

JOIN OUR PILOT FOCUS GROUP!



- Join the [1800wxbrief.com](https://www.1800wxbrief.com) Pilot Focus Group and help shape the future of Flight Service.
- Focus group members get early insight into upcoming features and provide feedback that directly improves the pilot experience.
- **Scan to sign up—it's quick and easy!**

Weather or Not to Fly

FUTURE FLIGHT SERVICES PROGRAM (FFSP)

FFSP Director of Innovation & Outreach: **Jeff Arnold**

Date: **August 15, 2025**

Bottom Line Up Front (BLUF)

What this presentation WON'T give you...

- **Solicit/Convert pilots from the product or vendor they routinely use: (Foreflight, Garmin, etc.)**

What this presentation WILL give you...

- **Insight on why self-briefing isn't as bad of an idea as it (initially) sounds**
- **How “self-briefing” is just another word for “learning WX”**
- **How you (& your family) can keep from becoming accident statistics**
- **How to be regulatory compliant w/FAR §91.103**
- **Transition tips for pilots starting or learning to self brief**
- **Information about our (free) services, changes to our system, and resources available to you**



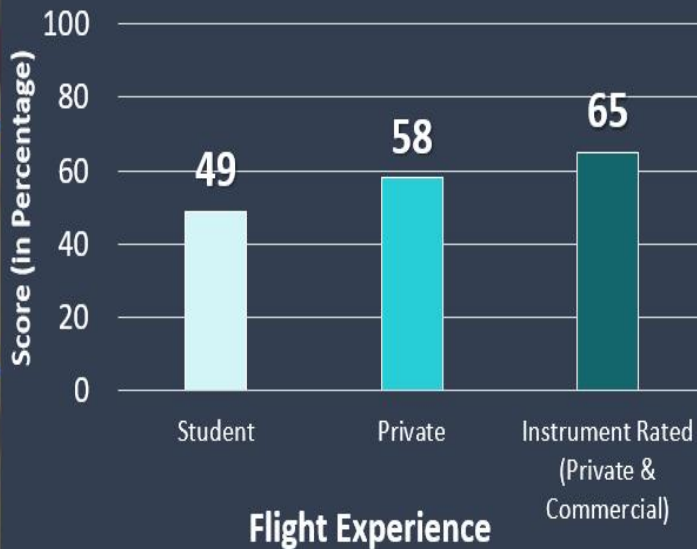
Gaps in Pilot Weather Knowledge

Overall, pilots' scores were low on interpreting IMC weather information.

This includes Surface Charts, Satellite Data, & PIREPs involving IMC weather

Instrument-rated pilots scored the highest.

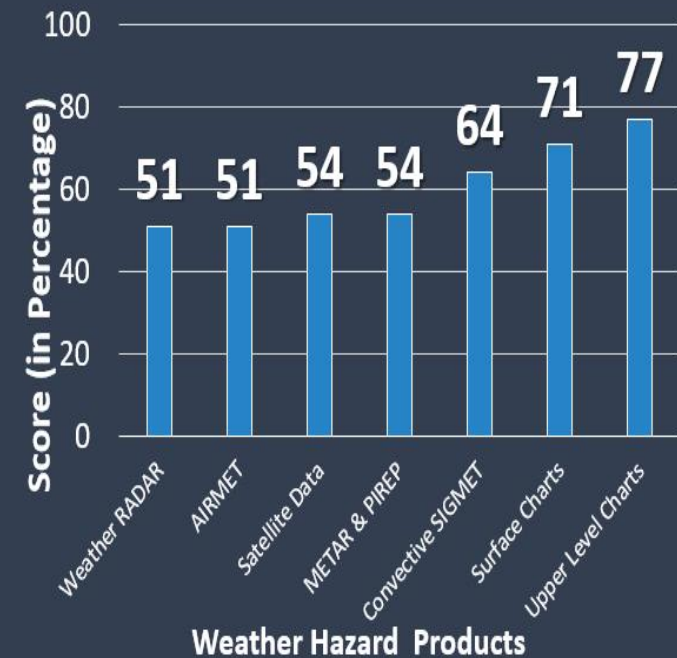
Pilot Performance on IMC and VFR Knowledge and Skills



