Introduction Operational Safety

How we define

OPERATIONAL

SAFETY???

Do you think that these operating conditions could be improved ???

How you could make a safer operation???

Operational Safety

It is the state in which the risk of injury to persons, damage to property, is reduced and maintained at an ACCEPTABLE LEVEL, or even better.

HOW WE DO IT ???

....we do it through a

CONTINUOUS PROCESS OF HAZARD IDENTIFICATION AND RISK MANAGEMENT.

OPERATIONAL SAFETY DEFICIENCY

It is a **CONDITION** in the system that allows or is the origin of the dangers and that they last over time.

These are conditions that are present in the system in latent form, often well in advance of the event.

The event, incident/accident makes them obvious but……. They were already!!!!

How do we define DANGER ?

It is a CONDITION or OBJECT that can potentially cause INJURY to people, DAMAGE to equipment or structures, LOSS of material or REDUCTION to perform a certain function.

We must bear in mind that the total elimination of incidents and accidents is impossible.

- There will always be failures or errors as in any human activity or human-designed system.
- **DANGERS and ERRORS** are acceptable in an implicitly SAFE system???
  ….. ***As long as they are under control***.


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PRACTICAL DRIFT

as in any SYSTEM we will always have a THEORETICAL PERFORMANCE, from its inception – operational start-up– BUT……..

Then we will see that there is usually a **REAL PERFORMANCE.**

That space, that difference is what we call **PRACTICAL DRIFT**!!!!

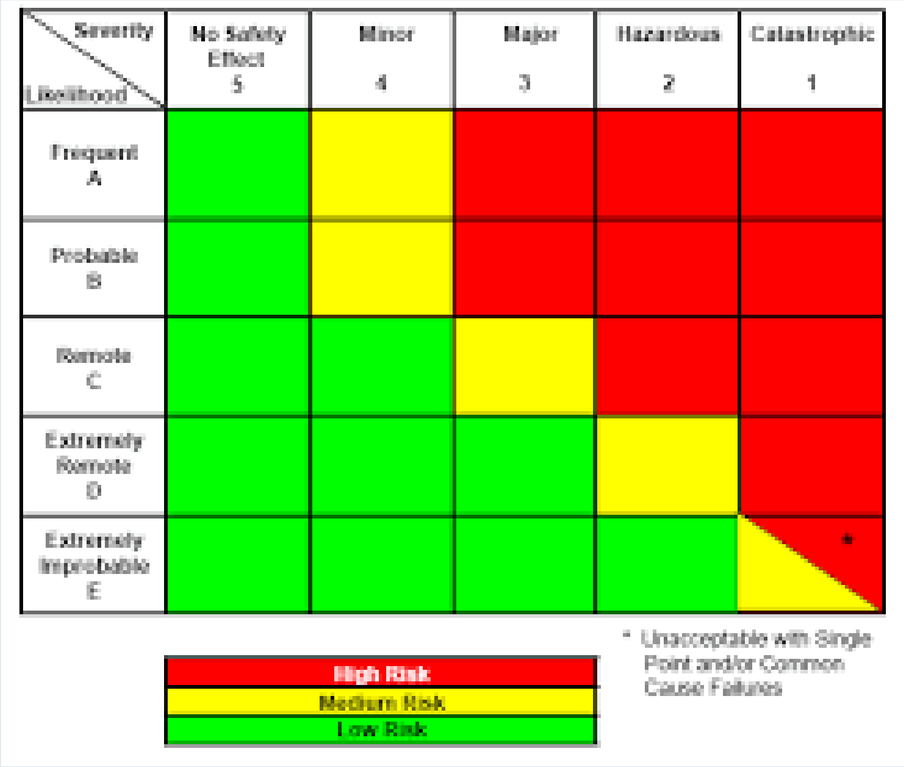
For our SAFETY and that of EVERYONE: THAT IT BE AS LITTLE AS POSSIBLE !!

…… with them we must generate a **SAFETY SPACE** that allows us to **NAVIGATE THE PRACTICAL DRIFT.**

That is where **WE MUST OPERATE**, it is the strip of **SAFE OPERATION**, it is an area that we can paint green – synonymous with **NORMAL** and **SAFE OPERATION**.

