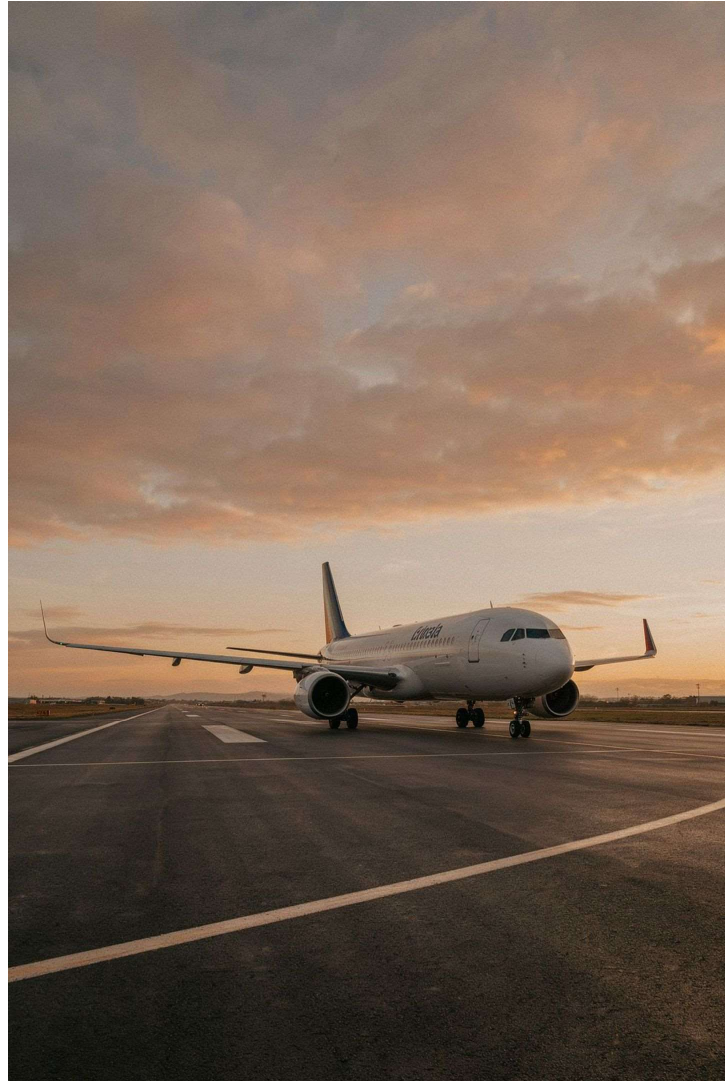




Mandatory & Voluntary Occurrence Reporting

MOR & VOR are the fundamental elements of an aviation Safety Management System (SMS) – the backbone of hazard identification and safety risk management. Established under ICAO Standards and developed by authorities including EASA, UK CAA, and FAA.



Why Occurrence Reporting Matters

Every accident begins as a chain of smaller failures, hazards, or unsafe conditions. If reported early, organizations can identify trends, implement corrective actions, and prevent future accidents.

"What happened, why did it happen, and how can we prevent it from happening again?"

Occurrence reporting is **not** intended to assign blame. It is a proactive safety tool that supports continuous improvement.



ICAO Requirements

Foundation Documents

- ICAO Annex 19
- ICAO Doc 9859

States Must Establish

- Mandatory reporting systems
- Voluntary reporting systems
- Systems for collecting, analysing, sharing, and protecting safety information

The Human Element

ICAO emphasizes that people must feel safe reporting hazards.

Fear destroys reporting.

Without reports, hazards remain hidden, risks increase, and accidents become more likely. A culture of trust is not optional – it is essential.

What Is an Occurrence?

An occurrence is: *any operational interruption, defect, failure, hazard, error, abnormal event or unsafe condition that has affected or could affect aviation safety.*

Not every occurrence is an accident. Most reports concern:

Hazards & Near Misses

Conditions that could lead to harm

Procedural Deviations

Departures from standard procedures

Equipment Failures

Technical defects affecting safety

Human Errors

Mistakes made in good faith

Mandatory Occurrence Reporting (MOR)

Certain events **must** be reported because regulations require it. Failure to report may result in enforcement action.

Objectives of MOR

- Identify serious safety issues
- Prevent accidents
- Allow regulators to monitor risks
- Identify recurring hazards
- Improve regulations and operator oversight

Who Must Report?

- Pilots & Cabin Crew
- Maintenance Engineers & CAMO Personnel
- Air Traffic Controllers
- Ground Handling Personnel
- Airport Operators & Safety Managers
- Flight Dispatchers

 Everyone involved in aviation operations has a reporting responsibility.