Pilots scored low on RADAR, AIRMETs, Satellite Data, METARs and PIREPs

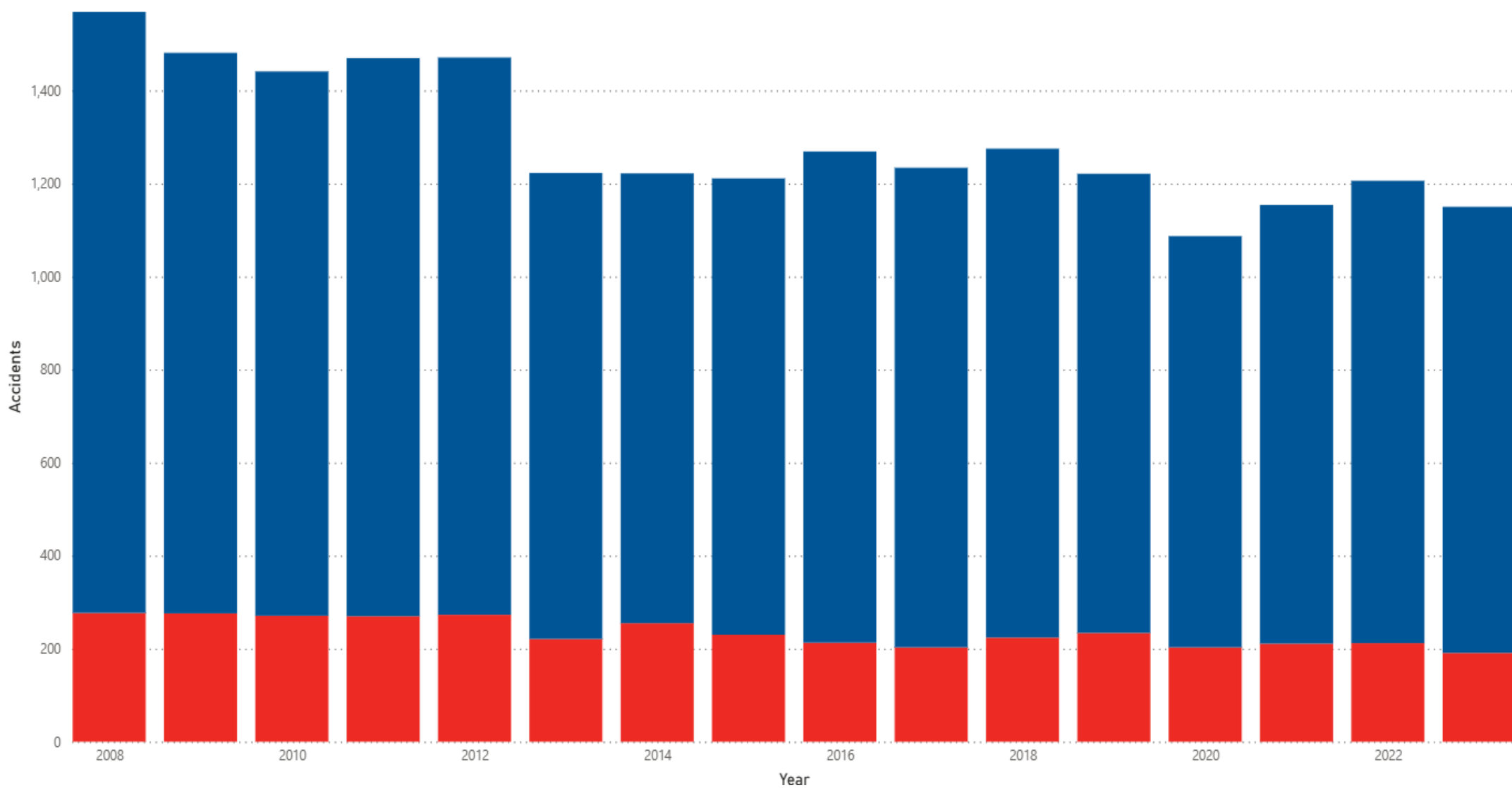
Pilots scored higher on SIGMETs, Surface Charts, and Upper Level Charts

Weather Hazard Product Interpretation



Link to ERAU report: <https://commons.erau.edu/ga-wx-display-interpretation/13/>

Fatal Non-Fatal



20,684
Accidents

3,764
Fatal Accidents

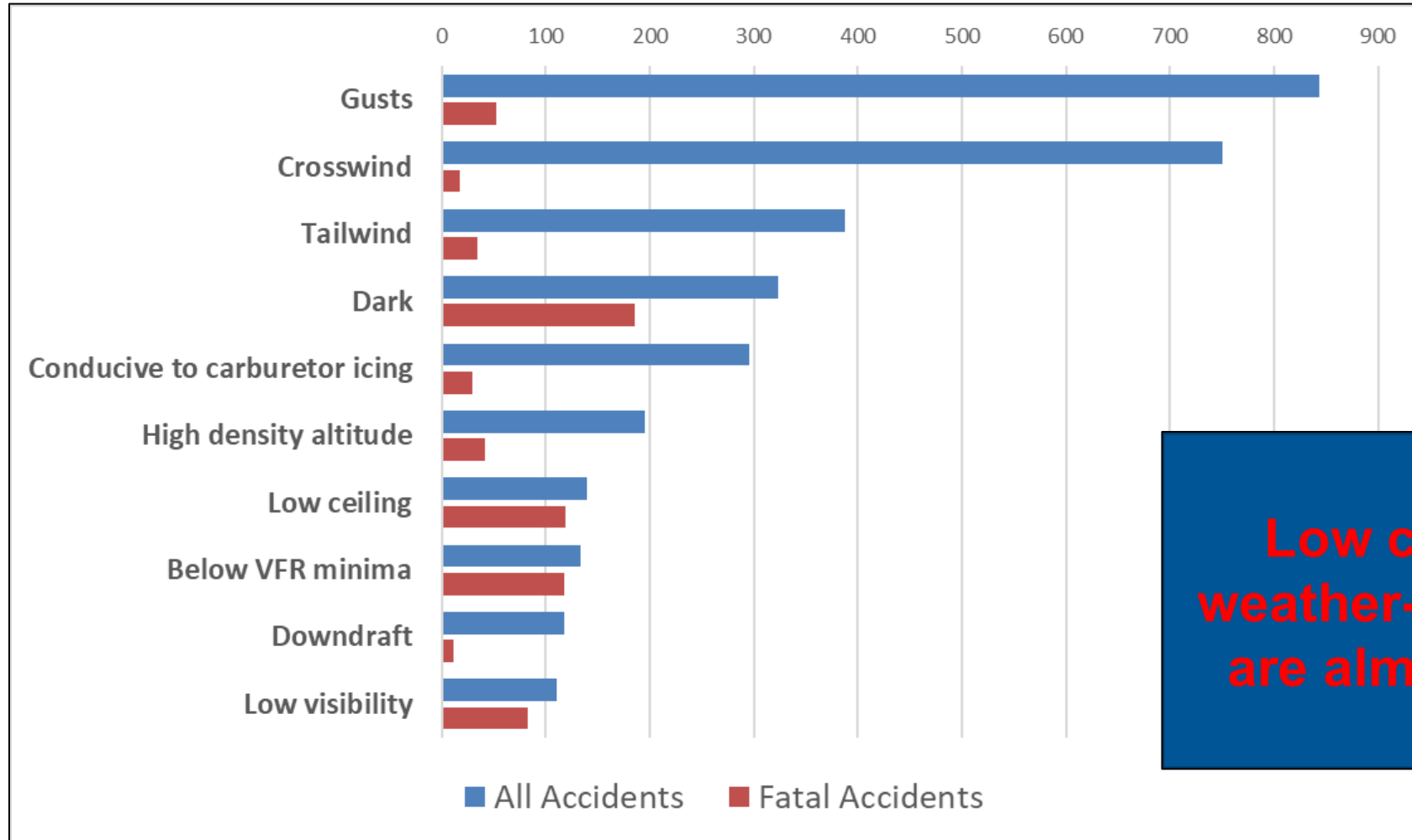
6,354
Fatalities

3,745
Serious Injuries

WX Driven Aviation Accidents – 2008 - 2023



Part 91 - 10 Most Frequent Weather-Related Findings: 2008-2020



Low ceiling/Visibility weather-related accidents are almost always fatal!

