



wats2024
O R L A N D O



AVIATION
PERFORMANCE
SOLUTIONS

Harmonizing Excellence: Tailoring UPRT Instructor Training for Airlines and Flight Schools

apstraining.com

Overview

APS and Our Purpose

A Training Disconnect

ICAO UPRT Framework & EPIC S2

Case Study: Delta Air Lines

A Harmonizing Approach: United & Aviate

Necessary Paradigm Shift to Save Lives



Who is APS?



We Help Pilots Bring Everyone Home Safely

Every Pilot Trained – In Control – All The Time



← UPRT

Presentation Perspective Based On ...

- UPRT Development for National and Foreign Airlines
- 3 Decades Developing and Implementing Professional Pilot UPRT Solutions
- Unique Airline UPRT Instructor Experience
 - >100 Initial Cadre Type-specific Airline UPRT SMEs
 - >1600 Next-level Airline UPRT Instructors
- 30,000+ Pilots Annually Implementing APS-certified UPRT, Including:
 - Boeing 717, 737, 747, 757/67, 777, 787
 - Airbus 320, 330, 340



Airline Safety Act of 2010



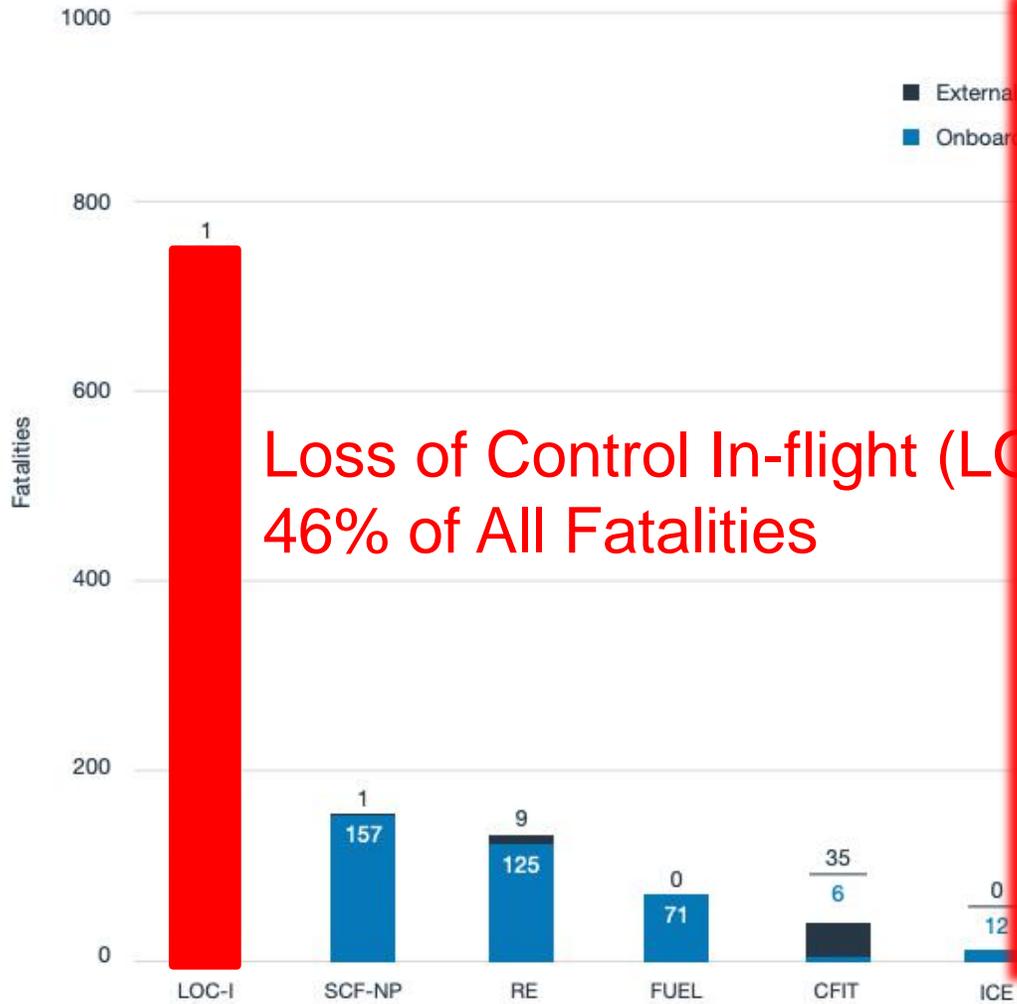
- **March 2019:** All US-based airline pilots required to train in Upset Prevention and Recovery Training (UPRT)
 - To Address #1 Causal Factor of Loss of Control-Inflight
- So how are we doing?

