

# Civil Aviation Authority of New Zealand

## Flying The Now A Human Performance Challenge?

Matt Harris – Safety Investigator

# Healthy Paranoia



**PARANOIA**

Just a heightened state of awareness

# Professional Unease







Mindfulness

# Practiced Mistrust

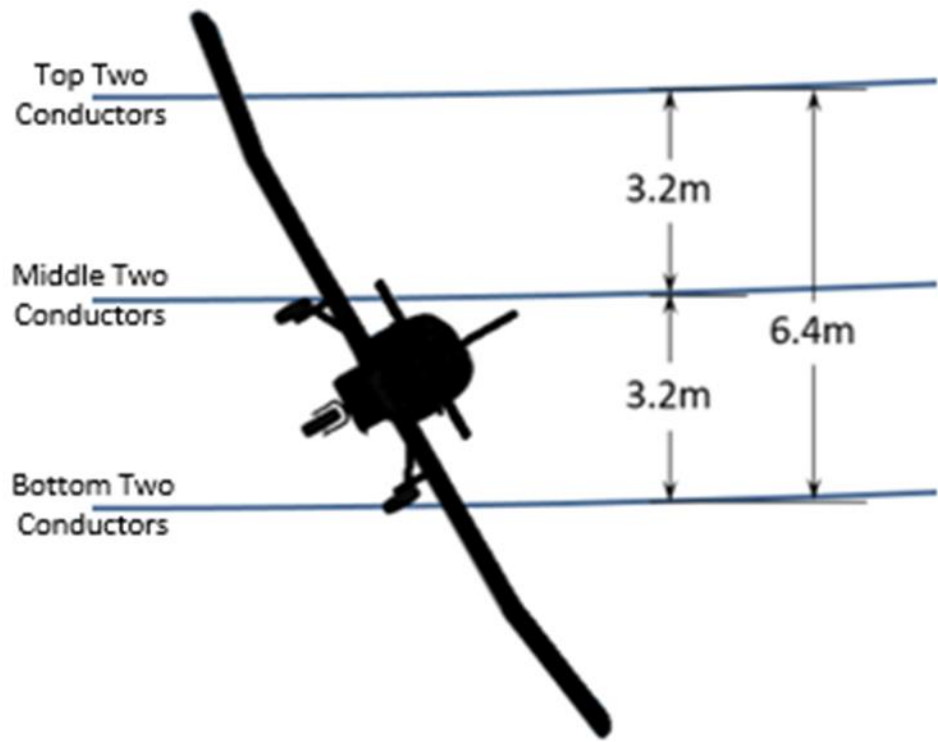
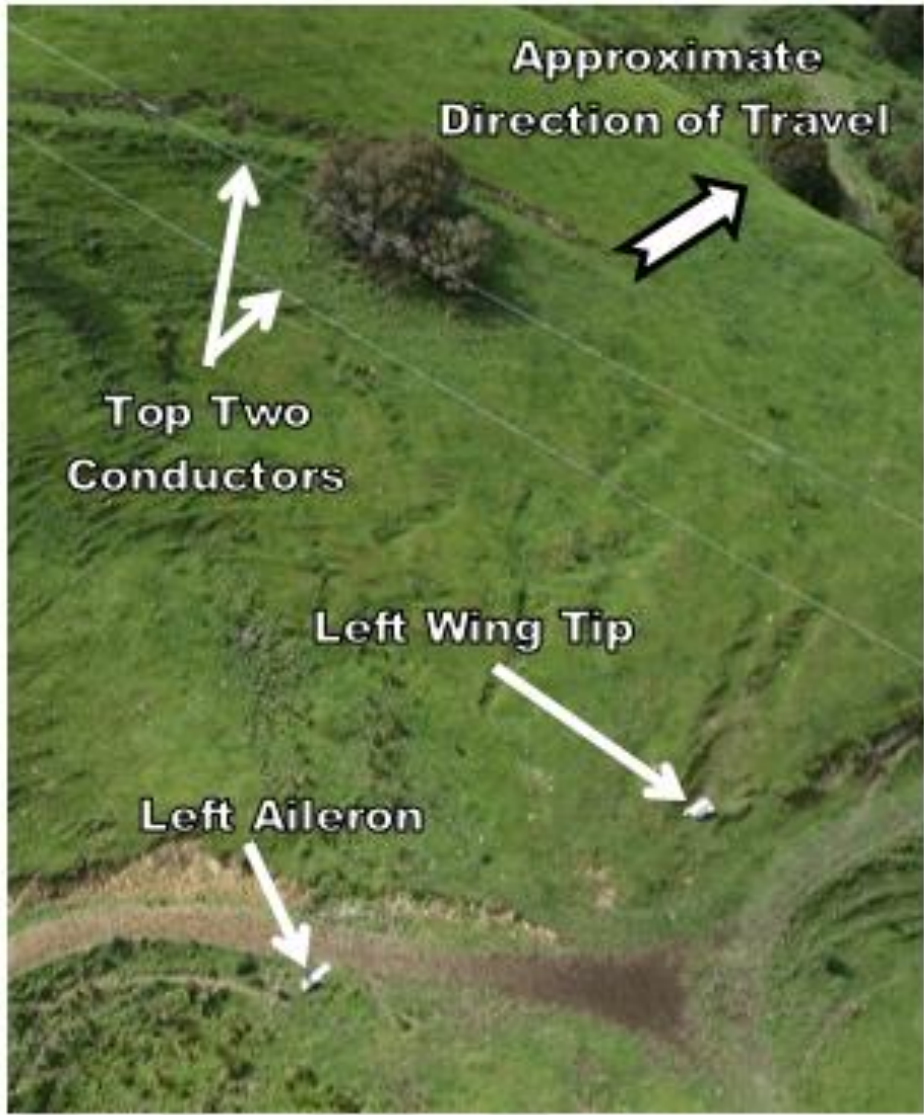


