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23D FLYING TRAINING SQUADRON

Be recognized as the Air Force's Vertical Lift Center of Excellence



DANIEL "COACH" COUGHLIN, Lt Col, USAF
Commander

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23 FTS BACKGROUND

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COMMAND AND CONTROL - 58 Special Operations Wing, Kirtland AFB, NM

MISSION - Train undergraduate aircrew members in foundational vertical lift operations.

PURPOSE - USAF's only undergraduate vertical lift aircrew training program.

- 176 USAF and USCG Pilots and USAF Special Missions Aviators per year
- Feeds graduate-level UH-1N, MH-139, HH-60W, and CV-22 training programs

DESCRIPTION- 400-member unit geographically separated at Cairns Army Airfield, Fort Novosel, AL, consisting of USAF Active Duty, Reserve, Civilian, and Contract personnel.

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MY BACKGROUND

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ASSIGNMENTS –

2005 – Commissioned South Dakota State University

2005-2006 – 82 OSS - Ellsworth AFB, SD

2006-2007 – SUPT-H – Columbus AFB, MS and Fort Rucker, AL

2007-2010 – 23 FTS – Fort Rucker, AL (First Assignment Instructor Pilot, UH-1H and TH-1H)

2010-2011 – 512 RQS – Kirtland AFB, NM (HH-60G Transition)

2011-2014 – 56 RQS – RAF Lakenheath, UK (Multiple deployments OOD/OUP, OEF)

2014-2017 – 512 RQS – Kirtland AFB, NM (HH-60G FTU IP/EP)

2017-2019 – Air University – Maxwell AFB, AL (SOS Instructor and ACSC)

2019-2021 – HQ Allied Air Command – Ramstein AB, DE (JPR)

****2020-2021 – Helicopter-Only Training Pipeline Transition Started****

2021-2023 – 23 FTS – Fort Rucker, AL (Operations Officer)

2023-Current – 23 FTS – Fort Rucker, AL (Commander)

- 19 years in USAF, Command Pilot with ~3000 total hrs, ~300 hrs combat time, Instructor and Evaluator in multiple aircraft
- Flown multiple single and multi-engine civilian aircraft, and the T-37B, UH-1H, TH-1H, T-6, HH-60G, HH-60W
- Multiple tours in Air Education and Training Command, both flying and non-flying instructor assignments
- In place for genesis of USAF transition from legacy SUPT-H to UHT Helicopter-only Program and 23 FTS transformation

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DIRECTION AND CHALLENGES

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CSAF Direction – Accelerate Change or Lose, Quality Matters Most

- **Last 4 years completely transformed and modernized USAF Vertical Lift Pilot Training**

2020 LIMFACS DRIVING UHT

- **Pilots** – Increase production with what we have
 - SUPT-H (T-6) → HTN (Helo-only Transition) → UHT (Helo-only FOC)
 - Building the plane while flying it, iterating from lessons learned
- **Program** - Managing Risk
 - Revamp Pilot Instructor Training – Better instructors produce better students
 - Lower experience across the board – Focused on foundations of vertical lift operations
- **Resources** - Aging Iron and Tech
 - IFT-R Program (emulates fixed-wing IFT) reduced stress on existing TH-1H fleet
 - New Devices for new opportunities (VR Headsets, ITDs and ATDs)
 - Program right-sizing (facilities, devices, contracts, personnel etc...) to support transformation