How do we define OPERATIONAL SAFETY RISK?

It is the evaluation of the CONSEQUENCES of a HAZARD, expressed in terms of PROBABILITY and SEVERITY ,taking .



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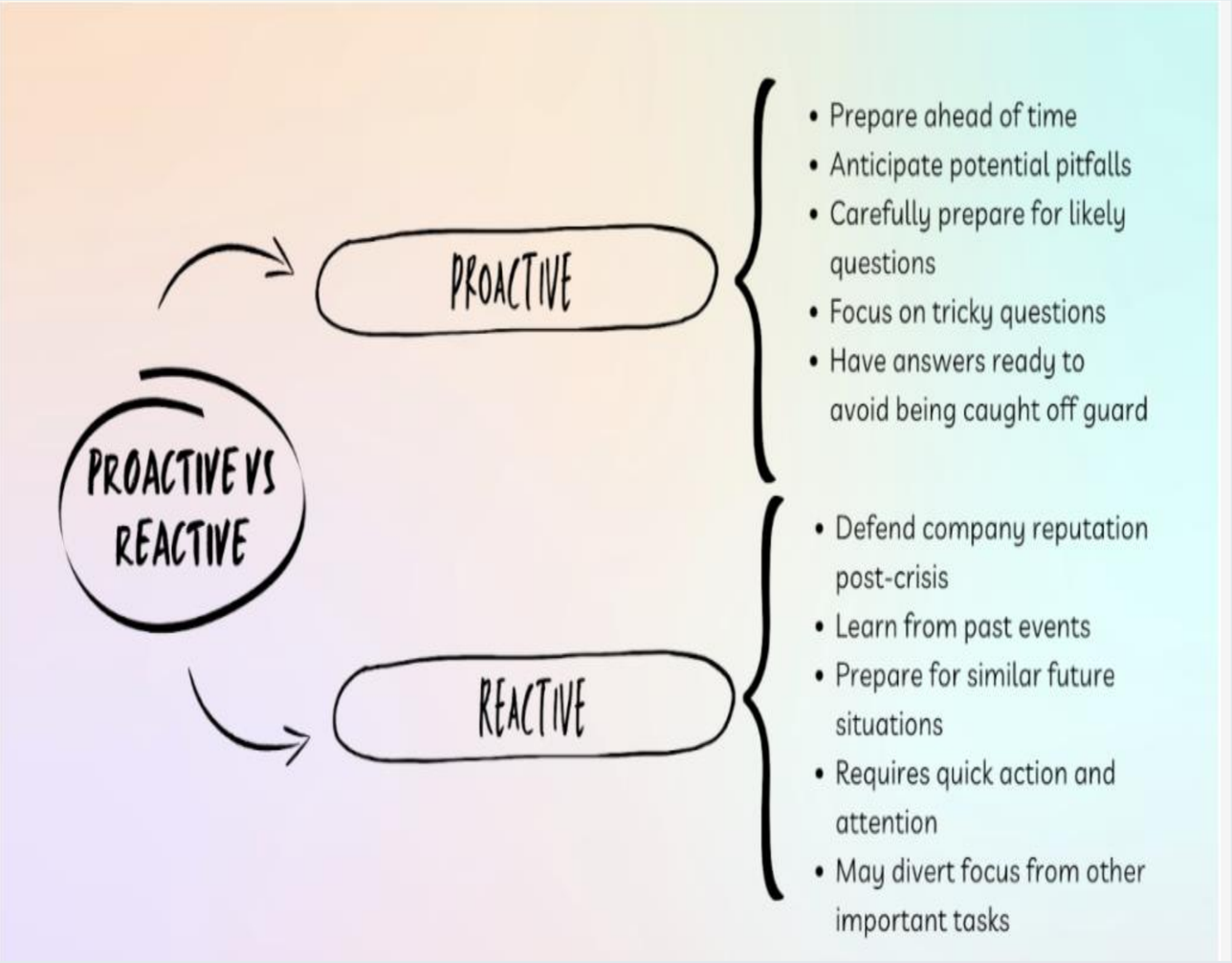
With our actions, with our operation, we will be able to implement RESPONSES to NAVIGATE THE PRACTICAL DRIFT **Those responses/actions are:**