Airline Safety Act of 2010

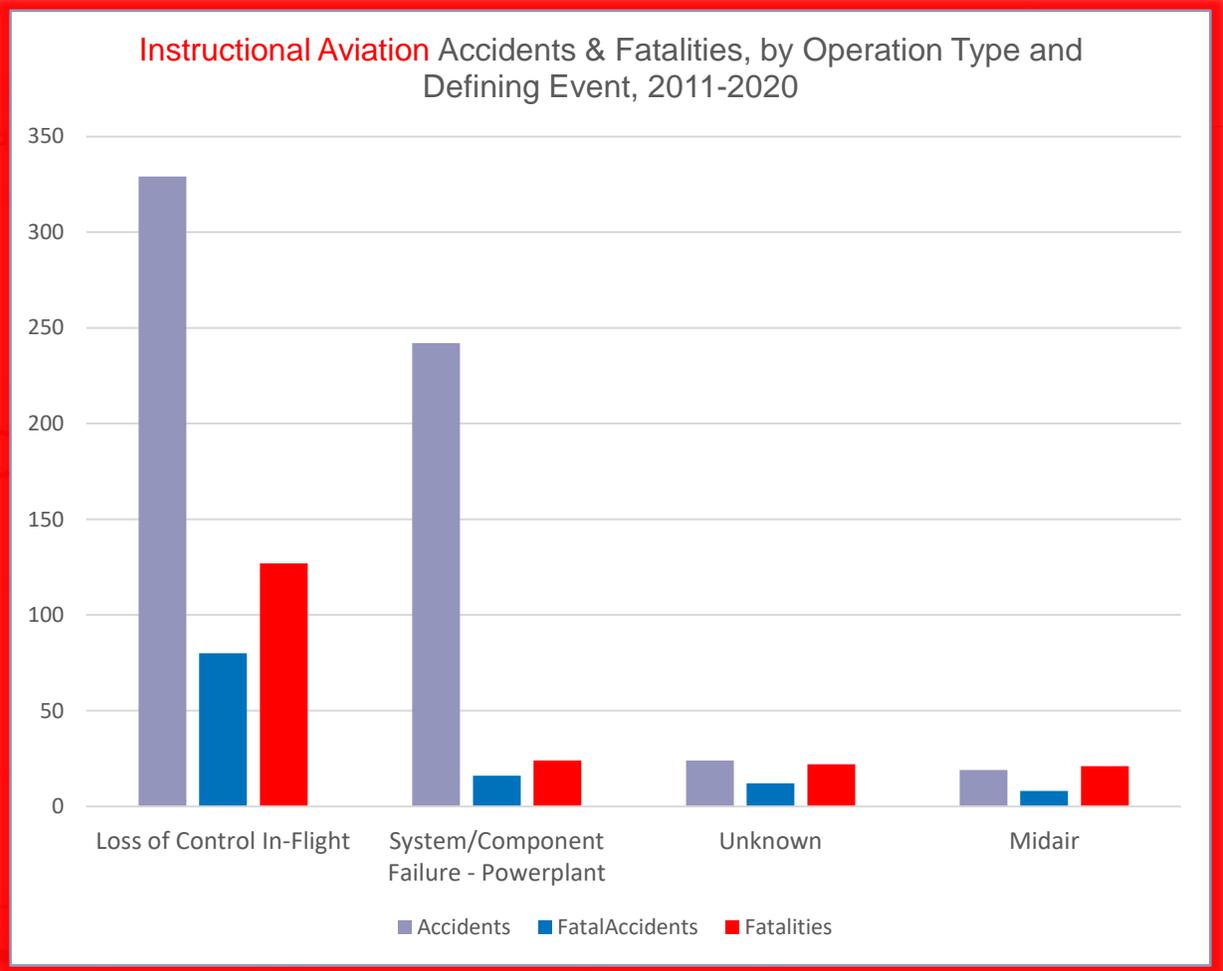


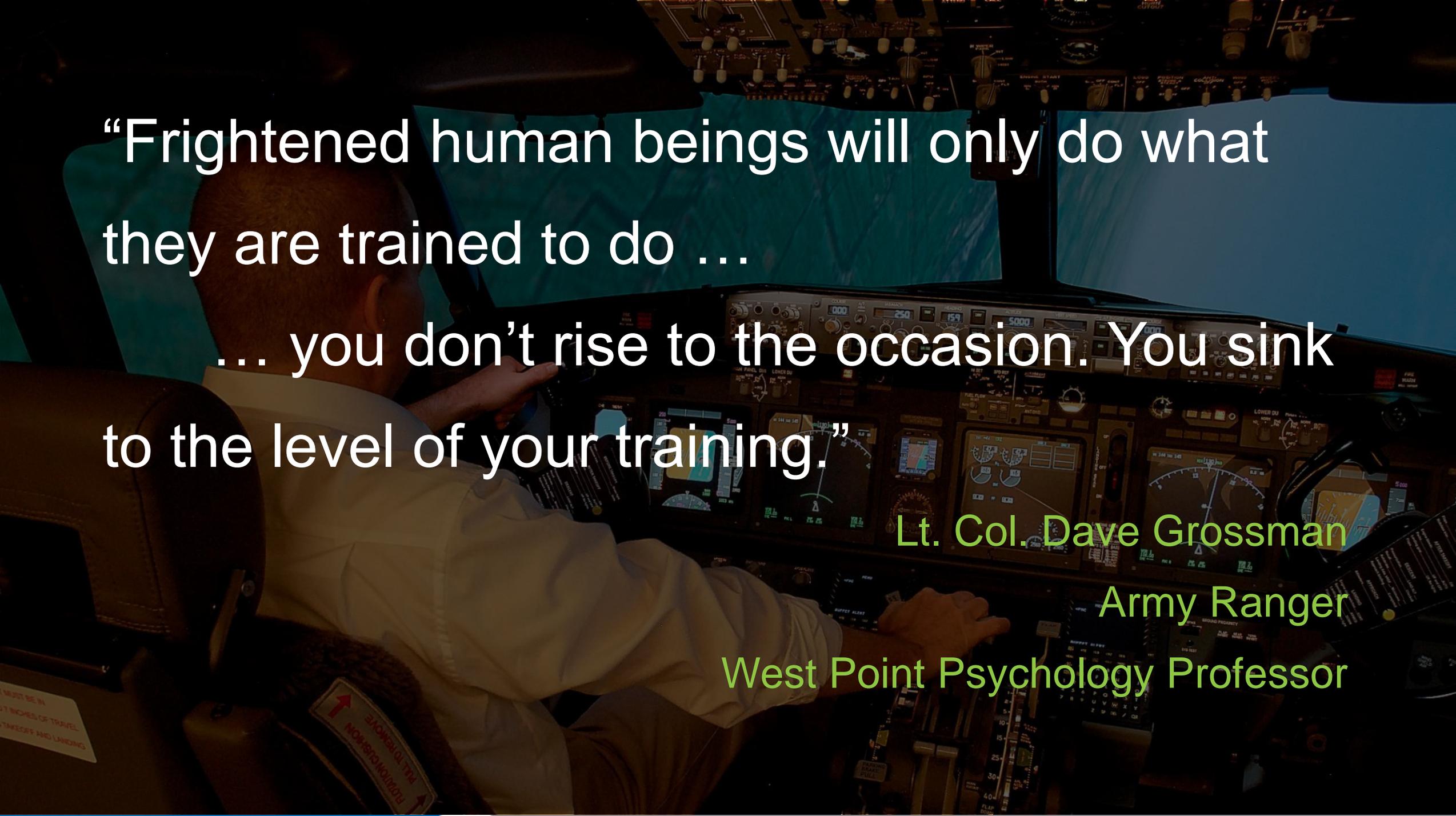
- However, no UPRT requirement for US-based pilots at the licensing level
- **LOCART ARC recommendation:**
 - Require UPRT in “actual aircraft” prior to Commercial licensing
- What about Law of Primacy?

Fatal Accidents | Worldwide Commercial Jet Fleet | 2013 - 2022



Loss of Control In-flight (LOC-I)
46% of All Fatalities



A photograph of a pilot in a cockpit, viewed from the side. The pilot is wearing a white flight suit and is looking out of the cockpit windows. The cockpit is filled with various instruments, dials, and screens. The background shows a blue sky. The text is overlaid in white and green colors.

“Frightened human beings will only do what they are trained to do ...

... you don't rise to the occasion. You sink to the level of your training.”

