages the fatigue risk within the constraints of State's prescriptive flight and duty time limitations and through the safety management processes (FRMP). The FRM processes based on reactive hazard identification (confidential safety reports, accident and incident investigations, audits, and historical rostering data), including risk assessment and implementation and monitoring of controls and mitigations

Just Culture: Focus actions on system performance and contributing factors first before consideration of individual behaviors. Provide active support to individuals involved in external investigation and proceeding.

Key Management Tools for Risk Mitigation

Flight Data Monitoring: LATAM Airlines Group boasts a Flight Operations Quality Assurance program (better known as FOQA), that allows us to compare actual flight parameters vs Standard Operating Procedures (SOPs). This critical safety program is a key element of our SMS and is crucial for identifying where safety may have been breached. It therefore provides us with very useful information to mitigate risk and prevent future case recurrences.

Line Operation Audits: Line Operational Monitoring Program (LOMP) involves a structured system that allows auditing non-technical skills during routine flight deck responsibilities. When threats and human errors are detected, these are then recorded and used for implementing counter measures to minimize risks in the future.

Training: Advanced Qualification Program (AQP) provides an enhanced curriculum development and a data-driven approach to quality assurance, along with the flexibility to target critical tasks during aircrew training. The AQP methodology is used to enhance safety by focusing on achieving the highest possible standard of individual and crew performance. In order to achieve this goal, AQP seeks to reduce the probability of crew-related errors by aligning training and evaluation requirements more closely with the known causes of human error.

Safety culture survey: LATAM Airlines Group adopted I-ASC (IATA Aviation Safety Culture Survey). The survey consists of 60 questions, which are in alignment with the four pillars of ICAO's SMS framework and relevant IOSA Standards and Recommended Practices (ISARPs). It measures five key elements of the "James Reason" Safety Culture model: Informed Culture, Reporting Culture, Learning Culture, Just Culture and Flexible Culture. Through this channel, we can: Improve employee safety awareness, increase employee engagement and adherence to safety procedures, measure safety culture in relation to KPIs, identify safety culture gaps and address them proactively, benchmark against past performance to demonstrate safety culture improvement, addition to many other benefits

SMS report and audit control: Aviation Quality Database (AQD), is a comprehensive and integrated tool that supports the need for Safety Reporting and Quality Assurance. It allows users to report any situation where safety margins have or could be breached, as well as serves as a platform to record internal and external quality/safety audits. Through this database, corrective and preventive actions can be taken to further mitigate risk.