



VIRGINIA FLIGHT SCHOOL SAFETY ARTICLE – NO 02/08

AVIATION DECISION MAKING (ADM)

Consider the following quote :

“It is a very human reaction, when faced with a tough choice, to delay making that choice. Unfortunately in aviation, the longer we postpone, the fewer genuine opportunities remain available”

In flying the pilot is faced with a myriad of decision that have to be made – mostly with very little time to make the desired choice. Understanding the process of decision making in aviation will enhance your safety integrity as a pilot.

DEFINITION OF DECISION MAKING

ADM is reaching a *correct judgment* for a specific situation when there is interaction between man, machine and the environment. The *correct judgment* will result in the *correct plan* being formulated (correct decision) to reach a desired result in the interests of flight safety.

PRINCIPLES OF DECISION MAKING.

Arousal. Arousal is the reaction to a threat or sudden surprise and is accompanied by an adrenalin rush. Under arousal thinking becomes more rigid with a tendency to stereotype decision making. A pilot normally has to make a decision under a state of increased arousal, in a stress situation and when natural human defenses are lowered.

REASONS FOR POOR DECISION MAKING

- Pilots are generally more adventurous and independent MACHO types.
- Often pilots dismiss authority and rules – accident stats are proof.
- Operating parameters of aircraft are all too often poorly understood, appreciated, respected or simply ignored.
- Aircraft handling characteristics and pilot proficiency can vary widely with different flight conditions.
- Pilots too often do not readily recognise or respect the limits of their own personal safety proficiency envelope.
- Experience and often “respected” pilots too often influence less experienced pilots to dismiss or confuse important technical, configuration and flight parameter issues essential to flight safety.

As can be seen from the list on page 1, effective decision making in flying, as with everything else in flying, starts with having the correct attitude – responding maturely, professionally and within your limits to any given situation.

RISK MANGEMENT

Effective decision making has as it's basis risk management.

How this works is briefly outlined below :

- A decision is based on risk evaluation – the higher the risk the greater the chance of an undesirable outcome.
- All too often in aviation we subconsciously tend to high risk behaviour and get away with no dire consequences and as a result we perceive less danger .
- Eventually we are fooled into believing there is no danger!
- Mental programming determines that repeated actions with no adverse consequences (“successfully done”) is viewed as a safe activity – a totally false sense of security!

BASICS FOR EFFECTIVE DECISION MAKING

Before we are able to make effective decision we have to ensure that we are in the best physiological and psychological condition. Use the following acronym to check yourself :

- I - Illness. Are you suffering from any illness that could impair your flying skills?
- M = Medication. Are you taking medication that could adversely affect your flying ability?
- S = Stress. Under undue negative stress – don't fly!
- A = Alcohol & Drugs. Alcohol, drugs and flying **DO NOT MIX!**
- F = Fatigue. Sufficient rest? Cumulative fatigue?
- E = Emotional/Eating. Don't fly in an emotional state. Proper sustenance is essential for effective human functioning.

Another acronym :

- P = Pilot. What shape are you really in? IMSAFE check.
- A = Aircraft. Correct aircraft for task? Proficient on type? Fully au fait with the aircraft?
- V = Vironment (environment). Weather conditions at departure, en route, destination?
Alternates?
- E = External pressure. Under pressure form higher up? “Press on itiss?” Leave yourself well considered alternate options.

HAVE A PLAN

Thorough pre planning for your flight will greatly reduce of encountering unforeseen situations and equip you well to make effective decisions should they arise :

- ENVIRONMENT – weather, terrain, light levels, etc.
- PILOT – proficiency, experience, physiological factors, etc.
- AIRCRAFT – airworthiness, fuel, performance, controllability, etc.
- MISSION – type of flight, urgency, etc.

This simply translates to :

- Do I have the experience to safely execute this task?
- Are the capabilities and characteristics of the aircraft questionable under the conditions – or don't you know?
- Have you been cautioned against flying in these conditions?
- Do you know that you don't know?

A final acronym in the decision making process :

- D – Detect the fact that change has occurred.
- E – Estimate the need to counter or react to the change.
- C – Choose a desirable outcome.
- I – Identify actions that will control the change.
- D – Do the necessary action to adapt to the change.
- E – Evaluate your actions.

Be well equipped to make effective decisions and avoid this :