THE AMERICAN ASSOCIATION OF  
PATRIOTS  
presents



**How to Talk to  
Your Cat About  
Gun Safety**







Australian Government  
Australian Transport Safety Bureau



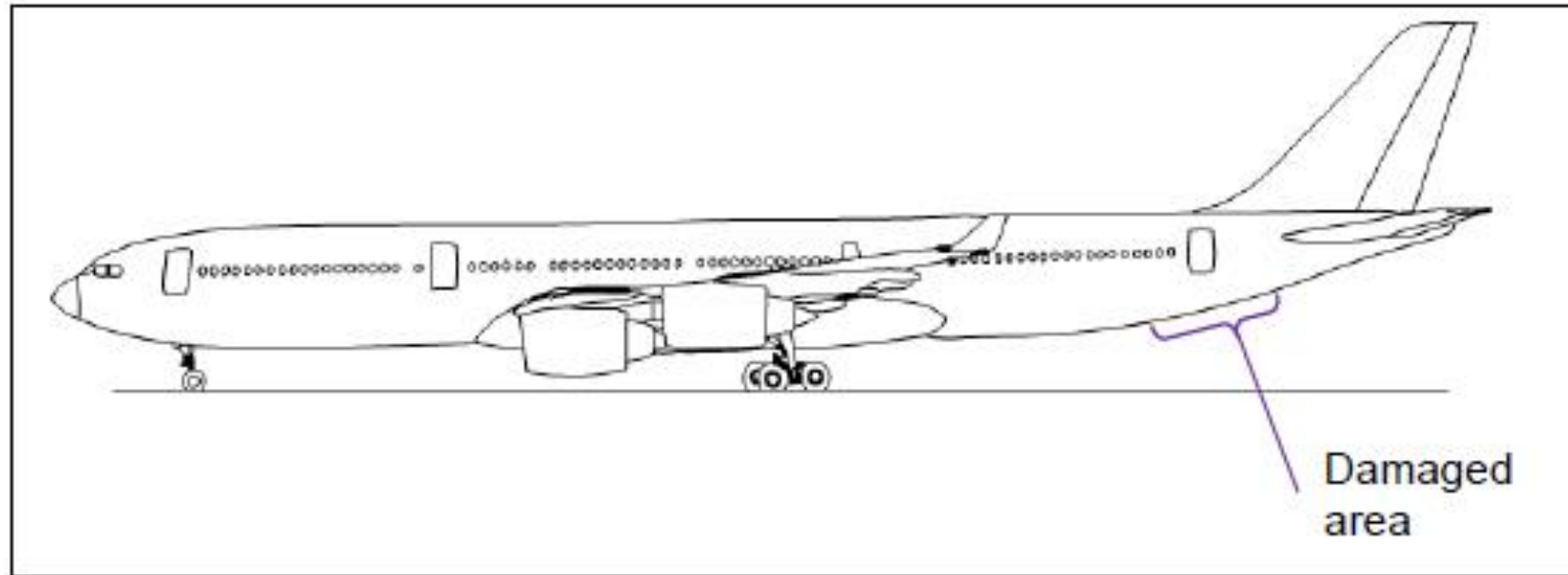
ATSB TRANSPORT SAFETY REPORT  
Aviation Research and Analysis - AR-2011-028