Lt. Col. Dave Grossman

Army Ranger

West Point Psychology Professor

80 Experts | 40 Organizations | 5 Years



IOS Enhancements

Simulator: Type-Specific UPRT

- FAR 121.423 Extended Envelope
- AC 120-123 Flightpath
- AC 120-109A Stalls
- AC 120-111 Upsets



Expert UPRT Instructor

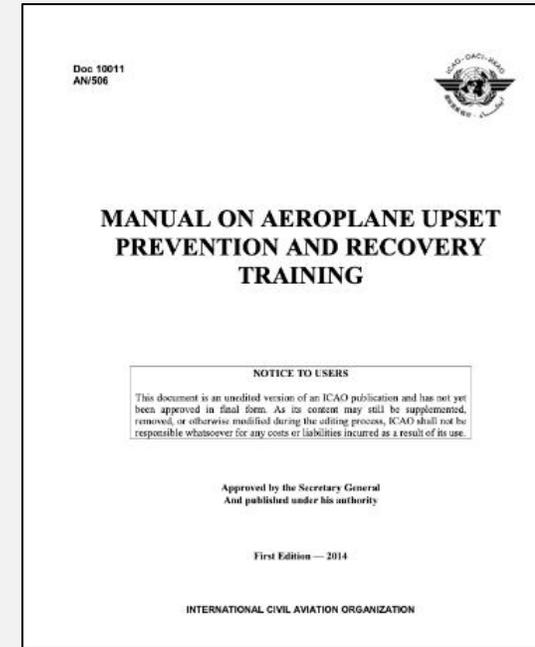
Core Skills: On-aircraft UPRT – CPL / MPL

- Repetition to Proficiency: Positive Training
- All-envelope All-attitude Platforms
- Startle, Fear, Reality – Factors
- Industry-approved Techniques



UPRT-specific Academics

- Industry Verified and Approved
- Stall and Upset Templates
- Airplane Upset Recovery Training Aids



Major Gaps
Harm Optimum Outcomes

- Instrument Recovery
- All-Attitude Maneuvering
- Spin Awareness Training
- Aerobatic-Capable Airplane Requirements
- Minimums for Academic and Flight Hours



Every Pilot In Control

Solution Standard™

8-Critical LOC-I Mitigation Criteria

Human Factors

All-Attitude Environment Immersion

Strategy Application, Resilience in Crisis

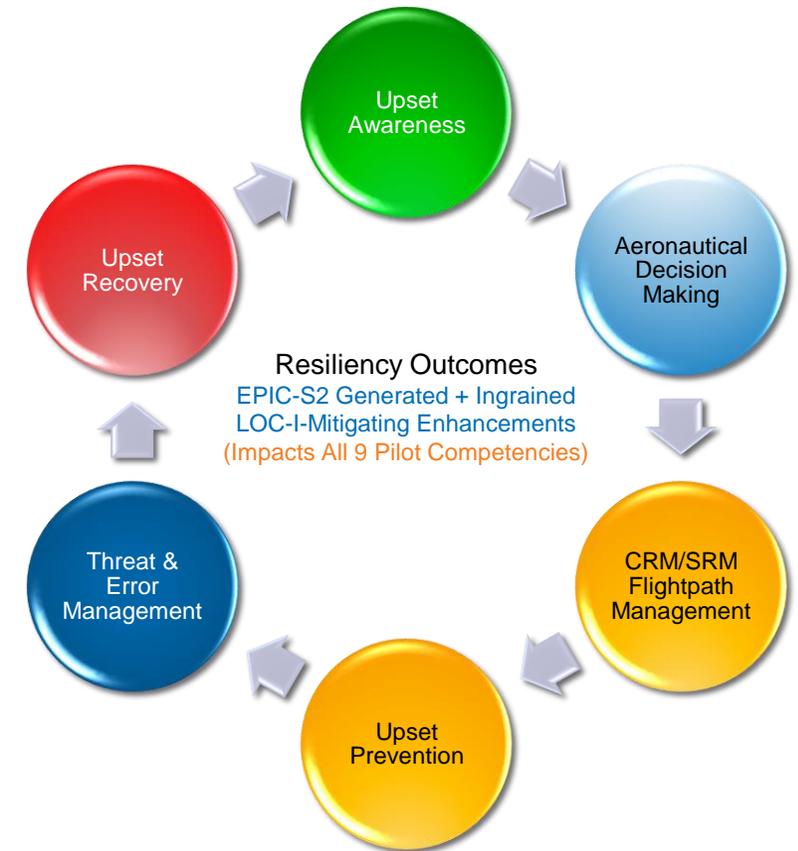
G-Awareness

Repetition to Proficiency

Very Low Altitude & All-Weather Upsets

CRM and/or SRM (Single-Pilot)

