

Airline Pilot Panel

Captain Mike Jesch

Captain John Ringel

Captain Gary Schank

Captain Brian Schiff

Moderated by:

Ourselves



Capt. Mike Jesch



- Boeing 737 Captain
- Airline - 33 years
- TT – 23,000 hrs.
- Master CFI – 34 yrs.
- S.A.F.E.
- FFAST Rep.
- Owns Cessna 182
- KFUL

Capt. John Ringel



- Boeing 767 Captain
- Airline - 31 years
- TT – 33,600 hrs.
- ATP, CFI
- S.A.F.E.
- FFAST Rep.
- Owns Cessna 182
- KLGB

Capt. Gary Schank



- Boeing 737 Captain
- Airline - 27 years
- TT – 20,000 hrs.
- ATP, CFI
- S.A.F.E.
- FFAST Rep.
- Owns Bonanza A-36
- Attorney & musician
- KSNA

Capt. Brian Schiff



- MD-80 Captain
- Airline - 29 years
- TT – 19,800 hrs.
- CFI - 32 years
- S.A.F.E.
- FFAST Rep.
- KCMA

Pilot texting his
wife...



Topics

- Airlines vs. GA
- “There I Was...” Stories
 - Risk & Safety Margins
 - Preflight Planning
 - SOPs
 - CRM



Airlines vs. GA

Accident Summary for Major Segments of US Civil Aviation CY 2013

Segment	Accidents	Fatal Accidents	Fatalities
Part 121 Air Carriers	23	2	9
Part 135 Commuter and On-Demand Carriers	51	12	30
Part 91 General Aviation	1224	222	390
Total US Civil Aviation	1298	236	429

General Aviation Can Be Safer



Regular (Recurrent, CQT) Training

- FAA Wings Program
- Clubs & Organizations
- Hire a flight instructor
- AOPA Air Safety Seminars
- FAA Website online training
 - www.faasafety.gov



- **“WARTS”:** Departure Brief
 - ✓ Weather, Wind
 - ✓ Abnormal Procedures
 - ✓ Runway, (Condition, Length)
 - ✓ Taxi, Terrain, Threats, Trans Alt
 - ✓ SID, Special Procedures
- **“NATS”:** Approach Brief
 - ✓ Notams, ATIS
 - ✓ Approach Chart, Level of Automation
 - Wx, Approach Rwy, Nav aids, Mins, Bugs, Initial approach altitude, Miss Procedures
 - ✓ Treats, Trans Alt, Terrain, Taxi
 - ✓ STAR, Special Procedures

* **Staying Ahead of
the Airplane**

B737 Landing Checklist

Landing

Landing gear	DOWN, 3 green	C&F
Flaps	<u>30</u> , <u>30</u> , green light	C&F
Speedbrake	ARMED, green light	PM
Engine start switches	CONT	PM