Avoidable Accidents No. 2

# Wirestrikes involving known wires: A manageable aerial agriculture hazard



**Figure 1: Location of damage**



**Figure 2: Skin abrasion**







*“the pilot failed to perceive the visual stimuli,  
experiencing inattention blindness”*

*“inability of the flight crew to determine  
when parameters were inappropriate”*

*“not detected by the flight crew  
until well into the take-off run, if at all”*

*“the pilot did not recognise that the aircraft  
was too low to complete the manoeuvre”*



# Situational Awareness

Appreciating all you need to know about what is going on, relating to the task at hand.

Or,

What?, So What? and What Next?

Long term memory structures  
(mental models)

+

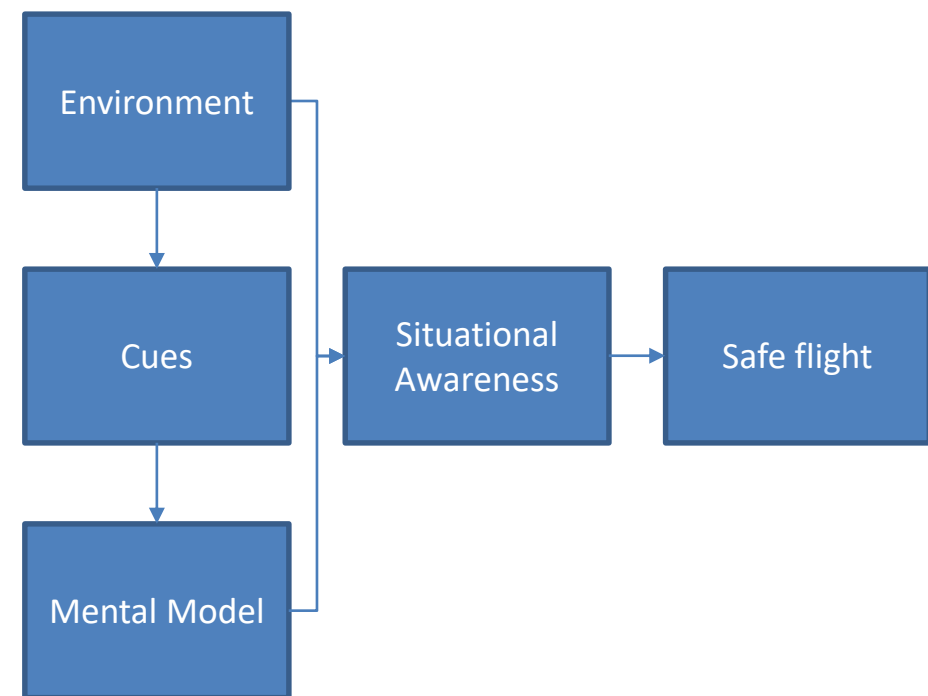
Comparison to the environment

=

Understanding of the current situation.

