Safety Management System

The objective of carrying out the **RISK MANAGEMENT** process is also to make a balanced allocation of resources to mitigate and control Operational Safety risks.

IT IS IMPORTANT TO BE ABLE TO ALLOCATE RESOURCES FOR MITIGATION BASED ON DATA.

It is IMPORTANT to collect data on current operations.

Define PROBABILITY and SEVERITY

We define **PROBABILITY** as the possibility that an event or occurrence related to the safety of operations may occur.

That event could be (QUALITATIVE DEFINITION):

- FREQUENT
- OCCASIONAL
- REMOTE
- PROBABLE
- EXTREMELY IMPROBABLE

Define PROBABILITY and SEVERITY

We define SEVERITY as the possible effects of an unsafe event/occurrence or condition taking as a reference the worst foreseeable condition. This event can be:

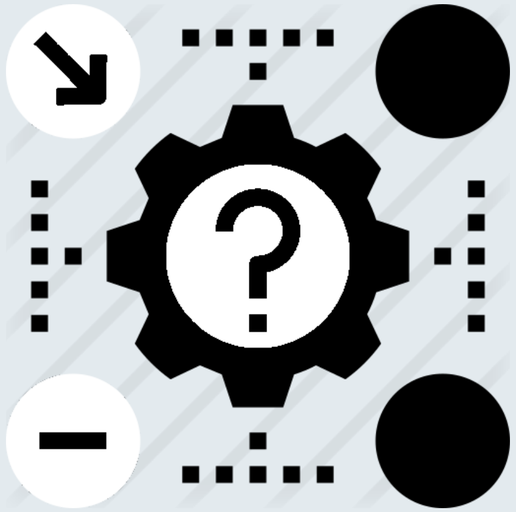
-CATASTROPHIC

-DANGEROUS

-ELDER

-MINOR

-INSIGNIFICANT



SAFETY MANAGEMENT MATRIX

The operational safety risk management matrix will cross-reference the PROBABILITY data with the SEVERITY data.

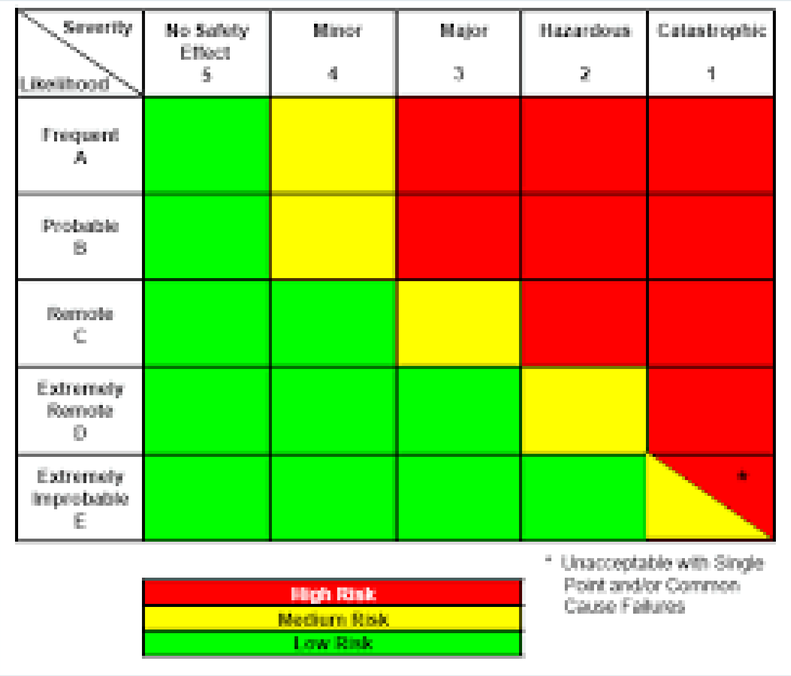
As a result, we will be able to reach the conclusion on the TOLERABILITY OF THE SECURITY RISK.

(RED - YELLOW-GREEN)

Zone/Region NOT TOLERABLE = RED

Zone/Region TOLERABLE = YELLOW

Zone/Region OK = GREEN



5x5 Risk Matrix Example

Impact

How severe would the outcomes be if the risk occurred?