Bonanza Landing Checklist

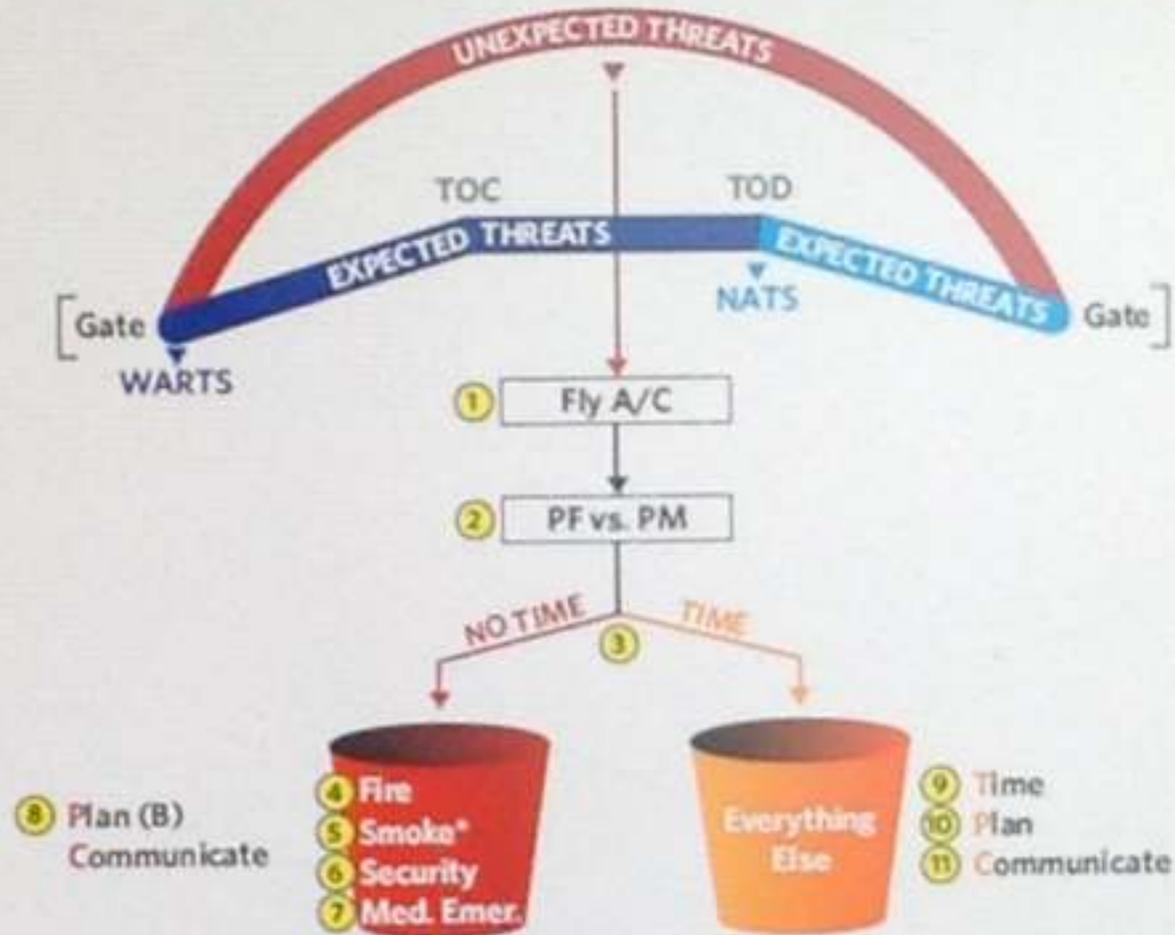
Final

Gear	Down 3 Green
Flaps	30/30 Green
Mixture	Full Rich
Propeller	Full Forward
Landing Lt.	On - Cleared to Land

*Flap settings for landing: 15, 30 or 40,
Flaps 30 is normal*

*Standardization

Threat & Error Management Model



Airline Recurrency

- * Periodic Ground Training
- * Periodic Flight Training
- * Line Checks **Required**
(Every 2 Years)
- * FAA Inspector Rides: Common
and Required for New Captains

WINGS Safety Program,

- * Periodic Ground Training
- * Periodic Flight Training
(Optional)
- * Line Check **Not Required**
(Voluntary or Flight Review)
- * FAA Inspector Rides:
Not Common, Not required

* Recurrent Training

WINGS Program - Similar to Airline Recurrency

* Lightning
Strike
B-737
(March, 2017)



Right engine, outboard side

- *Never* assume that you are going to takeoff;
- *Never* assume that you are going to land;
- *Never* assume that you are going to get there
- *Always* assume that something may go wrong
- *Always* assume that the weather will not be as forecast

*** Staying Ahead of the Airplane:
Assumptions & Non-Assumptions**

“Go-it is”



14:04Z, 02/18	39.428 / -119.769	8,000	260° / 21	0°C	40 / 34
14:05Z, 02/18	39.364 / -119.769	11,400	271° / 64	-3°C	54 / 30