REACTIVE

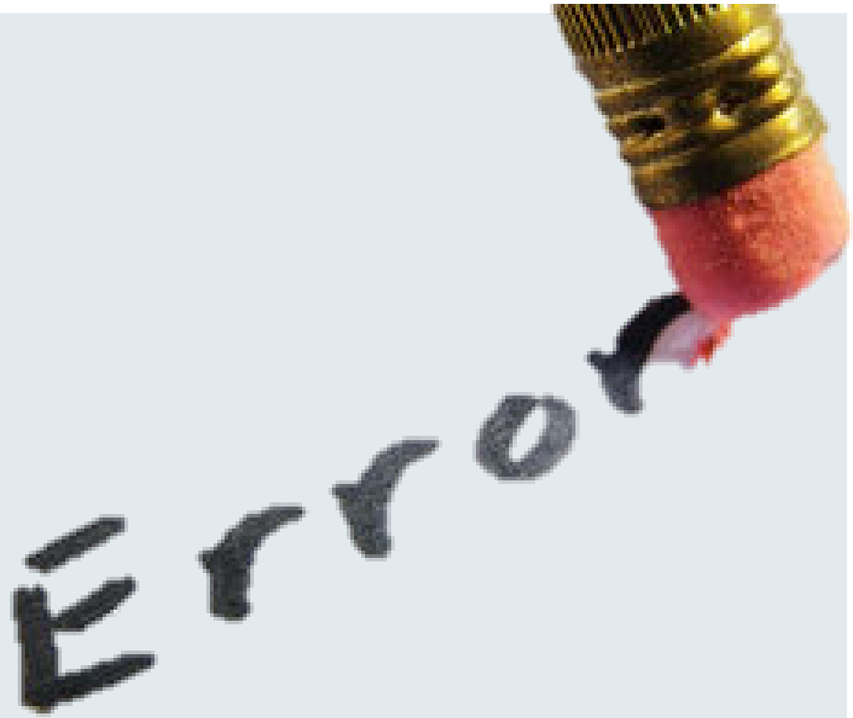
PROACTIVE

PREDICTIVE



REACTIVE RESPONSES:

with them WE CORRECT, SOLVE, AMEND…….



But....the incident/accident has already

happened. There could have been damage.

It works but it is NOT the best !!!!!

PROACTIVE RESPONSES:

Capture information on current events through permanent analysis of operations.

Examples: - **Surveys**

- **Audits**

They are more efficient and bring us closer to an **ACCEPTABLE LEVEL of OPERATIONAL SAFETY.**

PREDICTIVE RESPONSES:

They capture information about the performance of the operation/system in REAL TIME = at the time the operation is performed.

They are systems of direct observation of the same operation, while it is being carried out.

They are more efficient and will allow us an ACCEPTABLE LEVEL of OPERATIONAL SAFETY.

With the correct implementation of « **NAVIGATION AIDS**:

REACTIVE + PROACTIVE + PREDICTIVE We must be in that

«GREEN STRIPE«creating and ensuring a **SAFETY SPACE**!!!

Security is not given by definition, it is not generated spontaneously.

We must be committed to:

- DEVELOP
- IMPLEMENT
- MAINTAIN
- CONSTANTLY IMPROVE – concept of continuous improvement in safety

To ensure that the flight is carried out with its highest performance, complying with the Laws and regulations in force.

With **OUR ACTIONS**, training, situational awareness, adequate information, flight preparation, adequate technology and compliance with regulations we will create that **SAFETY SPACE**.






All this will also create a **OPERATIONAL SAFETY CULTURE!**

VOLTAIRE – Francois Marie Arouet – celebrated French writer, historian, philosopher and lawyer (1694 – 1778) said:

ACCIDENTS DO NOT EXIST!

….. They are the logical **CONSEQUENCE of CAUSES** that we did not know how to see, that we did not know how to control and correct.

THE CAUSES AND CONSEQUENCES OF OPERATIONAL ERRORS ARE NOT LINEAR IN THEIR MAGNITUDE !!

In Santo Domingo, an unmanned vehicle broke a window and left the crew member with minor injuries.