*Sensory channels* (visual, auditory, etc.)  
detect changes in the environment.

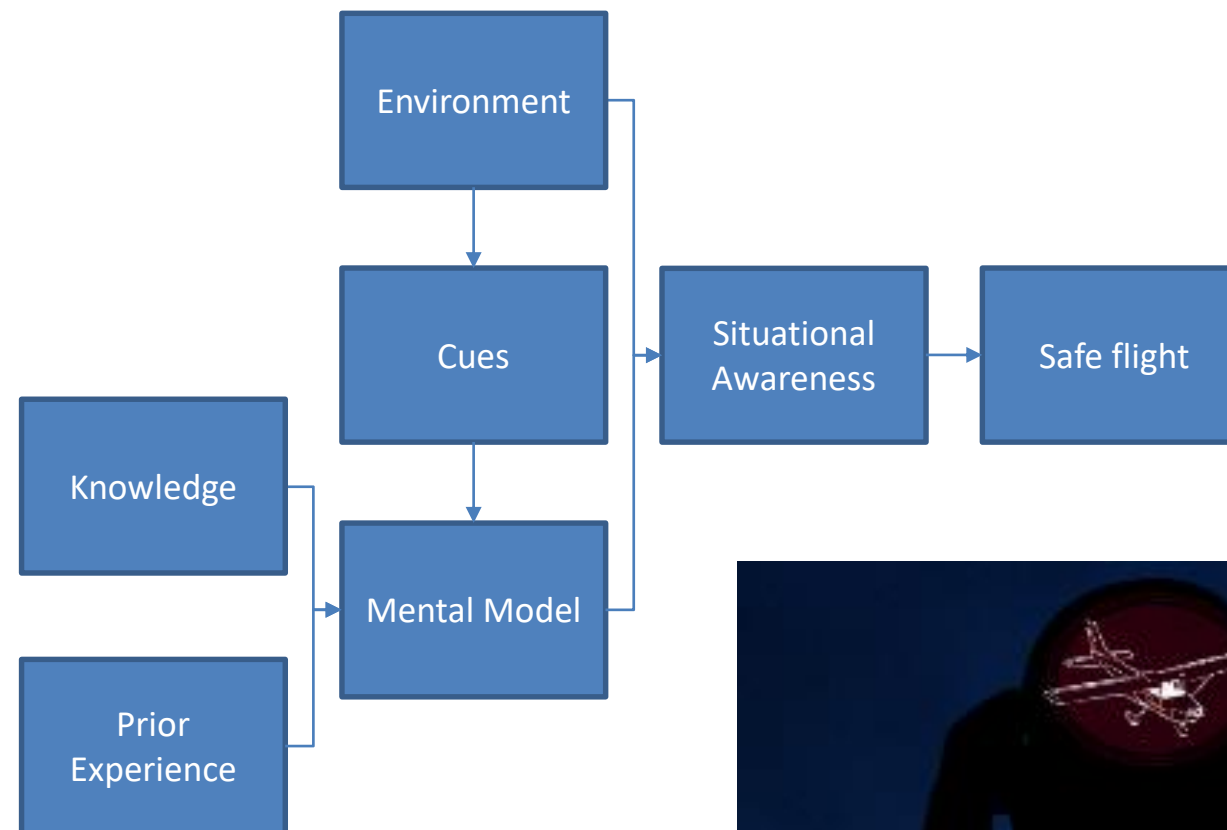
*Attentional processes* select, organise and  
interpret the data from the senses.