THE WHY:

- Continued VFR into IMC conditions continues to be the #1 cause of WX related fatalities.
- “Weather is often cited as a cause or contributing factor, accounting for roughly 25% of the accidents occurring in general aviation operations.”

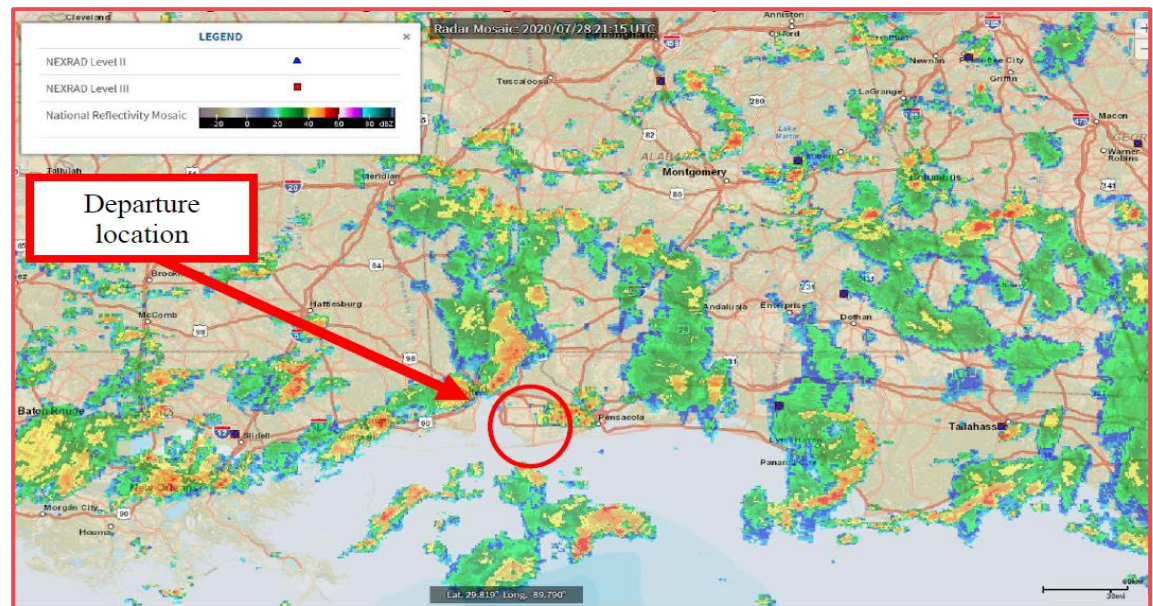
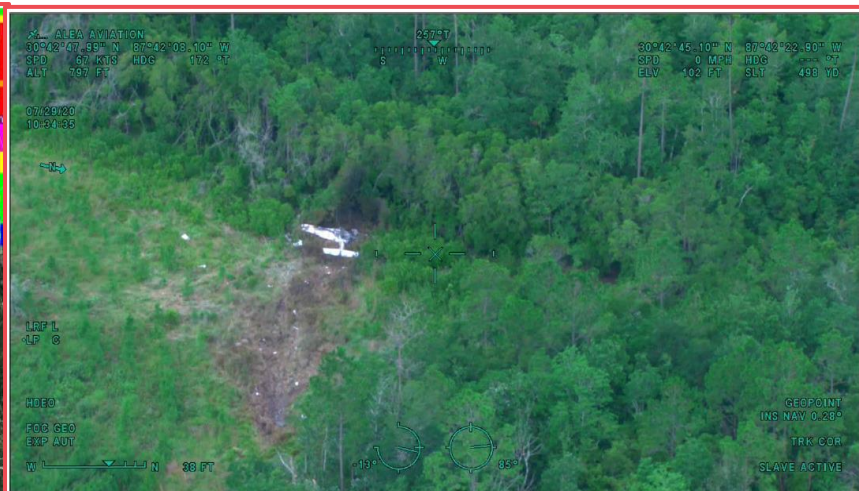
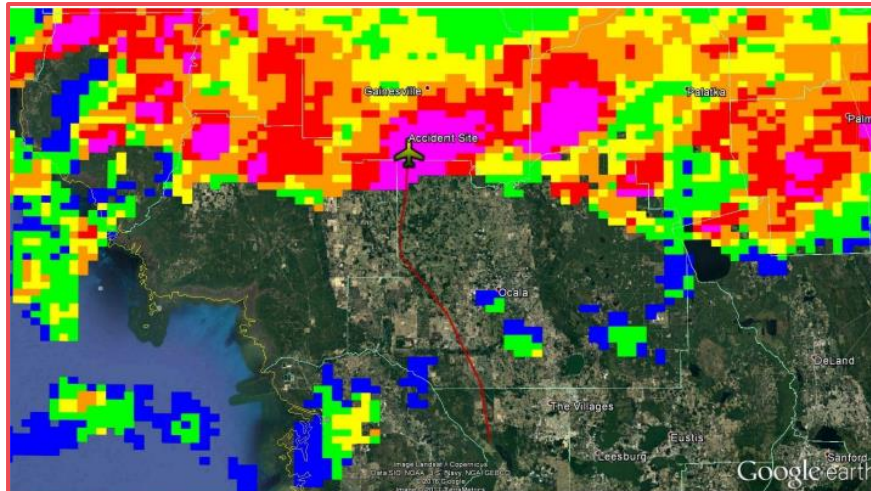
– Andrew J. Fultz & Walker S. Ashley (2016): Fatal weather-related general aviation accidents in the United States, Physical Geography, DOI: 10.1080/02723646.2016.1211854

- All weather subject matter questions can be failed on the private & instrument pilot written exam, and the candidate can still pass the exam.
- Pilots consistently share that they lack confidence as it relates to weather, yet EVERY pilot’s go/no-go decision is rooted in a weather decision.

