



IAC 2303 AIRLINE SAFETY MANAGEMENT

HAZARD



WORKPLACE HAZARDS



PREPARED BY:
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HAZARD

- Hazard is defined in the ICAO Safety Management Manual (SMM) (Doc 9859) as:
- A condition or object with the potential of causing injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.
- Types of hazards were identified as Environmental, Technical, Organizational, and Human



HAZARDS EXISTING AS **AN ENVIRONMENT** WITHIN THE SERVICES TAKE PLACE.

The environmental hazards category includes

- **Severe weather or climatic events:** Factors related to hurricanes, winter storms, droughts, tornadoes, thunderstorms, lightening, and wind shear.
- **Adverse weather conditions:** Factors related to icing, freezing precipitation, heavy rain, snow, winds, extreme temperatures, and restrictions to visibility.
- **Geographical events:** Factors relating to earthquakes, volcanoes, tsunamis, floods, and landslides.

- **Geography**: Factors relating to mountainous terrain, aerodrome altitude, aerodrome terrain, and large bodies of water such as oceans.
- **Natural events**: Factors related to wildfires, wildlife activity, and insect or pest infestations.
- **Public health events**: Factors related to epidemics of influenza or other diseases.

- **For example, snow might not be a hazard on its own, but it becomes a hazard with potential consequences in an aerodrome operational context.**
- **The quantity is an important consideration for environmental events or conditions to become a hazard . A light wind could be advantageous to the operation; however a strong crosswind is a hazard for a landing aircraft.**



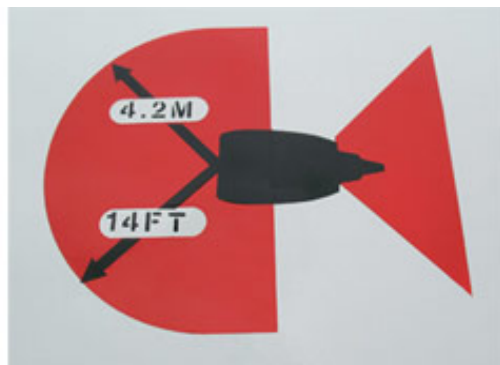
HAZARD REPORTING SOLUTION

HAZARDS EXISTING AS A CONSEQUENCE OF TECHNICAL DEFICIENCIES IN AIRCRAFT AND OTHER MACHINES.

The technical hazards category includes

- **Aircraft:** Factors related to the aircraft, its components, systems, subsystems, and related equipment.
- **Organizational facilities:** Factors related to the facilities of the organization in relation to the objects and conditions such as tools, equipment, workshops, hangers, and storage facilities.

- **External facilities:** Factors related to the facilities, systems, sub-systems, and related equipment of external organizations.
- If hazards exist in the facilities of contractors that repair aircraft parts then this hazard might cause the failure of such repaired aircraft parts.
- **Physical ergonomics:** Factors related to the human anatomical, physiological, and biochemical characteristics as they relate to the physical activities of the operation.
- Ex; the fit between the frontline employees and their work place. It includes the ease with which humans interact with the machines they need to operate.



WARNING:
STAND CLEAR OF
HAZARD AREAS WHILE
ENGINE IS RUNNING



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HAZARDS EXISTING AS A CONSEQUENCE OF THE ORGANIZATION OF THE AVIATION ENTITY.

The organizational hazards category includes

- **Economic growth/recession:** Factors related to economic growth or recession.
- High rates of economic growth while the organization is unable to change at the same rate, thus allowing safety issues to lag behind.
- During a recession when the organization needs to cut back spending, hazards may develop as safety issues become less important.

- **Operational policies/procedures**: related to operational policies and procedures of the operator or service provider.

Hazards can be built into the policies and procedures when they are based on production to obtain financial benefit.



- **Materials/equipment acquisition:** related to the management procedures for the acquisition of materials and equipment and the associated costs of the material and equipment.

For example, decisions not to purchase material or attempt to use less material, compromising the quality of maintenance.

In the case of equipment, hazards arise when decisions are made to maintain equipment rather than replacing it, introducing the problems associated with aging equipment.

- **Organizational culture:** Factors related to the safety culture of the organization's personnel.
- **Ex;** Hazards caused by the organization's safety culture that the job is being done, but not necessarily by the industry's accepted best practice.

- **Work paradigms/teamwork:** Factors related to the paradigms of new work undertaken and teamwork by the organization's staff.
Ex; hazards such as changing policies due to merging organizations or the operation of new aircraft types.



<https://youtu.be/wuoI3FrNX6g>

HAZARDS EXISTING BECAUSE OF HUMAN LIMITATIONS OR IMPAIRMENTS IN THE AVIATION CONTEXT.

- **Medical:** Factors related to medical conditions of human beings.
- **Psychological:** Factors related to psychological functioning of the human being, including cognitive functioning as described below.

- **Cognitive:** Factors related to mental processes such as perception, memory, reasoning, and motor response, as they affect interactions among humans and other elements of a system.
- **Physical limitation:** Factors related to physical limitations of the human beings operating in the organization.



QUESTION?

- <https://youtu.be/0b9gNy3whol>