Representative Control Feel & Responses





Case Study

Delta Air Airlines and Aviation Performance
Solutions 5-Year UPRT Implementation

Example of Effective Airline UPRT Implementation



bit.ly/daluprt50



DAL/APS Case Study: Takeaways for Operators Considering Robust UPRT Implementation

- FOQA and ASAP Data Study Over 5 Years and 5 Million Flights
- 50% Reduction in Precursor Airplane Upset Conditions
- Associated UPRT Data Analysis Targeted Operational Enhancements
- Specialized UPRT Instructor Training Central to Success
- Boosts Overall Operational Safety

Watch DAL's Capt. Brian Sims On-Demand (QR Code Above)

5 Critical Factors in Airline SME Implementation



#1
Robust UPRT
Initial Cadre
SME
Qualification
Training

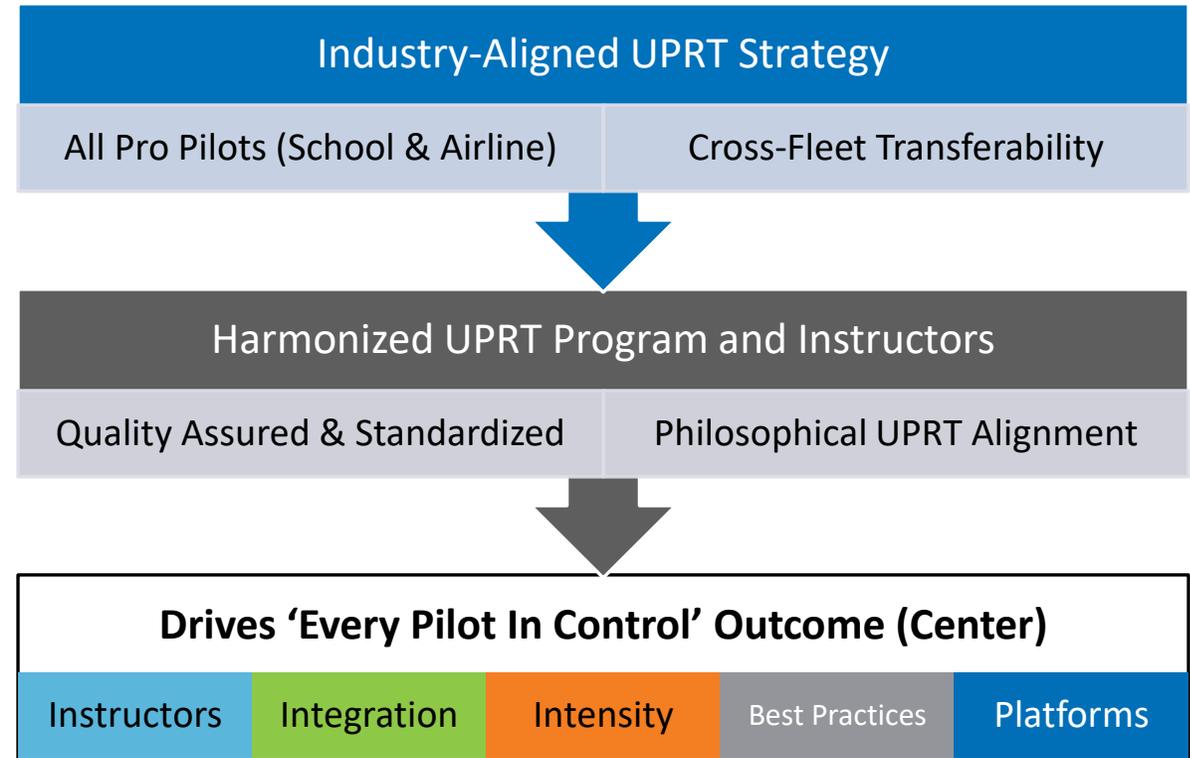
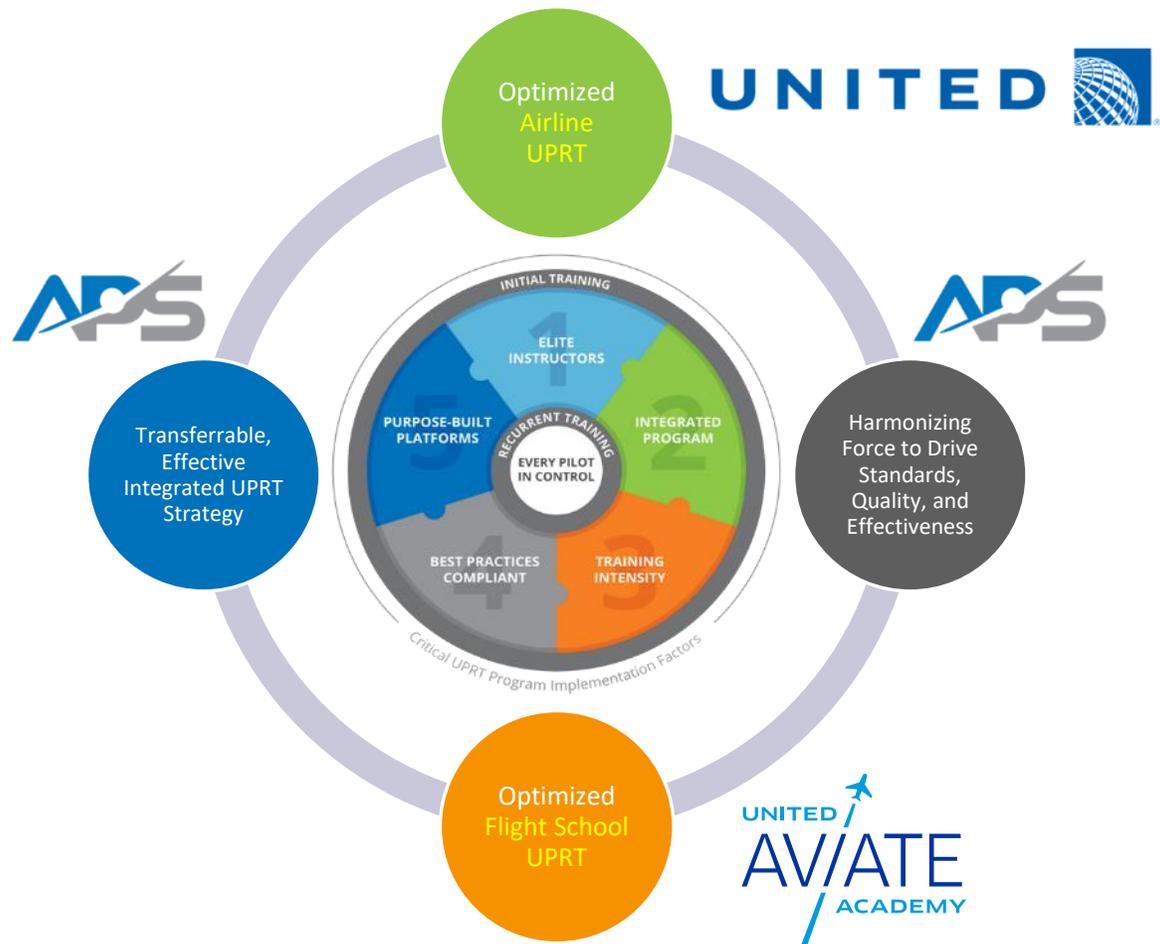
#2
Simple,
Effective
Strategic
Approach to
Recovery