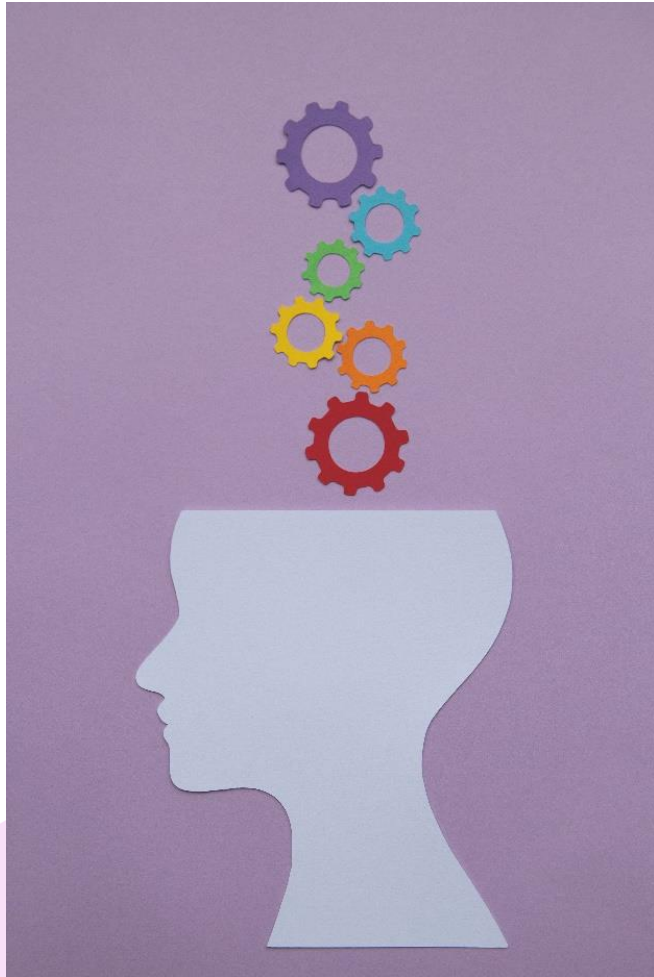


1/3
**The number of
VFR into IMC
accidents
involving an
instrument-rated
pilot.**

Gaps in Pilot Weather Knowledge - Results



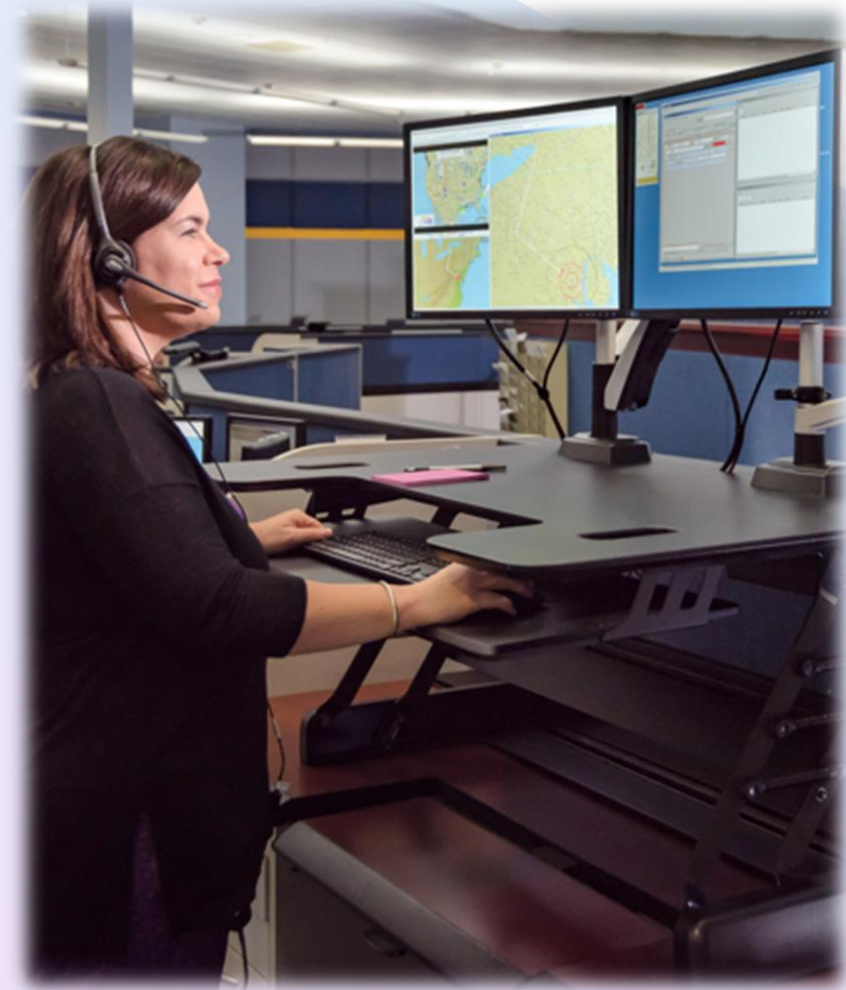
WHY DO PILOTS CALL FLIGHT SERVICE?



- 14 CFR part 91, § 91.103 – Preflight Action
 - Each pilot in command shall, before beginning a flight, become familiar with all available information concerning that flight
- Historical FAA Document References/Tradition
 - Pilots encouraged to call Flight Service before every flight and for every aviation related question by CFI's
- Last minute check for TFRs and NOTAMs
 - Has anything changed since my briefing?
- Local Area Knowledge
 - Unable to obtain anywhere else
- Validation of a Self-briefing or 2nd Opinion
 - Have I come to the right conclusion about the weather?