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TOOLS FOR TRAINING

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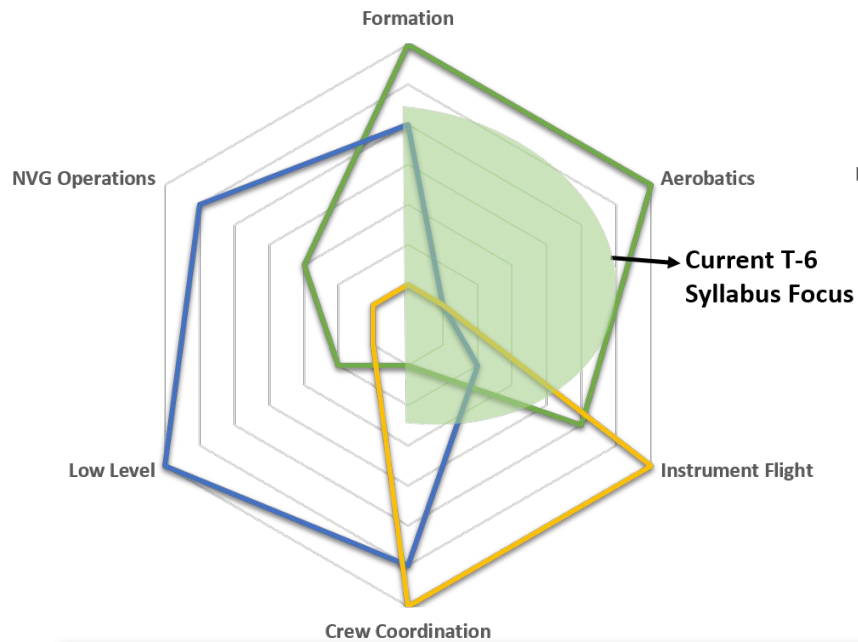


FRESH START AFTER 30+ YEARS

- Foundational skills for vertical lift operations are different than fixed-wing
- Recruiting – Aircrew-mindset from accessions
- Duration of Training – Officer development in addition to UHT training

