



PRNFC Safety Meeting

July 2020

Aeronautical Decision Making

- The continuous process of
 - Recognizing changes to any factor related to flight
 - Determining the desired end result
 - Determining the appropriate path to the result
 - Applying the action
 - Analyzing the result
- Factors affecting your ability to recognize and react
 - Attitude
 - Fatigue
 - Stress

Hazardous Attitudes

- ▶ 1. Anti-authority
 - Follow the rules, they're there for a reason
- ▶ 2. Resignation
 - I can make a difference
- ▶ 3. Invulnerability
 - It could happen to me
- ▶ 4. Impulsivity
 - Think before acting
- ▶ 5. Macho-ism
 - Taking chances is foolish

Determine the hazardous attitude

- ▶ Entering the pattern at NHK when suddenly tower switches the active runway. Distracted by the change you forget the checklist. On short final, you are low and descending quickly toward the arresting gear. Turns out your forgot the flaps.

1. Nothing will happen, you've landed without flaps before
2. Someone is watching from the ground, you think this approach will impress them
3. Who cares about the checklist anyways, you know how to fly
4. You quickly pull full flaps
5. You made it this far through the flight but it's up to the wind now

1. Invulnerability
2. Macho-ism
3. Anti-authority
4. Impulsivity
5. Resignation

- ▶ What is an appropriate way to respond?

Fatigue

- ▶ Fatigue continues to be one of the most treacherous hazards to flight safety, as it may not be apparent to a pilot until serious errors are made.¹
- ▶ Acute fatigue
 - Tiredness after long periods of strain
- ▶ Chronic fatigue
 - Repeated incidences of acute fatigue without enough recovery time
- ▶ Coordination and alertness decrease with increased fatigue

¹ AIM chapter 8, section 1

Stress

- ▶ Stress is a body's nonspecific response to a demand placed on it.
- ▶ Some stress is expected and can even improve performance
- ▶ Too much stress can occupy thoughts, decreasing alertness
- ▶ Stress can build up over time and its effects can be subtle.
- ▶ Pay attention to your emotions, physical being, environment, and behavior, recognizing changes and acting on them before they develop into a greater issue
- ▶ AC 60-22 has a more information on stress, recognizing it, and discusses managing stress

Risk Assessment Guide

		Risk Assessment		
Pilot		Date		
Route		to		
	Low - 1	Medium - 2	High - 3	Value
How do you feel?	Great	Slightly off	Ill	1
Sleep	≥ 8 hrs	6-8 hrs	< 6 hrs	2
Weather	Clear	Few clouds, mid level ceiling	Stormy, low ceilings	2
How is the day going?	Great, no issue	Few issues	Lot of issues	2
Time available for flying	All morning/afternoon/evening	Several hours	1-2 hours	2
Currency	Flown within last week	Flown within 1 month	Flown within 90 days	3
Pre-flight planning	Full Wx brief, aircraft performance reviewed	Aviation weather check, reviewed checklist	Checked Wx looking outside window, No review of performance	2
Aircraft issues	Clean squawk sheet, few minor issues	Some annoying issues (i.e. GPS unreadable)	Several issues requiring unique process	2
Time of day	Day	-	Night	1
Location of flight	Local	X-Country to familiar location	X - Country to unfamiliar location	1
			Total	18
		Result		
	1-12	Simple flight, Have fun, Stay alert/aware/safe		
	13-22	Exercise caution, Pay attention to issues, be prepared to call it a day if things aren't going well		
	23-30	Stop and think if the flight is really worth it. Consider rescheduling		

PAVE Checklist

▶ Pilot

- Am I ready physically/mentally? Am I current?

▶ Aircraft

- Is the aircraft prepared for flight? Can it achieve the desired performance? Is there enough fuel?

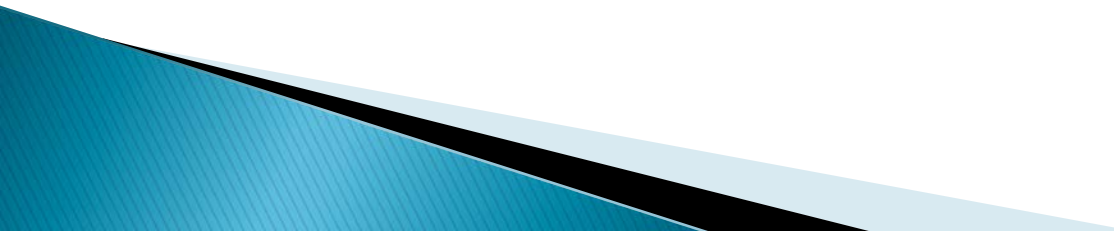
▶ enVironment

- Weather? Familiarity with route and destination?
Terrain? Airspace?

▶ External Factors

- Passengers? Focused on a goal?

DECIDE Model

- ▶ **Detect**
 - Detect a change
 - ▶ **Estimate**
 - Estimate the need to react
 - ▶ **Choose**
 - Choose the desirable outcome
 - ▶ **Identify**
 - Identify actions needed to reach the outcome
 - ▶ **Do**
 - Take the actions
 - ▶ **Evaluate**
 - Evaluate the effect of the action
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Scenario

- ▶ It's a Thursday in the middle of July and you find out your sister, who lives in Roanoke, just gave birth to a boy. You want to pick up your brother in Richmond on Friday to visit your sister and new nephew for a long weekend. The goal is to pick up your brother around 1 pm to make it to Roanoke before the car rental location closes. The aircraft was down for maintenance but the FCF is scheduled for this evening. As you decide what clothes to pack you remember taking a break from the busy work week and hearing a coworker, a meteorological enthusiast, mention a low pressure system moving in this weekend. What do you do in preparing for this flight?