DRONE COLLIDED WITH NAVY HELICOPTER

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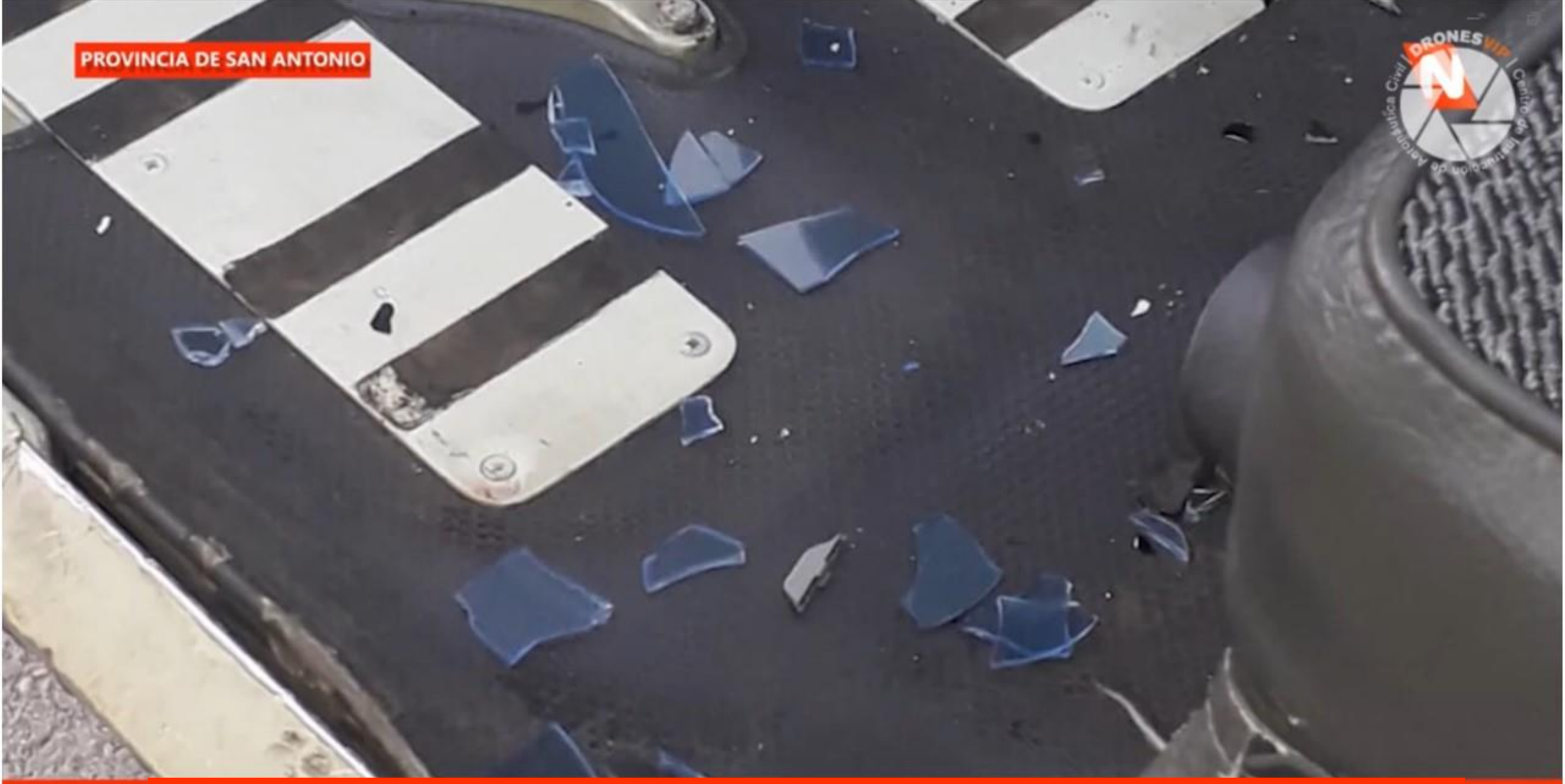