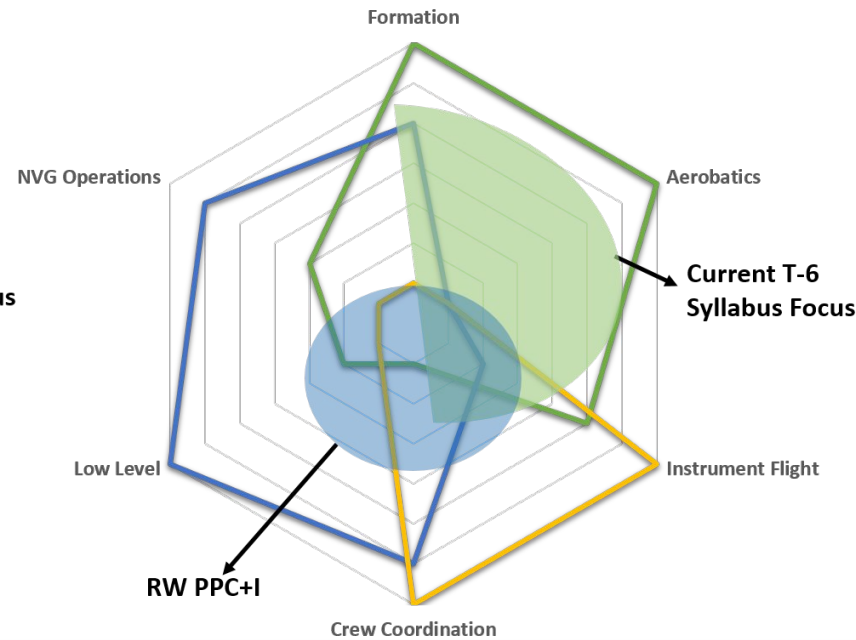
End-User Required Pilot Skill Sets

— Fighter/Bomber — Rotary Wing — Mobility



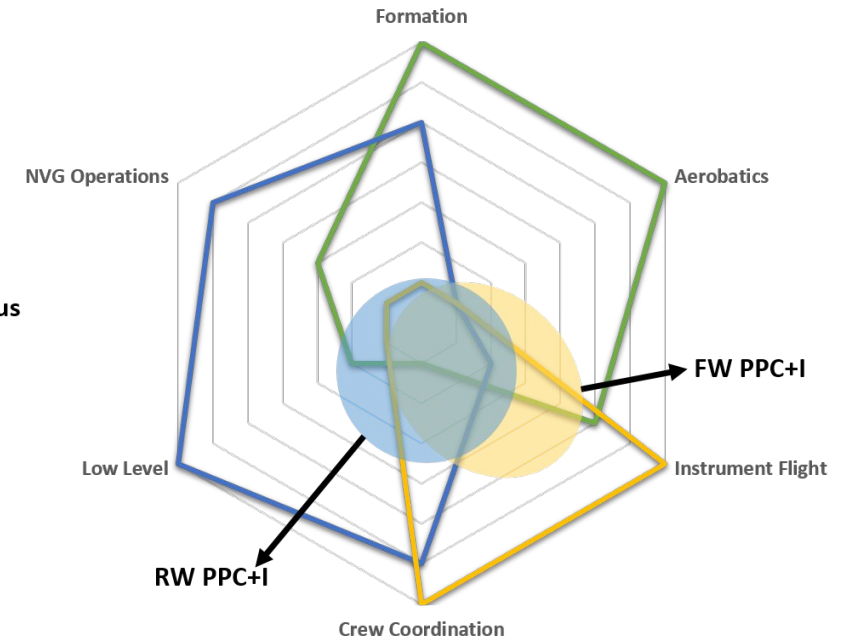
RW Civilian Trng vs. T-6

— Fighter/Bomber — Rotary Wing — Mobility



RW Civilian Trng vs. FW Civilian Trng

— Fighter/Bomber — Rotary Wing — Mobility



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RESOURCE MODERNIZATION

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AIRCRAFT – Unable to absorb 50+ hours per student on current TH-1H fleet

- **TH-1H fleet still aging and required program hours unable to increase for UHT program**
- **Answer - Initial Flight Training – Rotarywing (IFT-R) – emulates fixed-wing IFT but more intensive (Contact, Emergency Procedures, Instruments)**

DEVICES – Legacy Weapons Systems Trainer capacity unable to maintain production

- **2008 technology for simulators, very expensive, requires large facilities**
- **Answer – New technologies in virtual reality and mixed reality created Immersive Training Devices and Aircraft Training Devices**

SYLLABUS – Significant change to student's prior experience upon accessions

- **Complete revamp of program to focus on entry-level foundational skills**
- **Answer – SGTO 1, 2 and 3 (all transition during HTN) leading to UHT syllabus**

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AIRCRAFT

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Bell 505-X Jet Ranger (IFT-R)



TH-1H Huey II (USAF)



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LEGACY DEVICES

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- 2x TH-1H WSTs are on contract from Flight Safety International
 - Managed by PEO STRI
- Near Level D fidelity
- Full motion
- Linkable for formation training
- Contracted for up to 15 hrs/day; up to 200 hrs/month

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ATD DEVICES



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FAMILY OF DEVICES

- Aircrew Training Devices (High Fidelity):
- Replace 2 legacy WSTs with 4 Simulators
 - Mixed Reality trainers in house at squadron
 - Very in-expensive when compared to legacy simulators and achieves same, if not better training



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ITD DEVICES



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FAMILY OF DEVICES

- Immersive Training Devices (Medium Tiered):
- Virtual Reality Trainer (10 devices)
- 11th Beta Device converted to SMA Trainer
- Incorporated throughout training
- Linkable for Formation training



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HTN / UHT



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Goals

- Produce a better helicopter pilot
- Increase overall production

PTN Lessons Learned Incorporated

- Helicopter Immersive Training Devices
- Aircrew Training Device under development
- Early access to material
- Restructured academics / Proficiency reallocation
- Minimizes BITs in preliminary training

Updates

- All 7 SGTOs complete as of Aug 2022
- Up to 88 extra FW pilots out of T-6s FY 23

Legacy 88.5 + 85.6 = 174.1 hours
UHT 50 + 94 = 144 hours



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LESSONS LEARNED

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AUTONOMY NEEDED FOR RAPID ITERATING

- **Authorities and trust pushed to lower levels for freedom to maneuver (syllabi, deviations, resourcing) allowed discovery of best method and program landscape.**

RIGHT-SIZE RESOURCES

- **Syllabus full focus but need to invest in sustainment support requirements and identify shortfalls early (administration requirements for initial accessions location)**

ADAPT TO OUTCOMES

- **Shift to support successes and learn from failures (implementation of ITDs, flying phase order, culture for unit)**

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QUESTIONS?

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