<Lt <Lt/Lt Lt Lt/Md Md Md/Sv Sv Sv/Ex Ex Ex+



33 K
14:20 Z

5 nm

Clear Report

← | →

Intensity	Aircraft Reaction	Reaction Inside Aircraft	Reporting Term-Definition
Light	Turbulence that momentarily causes slight, erratic changes in altitude and/or attitude (pitch, roll, yaw). Report as Light Turbulence or Turbulence that causes slight, rapid and somewhat rhythmic bumpiness without appreciable changes in altitude or attitude. Report as Light Chop .	Occupants may feel a slight strain against belts or shoulder straps. Unsecured objects may be displaced slightly. Food service may be conducted and little or no difficulty is encountered in walking.	Occasional-Less than 1/3 of the time. Intermittent-1/3 to 2/3. Continuous-More than 2/3.
Moderate	Turbulence that is similar to Light Turbulence but of greater intensity. Changes in altitude and/or attitude occur but the aircraft remains in positive control at all times. It usually causes variation in indicated speed. Report as Moderate Turbulence ; or Turbulence that is similar to Light Chop but of greater intensity. It causes rapid bumps or jolts without appreciable change in aircraft or attitude. Report as Moderate Chop .	Occupants feel definite strains against seat belts or shoulder straps. Unsecured objects are dislodged. Food service and walking are difficult.	NOTE 1. Pilots should report location(s), time (UTC), intensity, whether in or near clouds, altitude, type of aircraft and, when applicable, duration of turbulence. 2. Duration may be based on time between two locations or over a single location. All locations should be readily identifiable.
Severe	Turbulence that causes large, abrupt changes in altitude and/or attitude. It usually causes large variations in indicated airspeed. Aircraft may be momentarily out of control. Report as Severe Turbulence .	Occupants are forced violently against seat belts or shoulder straps. Unsecured objects are tossed about. Food service and walking are impossible.	EXAMPLES: a. Over Omaha, 1232Z, Moderate Turbulence, in cloud, Flight Level 310, B707. b. From 50 miles south of Albuquerque to 30 miles north of Phoenix, 1210Z to 1250Z, occasional Moderate Chop, Flight Level 330, DC8.
Extreme	Turbulence in which the aircraft is violently tossed about and is practically impossible to control. It may causes structural damage. Report as Extreme Turbulence .		

High level turbulence (normally above 15 000 feet ASI) not associated with cumuliform cloudiness, including thunderstorms, should be

REMEMBER:

- **FLY THE AIRCRAFT**
- **CANCEL THE WARNING**
- **IDENTIFY THE EMERGENCY**
- **READ THE CHECKLIST**
- **DO NOT HURRY**

***EMERGENCIES**

* Emergencies/Incidents:

- * AE Metro, landing gear, 2/3 green
- * AE Metro, landing gear
- * AE Metro, landing gear
- * AE Metro, *engine failure* on T.O., KSNA
- * AE Metro, *engine failure* on T.O., KLAX
- * AE Metro, aborted T.O., KLAX (no emerg)
- * AE Metro, steering malfunction landing KOXR (no emerg)
- * AE Metro, min. fuel, KLAX (no emerg)
- * DC-9, landing gear (manual gear extension)
- * DC-9, landing gear
- * DC-9, landing gear
- * DC-9, medical emerg., KMCO
- * DC-9, elec. hyd. Pump failure, MCI (with student pilot on OE)
- * DC-9, navigation failure, KDFW
- * DC-9, no flaps, KATL
- * A320, TCAS resolution advisory
- * A320, avionics smoke, KMEM
- * A320, med. emerg.
- * A330, med. emerg. Over northern Canada (over-weight landing)
- * B737, limited flaps, KPHX

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Of these 20 incidents, 16 were declared emergencies.