WHEN SHOULD PILOTS CALL FLIGHT SERVICE?

- After completing a self-briefing
 - Address questions and/or focus on a specific concern
 - Clarify the weather previously reviewed
- If in training, after consulting with an instructor
 - Builds a relationship and ensures the team is on the same page
 - Calling together to ensure the same information is gathered
- When you're invested and ready
 - Avoid **[insert word]** weather briefings – invest in yourself!
 - Be prepared, engaged, and ready to discuss your concerns



AC 91-92: Pilot's Guide to a Preflight Briefing

Educational roadmap for the development and implementation of preflight self-briefings

- Flight Planning
- Weather Interpretation
- Risk Identification/Mitigation Skills
- Repetition and Practice

Adhering to the guidelines better prepares pilots to interpret and use real-time weather information

- Before departure
- En-route (in the cockpit using ADS-B)

Provides *guidance* for required preflight actions under Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.103

Encourages pilots to use Flight Service (via phone) in a consultative capacity, *when needed*

3/15/21

AC 91-92
Appendix B

APPENDIX B. SAMPLE PREFLIGHT CHECKLIST

B.1 Outlook Briefing Elements (more than 6 hours until departure). Check for reported or forecast meteorological or aeronautical conditions that might influence or alter the proposed flight.

- Weather advisories (SIGMET, AIRMET, convective SIGMETs, CWAs, and Aviation Watch Notification Messages)
- Synopsis (type, location, and movement of weather systems and/or air masses)
- En route and destination forecast (alternate if needed)
- NOTAMs (e.g., airport/runway closures, air traffic delays, and TFRs)

B.2 Standard Briefing Elements.

- Adverse conditions (e.g., weather advisories, low-level wind shear, thunderstorms, icing, and frontal zones)
- Synopsis
- Current weather
- En route, destination, and alternate forecasts
- Winds aloft
- NOTAMs, TFRs, and PIREPs
- P40 (Camp David) and P56 (Washington DC); Washington, DC SFRA (if applicable)
- ATC delays

B.3 Abbreviated Briefing Elements (update on changes, up to 2 hours prior to flight).

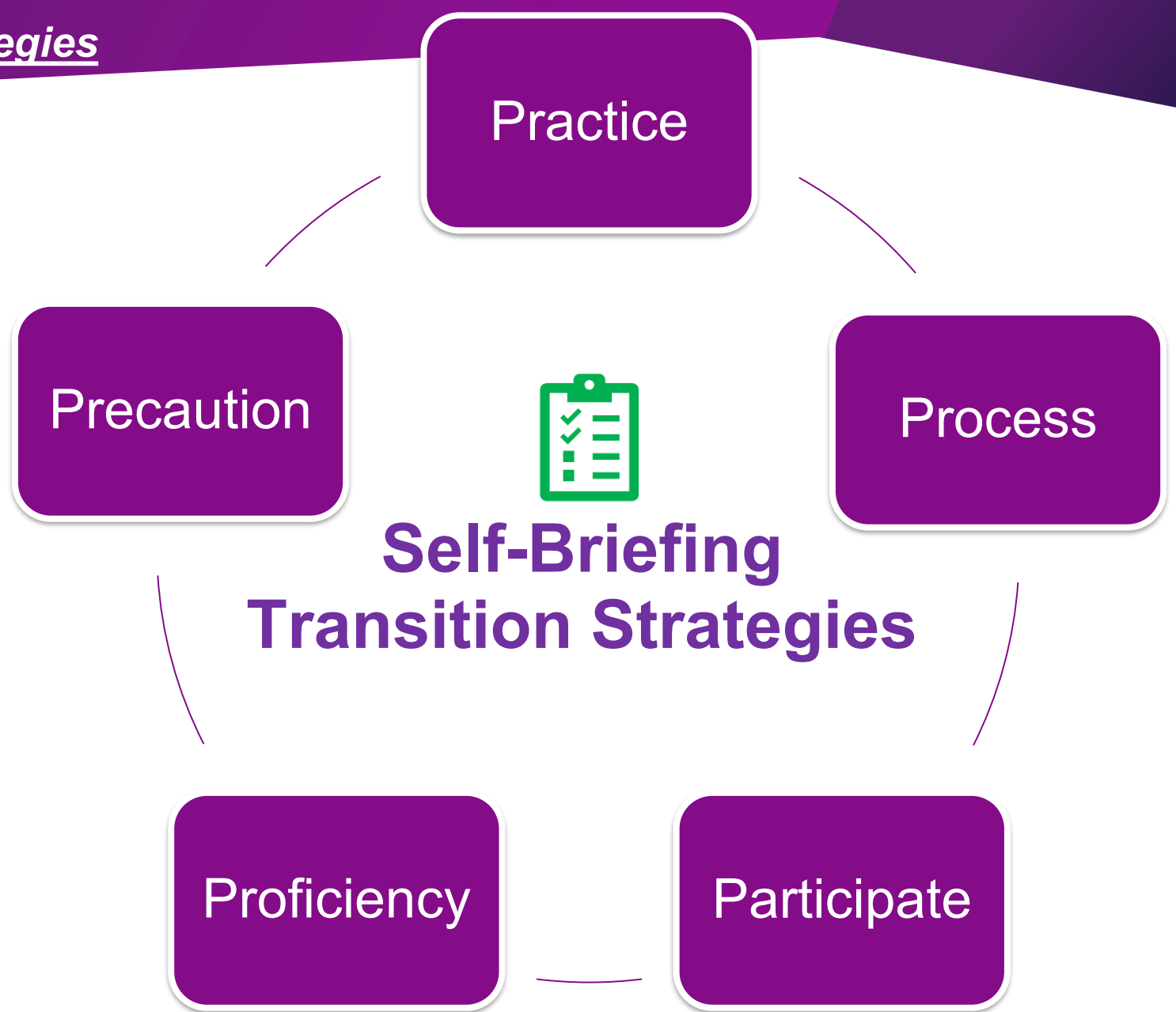
- Check updates to adverse conditions (reported or forecast) along the route of flight
- Check for any changes in meteorological and aeronautical conditions

B.4 Non-Weather-Related Checklist Items.