# Mental Models

Mental models are representations of the world, based on the Pilot's:

- Knowledge
- Experience
- Ability to Sense and Perceive Cues











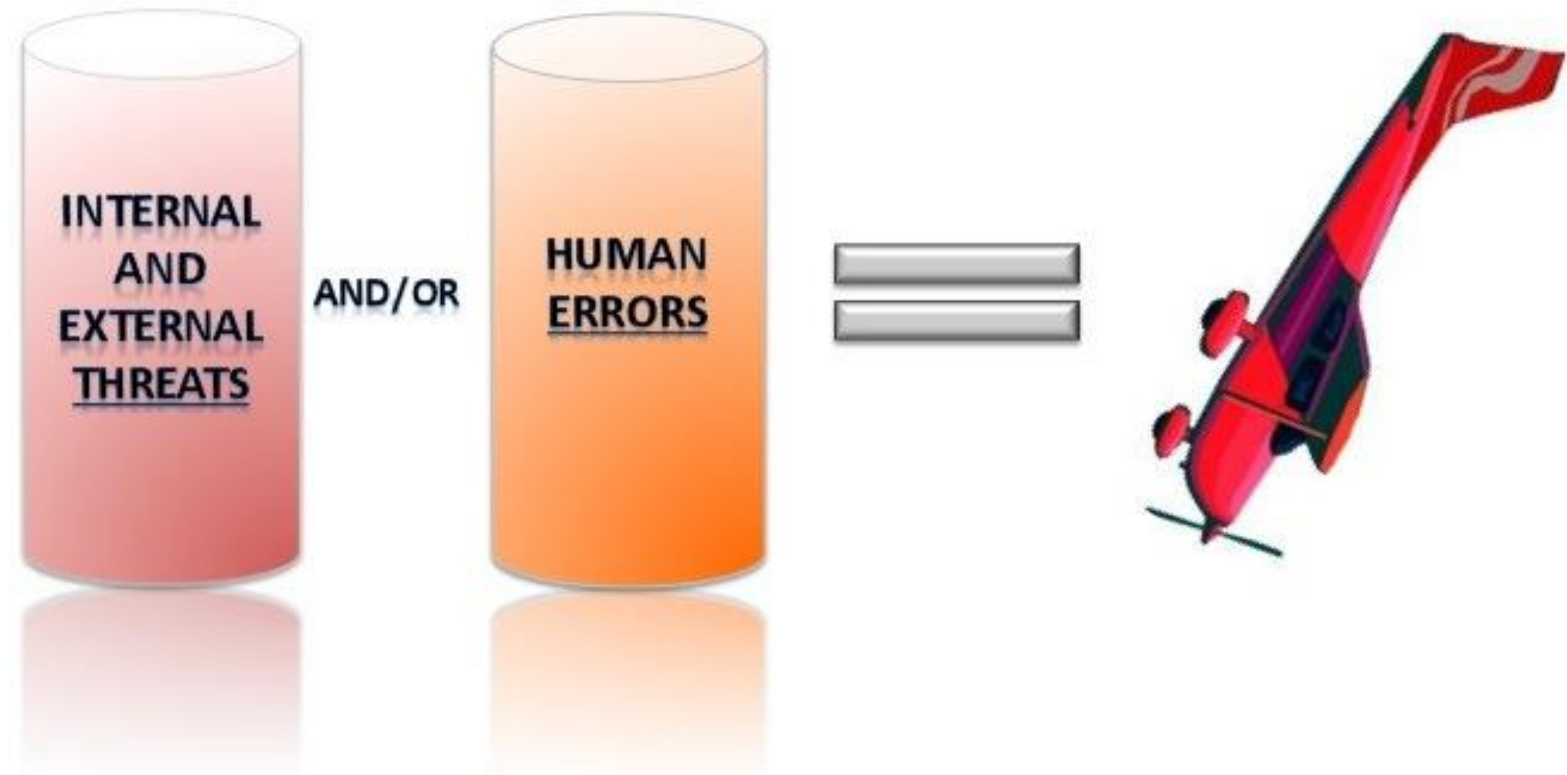








# MANAGEMENT OF THREATS AND ERRORS CAN AVOID AN UNDESIRABLE AIRCRAFT STATE



## ***Threat:***

Events or errors that:

- occur outside the influence of the flight crew
- increase operational complexity
- require crew attention and management