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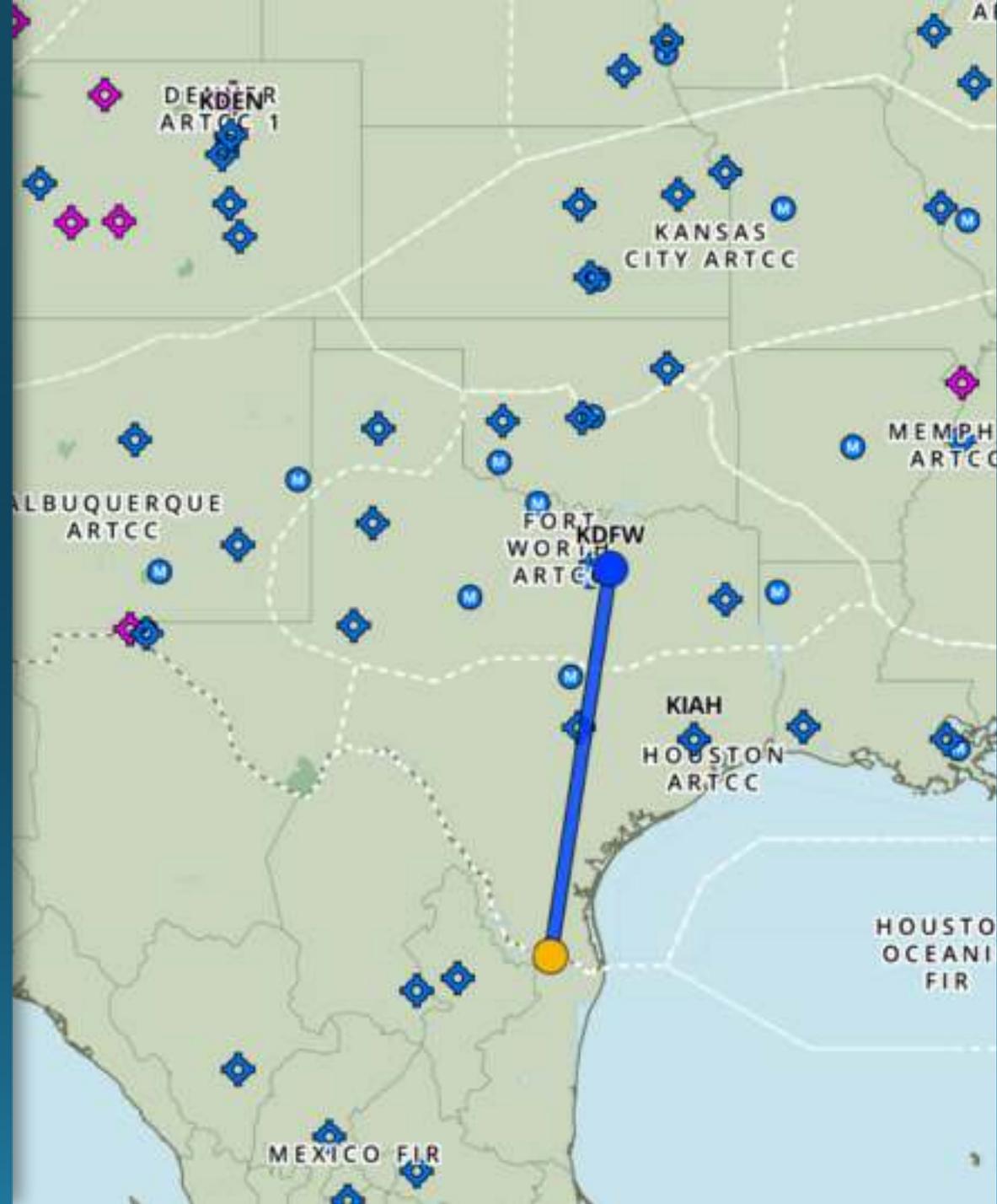
Q: How many of these required follow-up paperwork?

Does Your Tail Tingle?