- IMSAFE
- PAVE
- Personal minimums
- Fuel requirements
- Alternate airports
- Traffic delays
- Takeoff and landing distance information for airports
- Aircraft performance items (e.g., airport elevation, runway slope and conditions, and Weight and Balance)
- RAIM check

“How do I increase my comfort with weather?”

- **Practice**
 - Daily 5 Minute Dry Run
- **Process**
 - Use a Self Brief Checklist
- **Participate**
 - Work with your resources: CFIs, Flight School Support, Flying Community, Online Resources, Ask Questions and Verify with Flight Service
- **Proficiency**
 - Continue learning using educational resources: VFR & IFR Wings Courses, Collegiate courses, etc.
- **Precaution**
 - When in doubt... sit it out!



“How do I teach my students to be comfortable with weather?”

- Provide structure**
 - Resources available
 - Self-briefing Checklist
- Demonstrate by doing**
 - Demonstrate a successful briefing & go/no-go process
- Observe & Evaluate**
 - Provide instructional oversight and adjustments where needed during instructor guided briefing(s)
- Take the Training Wheels Off**
 - Encourage your student(s) to start the self-briefing process as soon as practical
 - You are your student’s primary learning resource; encourage questions from day 1!
- Insist on consistency**
 - Just one skipped preflight briefing sends a clear message:
 - “This is ok.”
 - “My last flight turned out just fine without a briefing...”
 - “You can check the WX, but we’re still going!”



- **Standard Briefing** – I know I'm going on a flight, and I need everything.
 - This is the most comprehensive briefing. It's intended for pilots planning a flight & is used as an initial briefing.

- **Abbreviated** – I have some WX & need the rest, or I have questions about the WX I've seen.
 - Used to update a previous briefing or to get information on a specific topic.

- **Outlook** – I'm leaving later & need an idea of what it'll look like (Dep >6hrs).
 - Used when the departure is 6 or more hours in the future. It provides initial information on forecast conditions.

What is a Standard Briefing?

- ▶ Adverse Conditions – What will make this a No-Go?
 - AIRMETs, SIGMETs, Convective SIGMETs, Adverse NOTAMs, TFRs
- ▶ Synopsis – What's going on? (Big Picture)
 - Timeframe relevant Prog charts & Forecast Progs, Convective Outlooks
- ▶ Current WX – What's the WX doing right now?
 - METARs, PIREPs, Radar, Satellite, Avn. Forecast Discussion
- ▶ Forecast WX – What's the WX going to change into?
 - TAFs, GFAs, Winds Aloft
- ▶ NOTAMs – Advisories, Planning, & Situational Awareness
 - Departure, Destination, and Alternate Airports + Enroute, NAV, and FDC