## ***Error:***

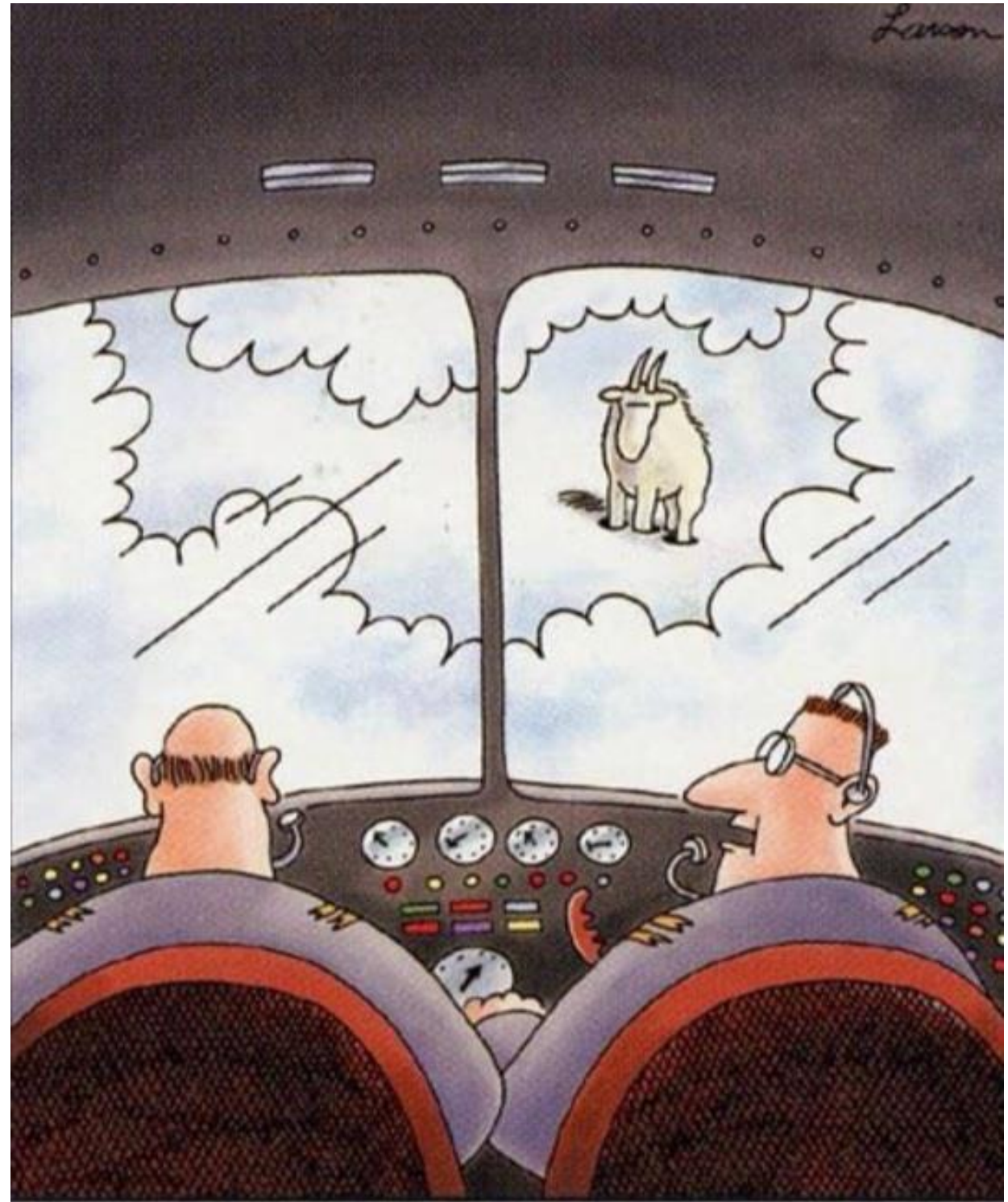
Flight crew actions or inactions that:

- lead to a deviation from crew/organisational intentions or expectations
- reduce safety margins
- increase the probability of adverse operational events





What does it truly  
mean to be  
flying in the now?



"Say ... what's a mountain goat doing  
way up here in a cloud bank?"