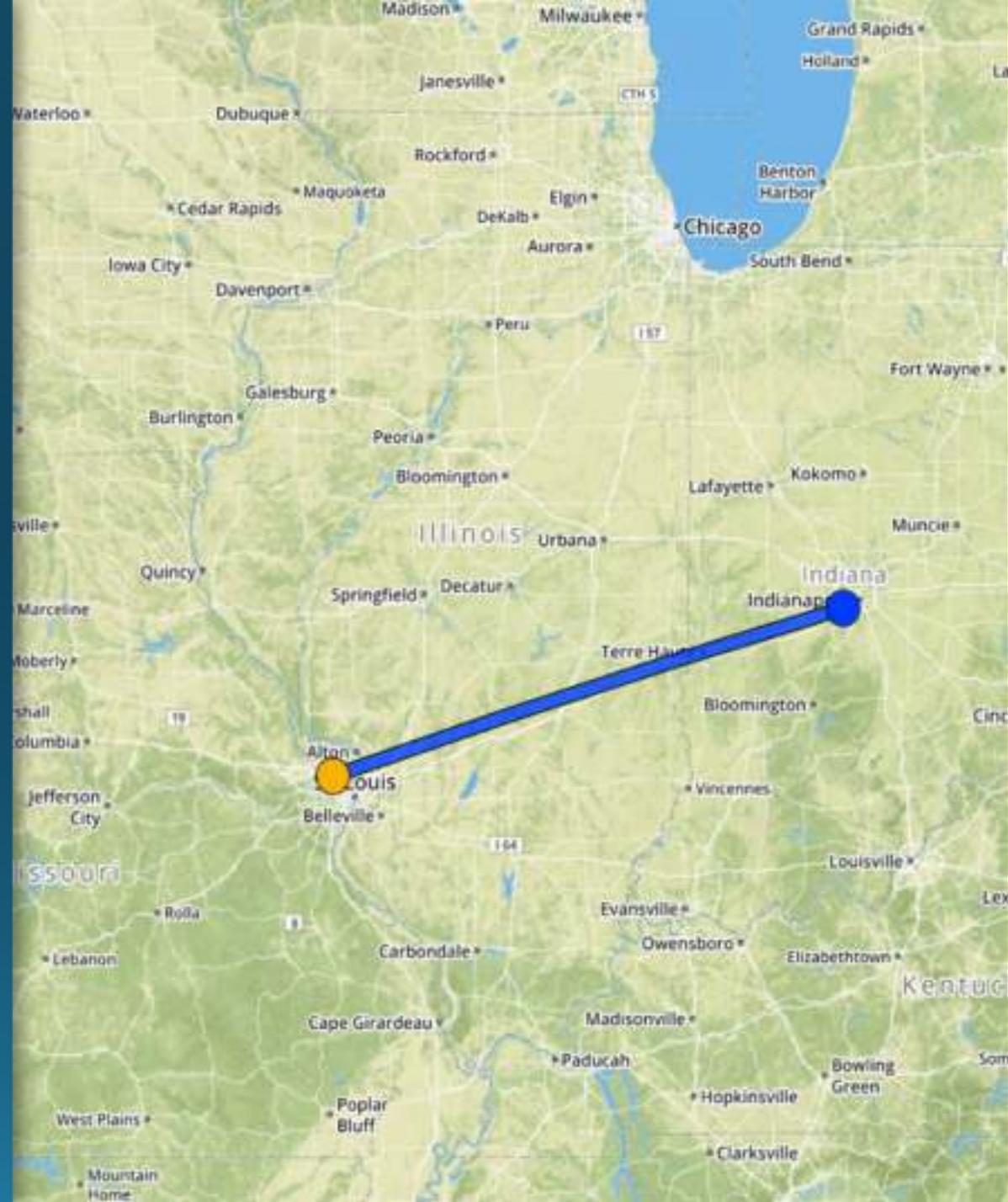
There I Was: MFE - DFW

- MD-80
- 140 Pax
- Delayed due MX
- TSRA in Vicinity
- Icing Conditions
- Burning Odor