GO/NO-GO DECISION MAKING

1. Personal Minimums & Risk Tolerance

Set clear weather limits based on experience & aircraft capability

Don't just meet legal minimums—know your own comfort zone

Consider factors like wind, visibility, ceilings, and turbulence

2. Dynamic Weather Assessment

Preflight weather briefings are just the start—keep evaluating

Use METARs, TAFs, PIREPs, and real-time weather updates

Be proactive, not reactive, when conditions change

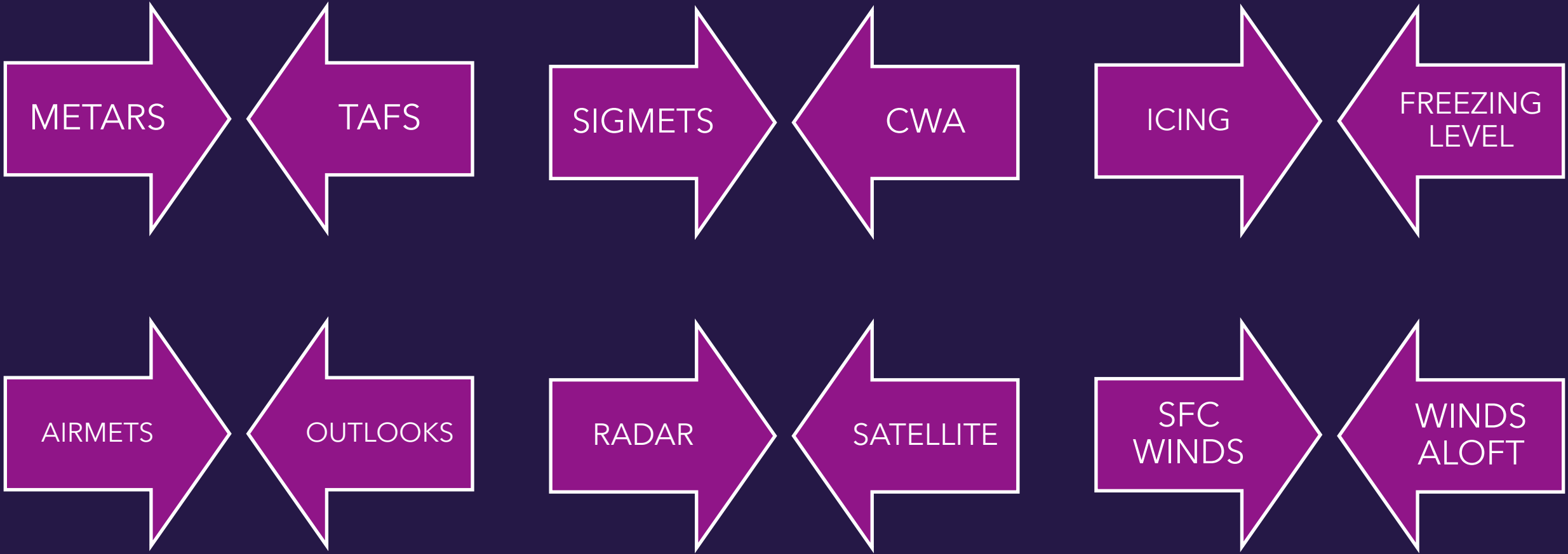
3. Plan B & Alternatives

Always have an alternate airport and route in mind

Identify decision points for reassessment

Know when to turn back, divert, or delay the flight

USE PAIRED WEATHER PRODUCTS



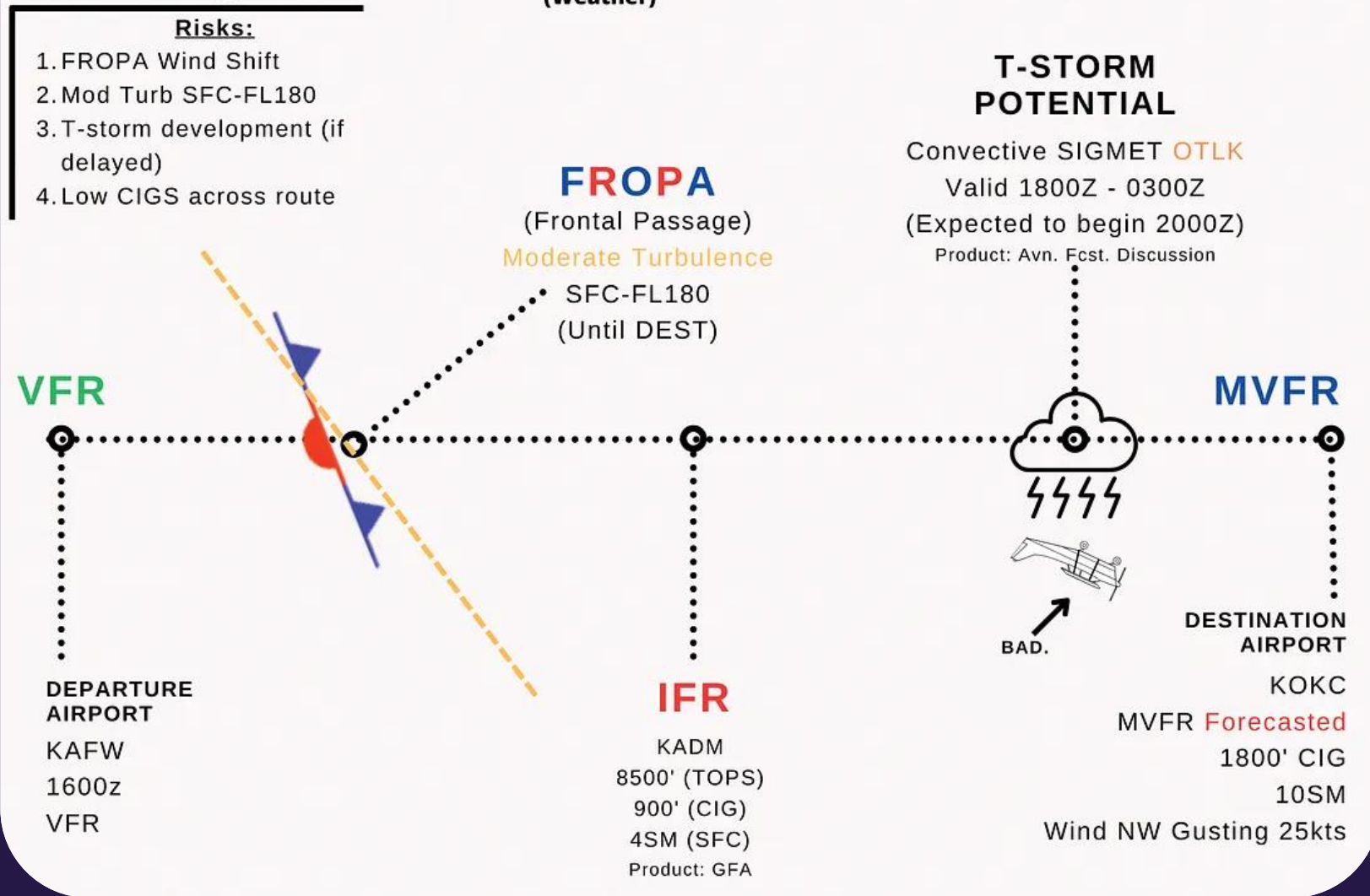
Jeff's Tips for Learning & Conducting WX Briefings

- **Avoid Round-Robin Flight Plans**
- **Practice – Identify, Admit, & Attack**
 - Identify & admit what you don't know & attack it with education.
- **Draw a WX Timeline or Mental Model**
 - Technique to help pilots remember & track WX throughout their flight
- **Learn Jeff's official icing formula:**
 - Clouds + Winter = Icing
- **Learn Jeff's different types of icing:**
 - Known
 - Should've known
- **Learn how to effectively utilize radar & satellite imagery**
 - Infrared, Winter Radar, Echo Tops, VAD Winds, etc.
- **Don't rely solely on METARs & TAFs for a WX briefing**
 - Don't miss the forest for the trees.
- **Use a structured format, process, or checklist. Every time.**

USE A TIMELINE

- Implement a WX Timeline
 - As you brief yourself fill in a timeline for the duration of your flight
 - Flag points where you want to follow up on the weather
 - Flag points that have additional risk
 - List risks in a clear spot
 - Document questions to ask an instructor, flight buddy, or specialist
 - Take the timeline with you inflight

Jeff's WX Timeline (Weather)



FFSP FACTS

- Online tools mirror specialist tools
- Specialists don't have access to "extra" or "special" information - all info is published
- Two facilities - VA and TX
- Value added briefings (abbreviated) make our day - come prepared to talk WX
- Specialists can see the actions taken on 1800wxbrief.com - Contact History retained for 45 days



 FlightService

Better Briefings
Safer Flights



Flight Data

General Aviation - Search
and Rescue
NOTAM Entry
ATC Clearance Relay



ONLINE TOOLS

- Priority Service
- EasyActivate™ and EasyClose™
- Close Reminders
- SMS/Text Services
- ATC Notices
- SE-SAR
- Preflight Summaries
- Local Area Knowledge
- Interactive Map
- WX Charts
- Flight Plan Services
- Pilot History

The screenshot displays the FlightService web application interface. At the top right, the logo "FlightService" and a "Home" link are visible. A search bar contains the text "Search RBL".