What is the probability the risk will happen?

Probability

	Insignificant 1	Minor 2	Significant 3	Major 4	Severe 5
5 Almost Certain	Medium 5	High 10	Very high 15	Extreme 20	Extreme 25
4 Likely	Medium 4	Medium 8	High 12	Very high 16	Extreme 20
3 Moderate	Low 3	Medium 6	Medium 9	High 12	Very high 15
2 Unlikely	Very low 2	Low 4	Medium 6	Medium 8	High 10
1 Rare	Very low 1	Very low 2	Low 3	Medium 4	Medium 5

In the zone/region NOT TOLERABLE (RED) operations are assumed to be UNACCEPTABLE under the existing circumstances/conditions/environment = WE DO NOT FLY!!

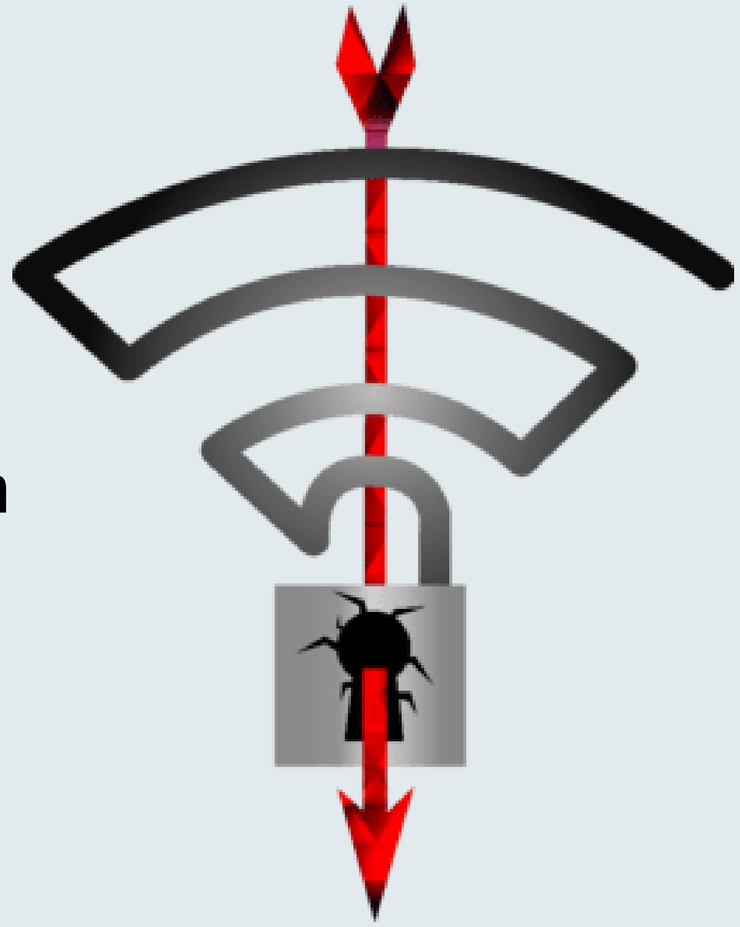
In the TOLERABLE zone/region (YELLOW) operations are assumed to be ACCEPTABLE based on the risk mitigation process. It is suggested to consult the Instructor !!

In the ACCEPTABLE zone/region (GREEN) we operate/fly normally.

4 BASIC BUT SOLID SAFETY PRINCIPLES!!!

1.- Every system is VULNERABLE!!

2.- Vulnerabilities in Operational Safety matters of a system are described in terms of: - DANGERS – RISKS – CONSEQUENCES



4 BASIC BUT SOLID SAFETY PRINCIPLES!!!

3.- **HAZARDS** are normal components of a system. They must be **IDENTIFIABLE** and **CONTROLLABLE**

4.- RISKS are a measure of **REFERENCE** and **CONTROL**, and must be measured against your **PROBABILITY** and **SEVERITY**.

THANKS

DRONESVIP | CIVIL AERONAUTICAL TRAINING CENTER