There I Was: STL - IND

- MD-80
- Imbedded TS
- Smoke/Fumes
- Emergency Landing
- Evacuation



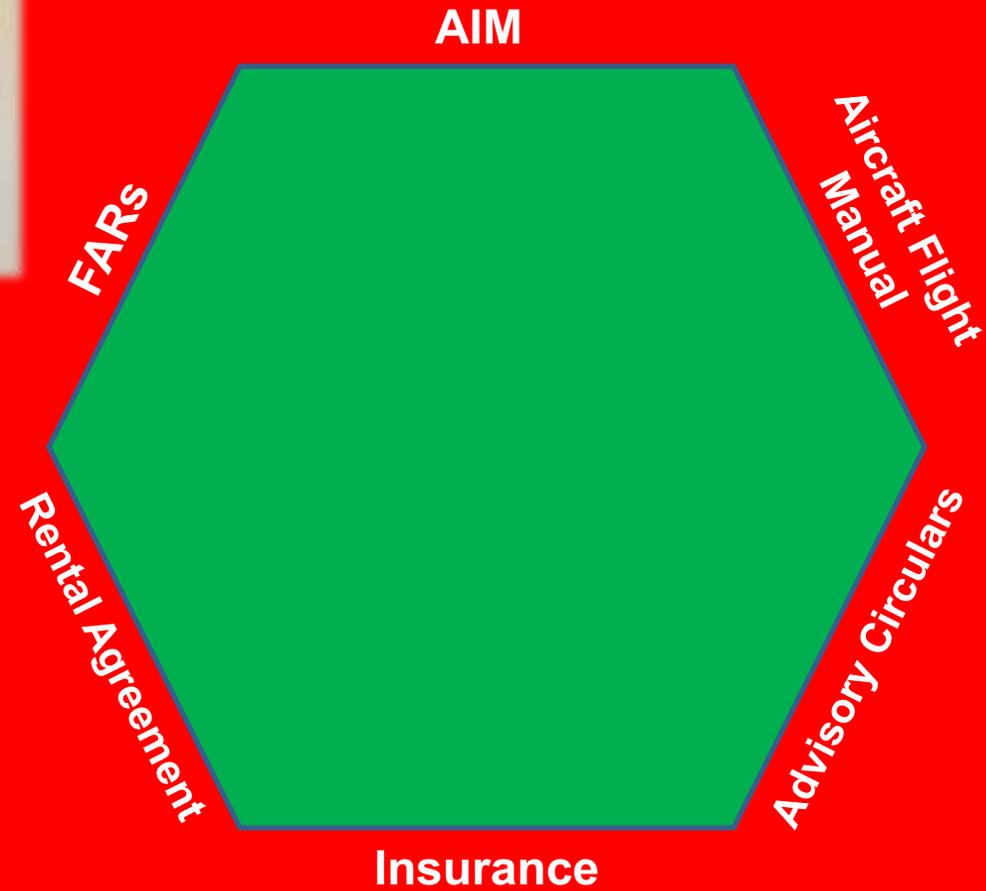
Decision-Making



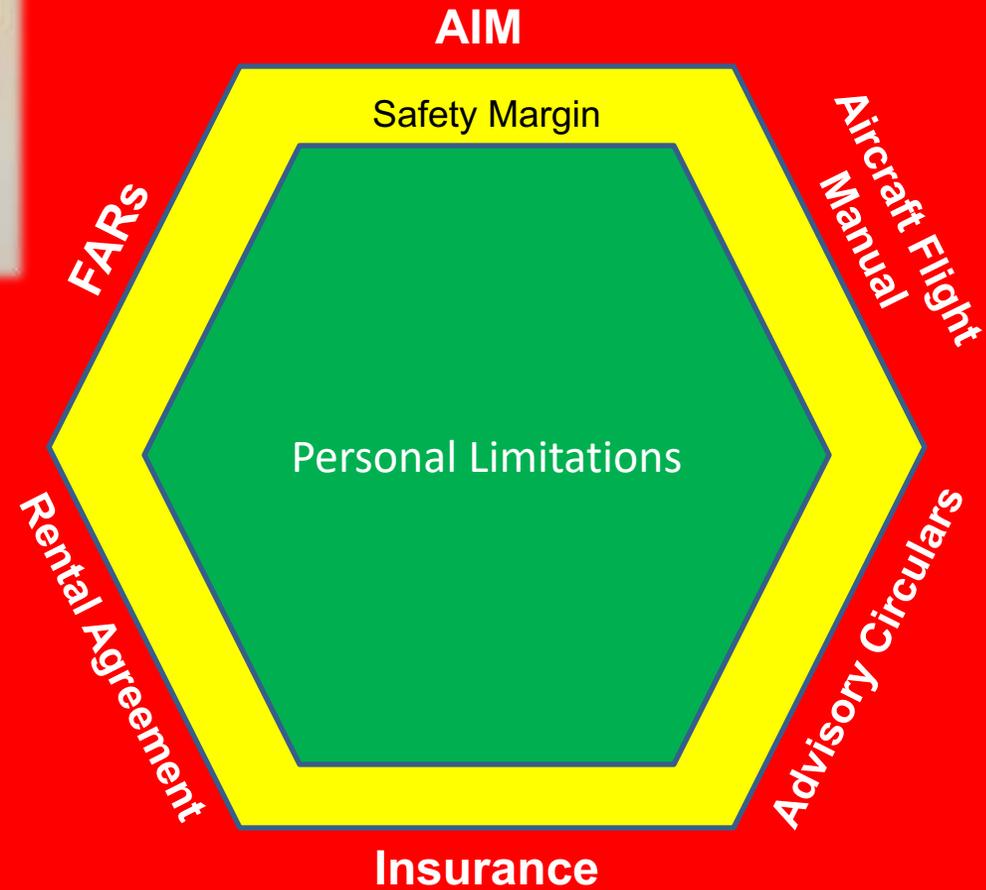
- Avoid “get-there-itis”
- Use these criteria (in this order of priority):
 - Safe
 - Legal
 - Comfortable for passengers



Staying Inside The Envelope



Staying Inside The Envelope



Risk

"I cannot imagine any condition which would cause a ship to founder. I cannot conceive of any vital disaster happening to this vessel."