The "Self-Briefing C" window is open, showing a list of overlays with checkboxes and view times:

- METARs and TAFs (Viewed 16:09:05 Z)
- Pilot Reports (Viewed 16:09:15 Z)
- TFRs (Viewed 16:09:29 Z)
- SIGMET (Viewed 16:09:34 Z)
- G-AIRMET
- CWA
- Severe Weather
- Mosaic Radar
- Visible Satellite

A "Log Checklist" button is located at the bottom of this window.

The "Flight Plan" window is also open, displaying flight details:

AIRCRAFT	SPEED	ALTITUDE	DEP TIME
TTTAW	85 kts	6500 ft	1600 UTC

DEPARTURE: **KAFW** PEROT FLD/FORT WO
Fort Worth, TX

ROUTE OF FLIGHT: **DCT**

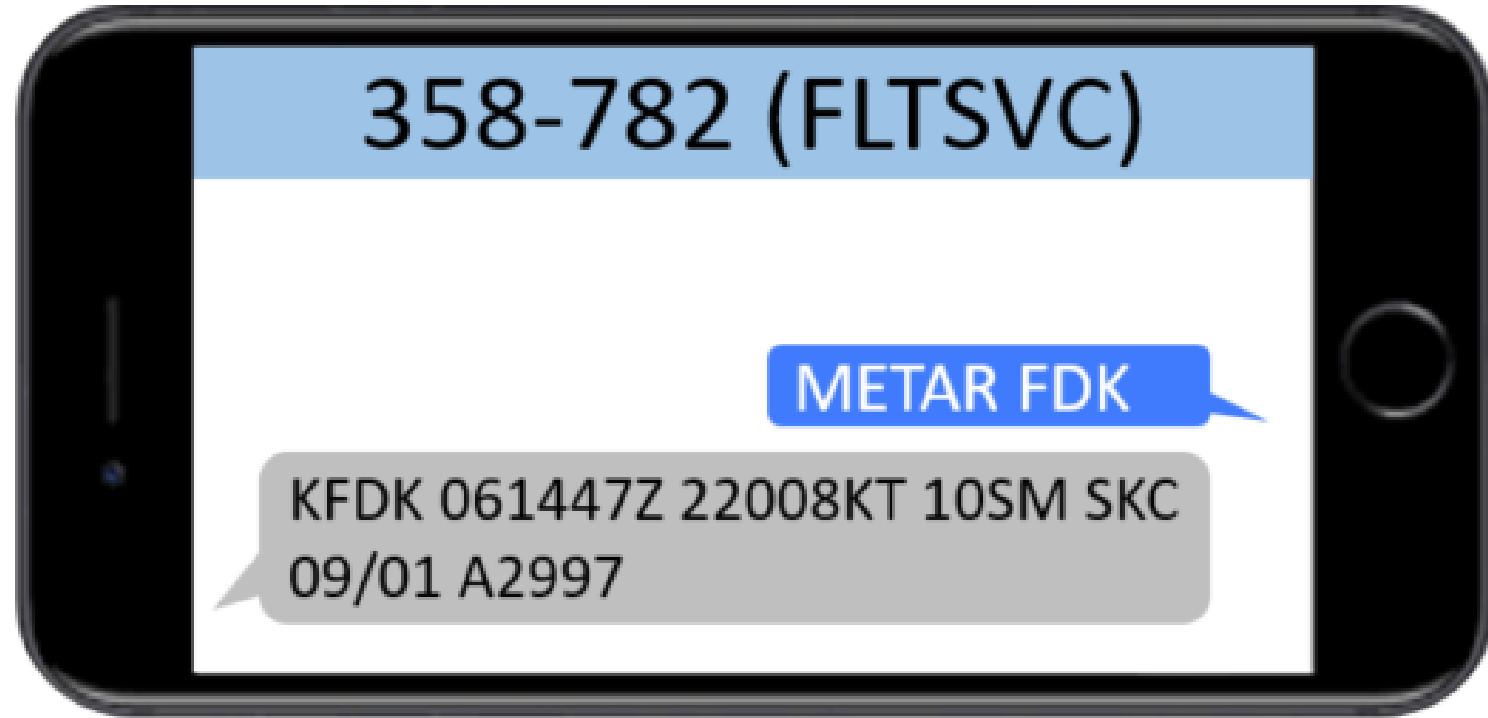
DESTINATION: **KOKC** WILL ROGERS WORLD
Oklahoma City, OK

DISTANCE	TIME	BURN
144.4 NM	2H15M	20.2 GAL

Buttons for "Text", "NavLog", and "PLAN" are visible. A "Plan & Brief" button is at the bottom right of the window.

FREE SMS/TEXT SERVICES

- Text "*METAR FDK*" and you will receive the latest METAR for Baltimore Washington International Airport.
- Text "*METAR FDK PT*" and you will receive the latest METAR for Baltimore Washington International Airport in **plain text**.
- Text "*TAF FDK*" and you will receive the latest TAF for Baltimore Washington International Airport.
- Text "*MT FDK PT*" and you will receive the latest METAR and TAF for Frederick Airport in **plain text**.



Note: the requests are case independent.

Useful Online Resources

[VFR WINGS Course – How to Conduct Preflight Self-Briefings for Student and VFR Pilots](#)

[IFR WINGS Course – Conducting Preflight Self-Briefings for IFR Pilots](#)

[AC 91-92 - Pilot's Guide to a Preflight Briefing](#)

[AC 91-92 - Live FAA YouTube Panel](#)

[FAA Safety Briefing: Building Confidence with the Conditions \(How to Unleash Your Inner Weather Briefer\)](#)

Scan to give quick 3-minute
feedback!



Thank you from all of us at
Leidos Flight Service

www.1800wxbrief.com

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BACKUP