Examples of Mandatory Occurrences

Flight Operations

- Runway excursion / incursion
- TCAS Resolution Advisory
- Engine failure or fire
- Fuel emergency
- Loss of separation

Maintenance

- Structural damage
- Incorrect maintenance
- Critical component failure
- Missing inspection

Cabin & Security

- Emergency evacuation
- Dangerous goods event
- Bomb threat / hijacking
- Laser attack

Air Traffic

- Loss of separation
- Wrong clearance issued
- Airspace infringement
- Communication failure

MOR: Timelines & Report Content

Reporting Timeline

Most authorities require reports within **72 hours** of becoming aware of the occurrence. Some serious occurrences require immediate notification followed by a written report.

Information Included in an MOR

- Date, time, location, flight phase
- Aircraft registration & flight number
- Weather conditions
- Description & contributing factors
- Immediate actions taken
- Damage, injuries, reporter information

Focus on **factual, objective information** rather than opinions.

What Happens After Submission?



Each submitted report triggers a structured safety process. The goal is not to find fault, but to understand systemic causes and implement lasting corrective actions that prevent recurrence.



Voluntary Occurrence Reporting (VOR)

Voluntary reporting means personnel report safety concerns **even when regulations do not require it**. These reports are often the most valuable – they reveal hazards before they lead to incidents.



Hidden Hazards

Weak procedures and unsafe behaviours not yet captured by mandatory systems



Human Factors

Organizational weaknesses and communication gaps affecting frontline staff



Improvement Opportunities

Suggestions that improve processes before any incident occurs

The Safety Pyramid

Most accidents are preceded by many unreported hazards. For every major accident, there are typically:



By encouraging reporting at the base of the pyramid, organizations address issues before they escalate – a core principle of Heinrich's model and modern safety frameworks.

MOR vs. VOR: Key Differences

Dimension	Mandatory (MOR)	Voluntary (VOR)
Obligation	Required by regulation	Encouraged by organization
Scope	Specific reportable events	Any perceived hazard or concern
Time Limit	Usually within 72 hours	No prescribed limit; prompt encouraged
Destination	May be sent to regulator	Usually managed internally
Focus	Reportable safety occurrences	Early hazard ID and learning

Reporter Protection & Just Culture

Protected Reporting

A reporter acting in good faith should not fear punishment for honest mistakes, inadvertent errors, or unintended violations. This protection is a cornerstone of Just Culture.