-- Capt. Edward Smith, *USS Titanic*



Planning

Proper

Preflight

Planning

Prevents

Poor

Performance



Preflight

- Yourself
- Airplane
- Operating Environment
- External Pressures
 - Removed from airline pilot ADM



Preflight

- Pilot
- Aircraft
- enVironment
- External Pressures



PAVE Checklist



Runway Length



§91.103 Preflight action.

Each pilot in command shall become familiar with runway lengths at airports of intended use, and takeoff and landing distance data



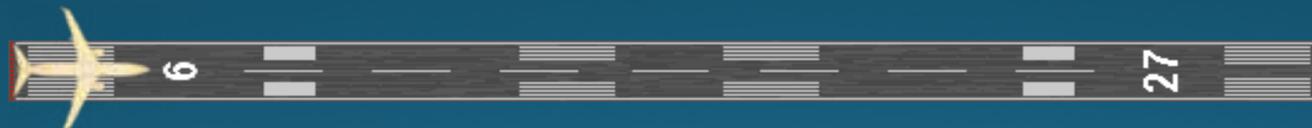
Runway Length



If this much pavement is needed to liftoff...



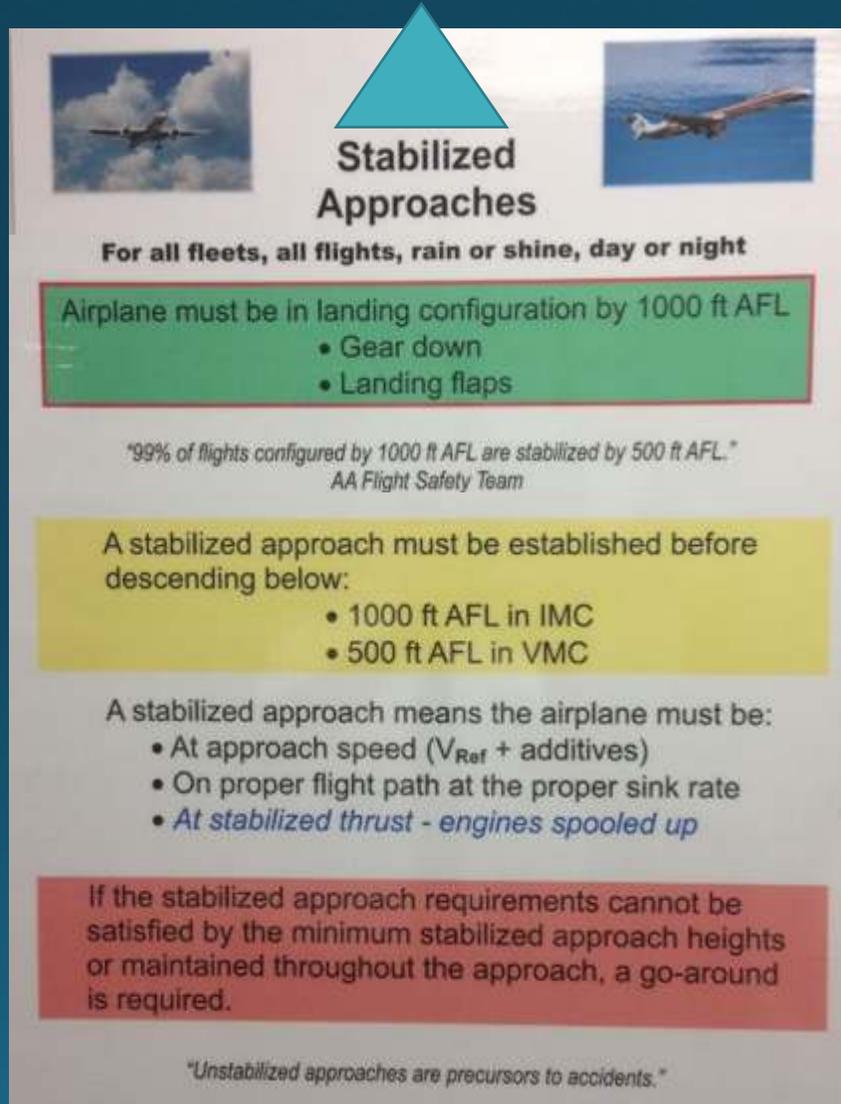
GA pilots are only required to have this much,



Airlines are required to have this much (115%)



Stabilized Approach



Stabilized Approaches

For all fleets, all flights, rain or shine, day or night

Airplane must be in landing configuration by 1000 ft AFL

- Gear down
- Landing flaps

*"99% of flights configured by 1000 ft AFL are stabilized by 500 ft AFL."
AA Flight Safety Team*

A stabilized approach must be established before descending below:

- 1000 ft AFL in IMC
- 500 ft AFL in VMC

A stabilized approach means the airplane must be:

- At approach speed (V_{Ref} + additives)
- On proper flight path at the proper sink rate
- *At stabilized thrust - engines spooled up*

If the stabilized approach requirements cannot be satisfied by the minimum stabilized approach heights or maintained throughout the approach, a go-around is required.