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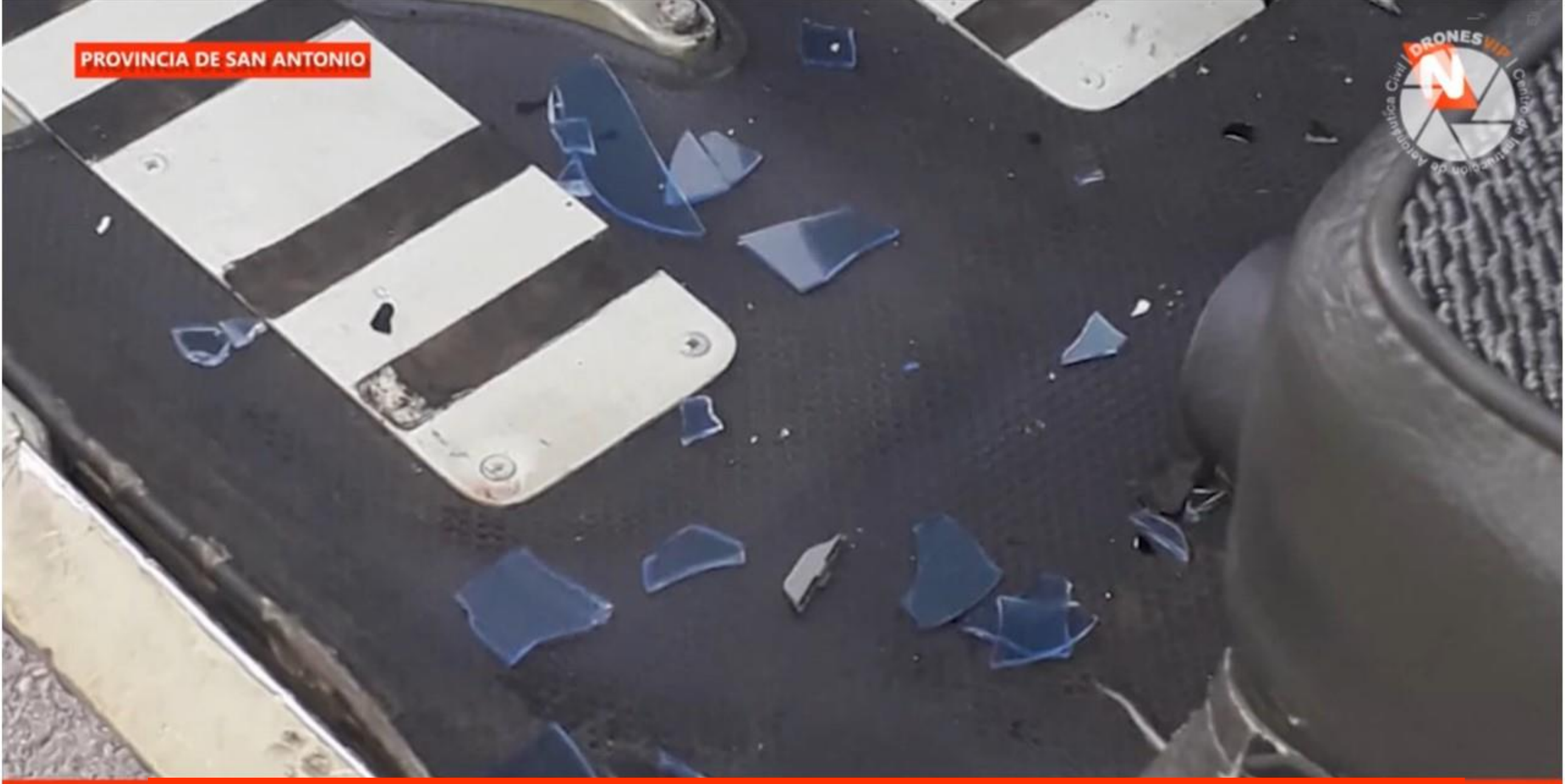

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POSSIBLE CONFUSIONS !!

- Confusing RISK and DANGER
- Confusing both with a safety deficiency

Describe the danger as one of its possible consequences.

The real nature of the danger is hidden The ROOT CAUSE of the danger is hidden


aeromaquina
A PLANE COLLIDED WITH A DRONE

RISK MANAGEMENT!!

What is risk management ??

1º.- ANALYSIS

2º.- MITIGATION

3º.- ELIMINATION

THANKS

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