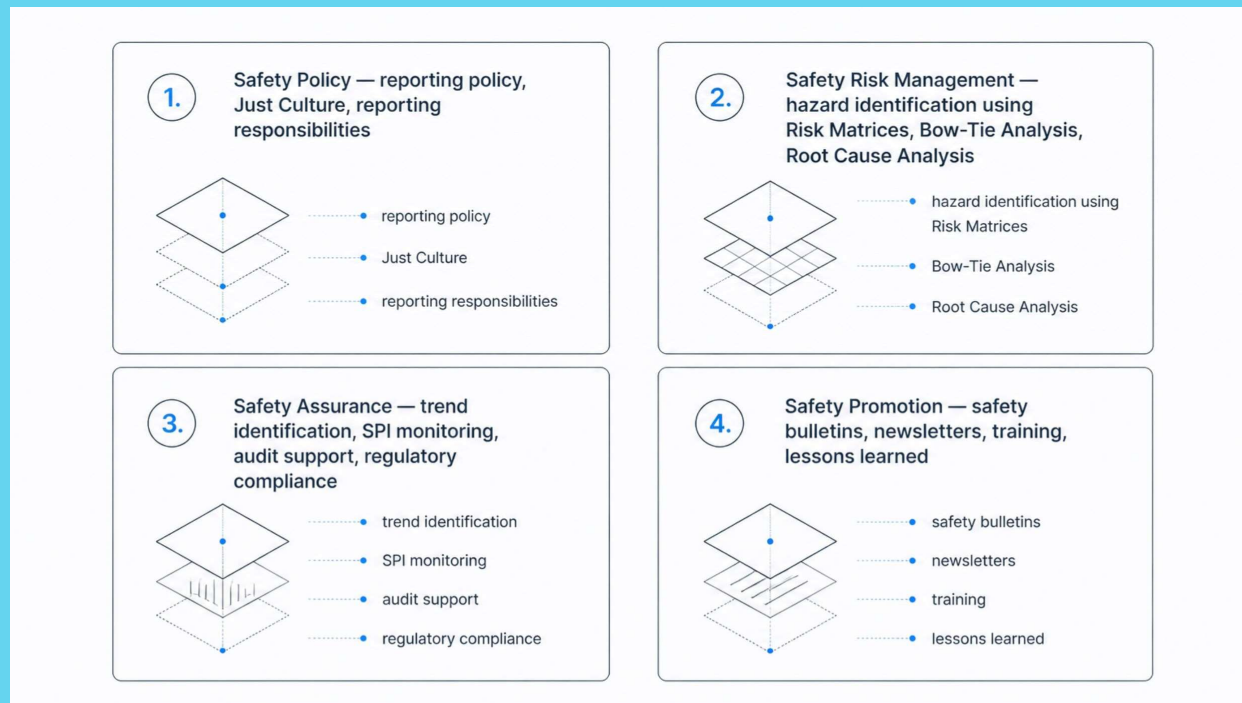
Protection Does NOT Apply To

- Intentional violations
- Reckless behaviour
- Sabotage or criminal acts
- Substance abuse

Effective VOR Systems Are

- Easy to access, confidential, non-punitive
- Trusted, independent, feedback-oriented
- Visibly supported by management

Occurrence Reporting & the SMS Framework



Occurrence reporting feeds all four pillars of SMS – from policy and risk management through to assurance and promotion – creating a closed-loop safety system.

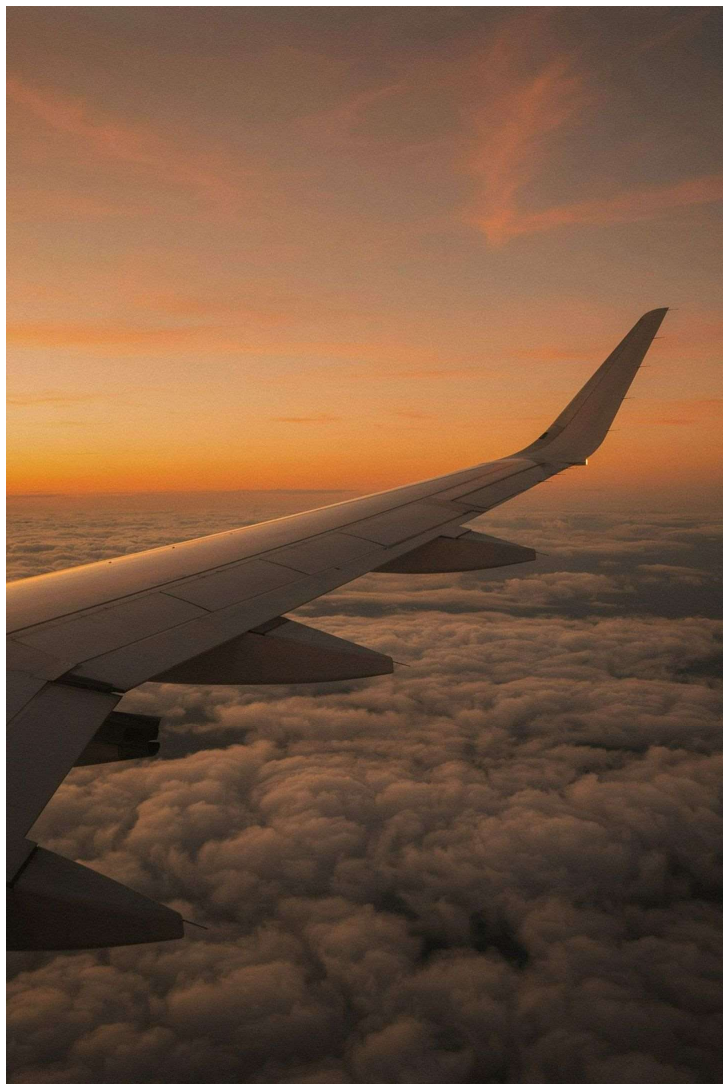
Benefits & Best Practices

Benefits of Effective Reporting

- Early hazard detection
- Reduced accidents and serious incidents
- Improved organizational learning
- Stronger regulatory compliance
- Enhanced employee trust and engagement
- Improved Safety Performance Indicators (SPIs)

Best Practices for Operators

- Provide simple, accessible reporting channels
- Communicate a clear Just Culture policy
- Acknowledge and provide feedback to reporters
- Prioritize investigations by risk level
- Analyze trends regularly via SMS data
- Review performance through the Safety Review Board



Conclusion

Mandatory and Voluntary Occurrence Reporting are **complementary elements** of a mature safety system. MOR ensures significant events are consistently captured and shared with regulators. VOR reveals emerging hazards and organizational weaknesses before they lead to accidents.

Together, they create a continuous learning cycle that strengthens safety performance, supports regulatory compliance, and fosters a proactive reporting culture grounded in trust and continuous improvement.