"Unstabilized approaches are precursors to accidents."

- Configure by 1,000' AGL
- Stable by 500' AGL (1,000 VFR)
- If either not met – Go Around!

Policy

Personal Electronic Devices

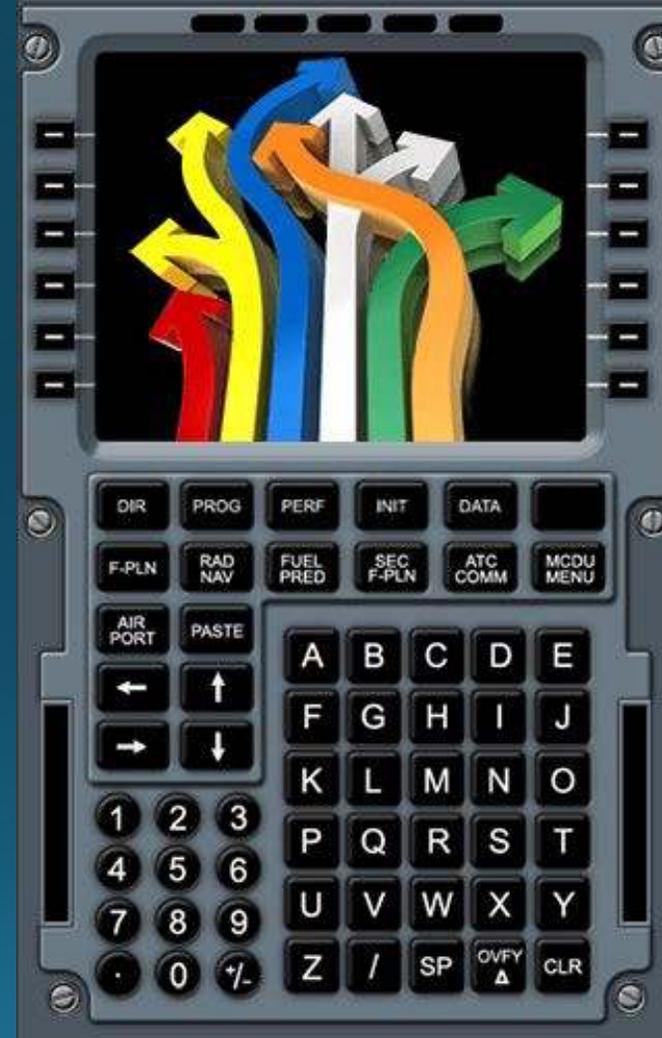
Flight Crewmembers shall not use personal portable electronic devices (PEDs), while performing job-related duties. Flight Crewmembers must ensure their PEDs are turned off prior to the Before Starting Engines Checklist



Policy

Use of FMS During Critical Phases of Flight

FMS programming should be avoided during critical phases of flight. Updating FMS and moving map displays close-in to the landing airport is not required if “heads down” data entry would distract from primary flight duties.



Policy



Conditions Requiring **Emergency** Declaration

The following events are deemed to be emergencies:

- Flight unable to establish definite position
- Flight 20 minutes or more overdue and not heard from at terminal, intermediate station or check point
- Failure, or malfunctioning of an aircraft system which compromises safe operation
- Fire
- Communication or navigation systems significantly impaired

Policy



Conditions Requiring **Emergency** Declaration

The following events are deemed to be emergencies:

- Any circumstance or condition jeopardizing safety of flight requiring deviation from prescribed procedures or minimums in the interest of safety
- Critical shortage of fuel
- Seriously ill passenger requiring in-flight diversion
- Serious passenger misconduct requiring in-flight diversion
- Overweight landings
- Other events deemed emergencies by the Captain



End

Parting Advice

- Acquiesce to your “Tingling Tail” (red flags)
- Two Speeds
- Know Your Next Steps
- Have the Big Picture