#3
Effective
Scoped-down
Post-SME
Instructor
Training

#4
High
Instructor
Drift in UPRT
vs Other
Competencies

#5
On-aircraft
UPRT Training
for Airline
SMEs is
Critical

Next Generation Upset Training Structure

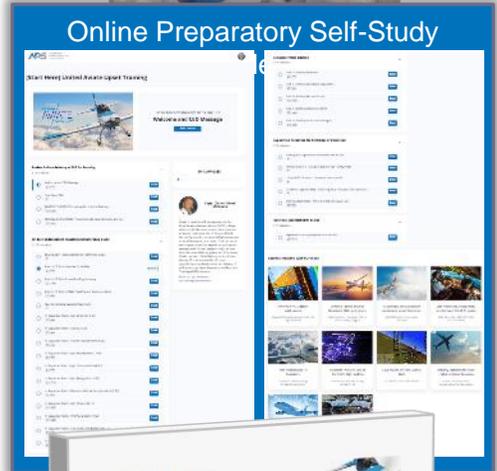
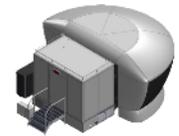






Every Pilot In Control

Solution Standard™



8-Critical LOC-I Mitigation Criteria

Human Factors

All-Attitude Environment Immersion

Strategy Application, Resilience in Crisis

G-Awareness

Repetition to Proficiency

Very Low Altitude & All-Weather Upsets

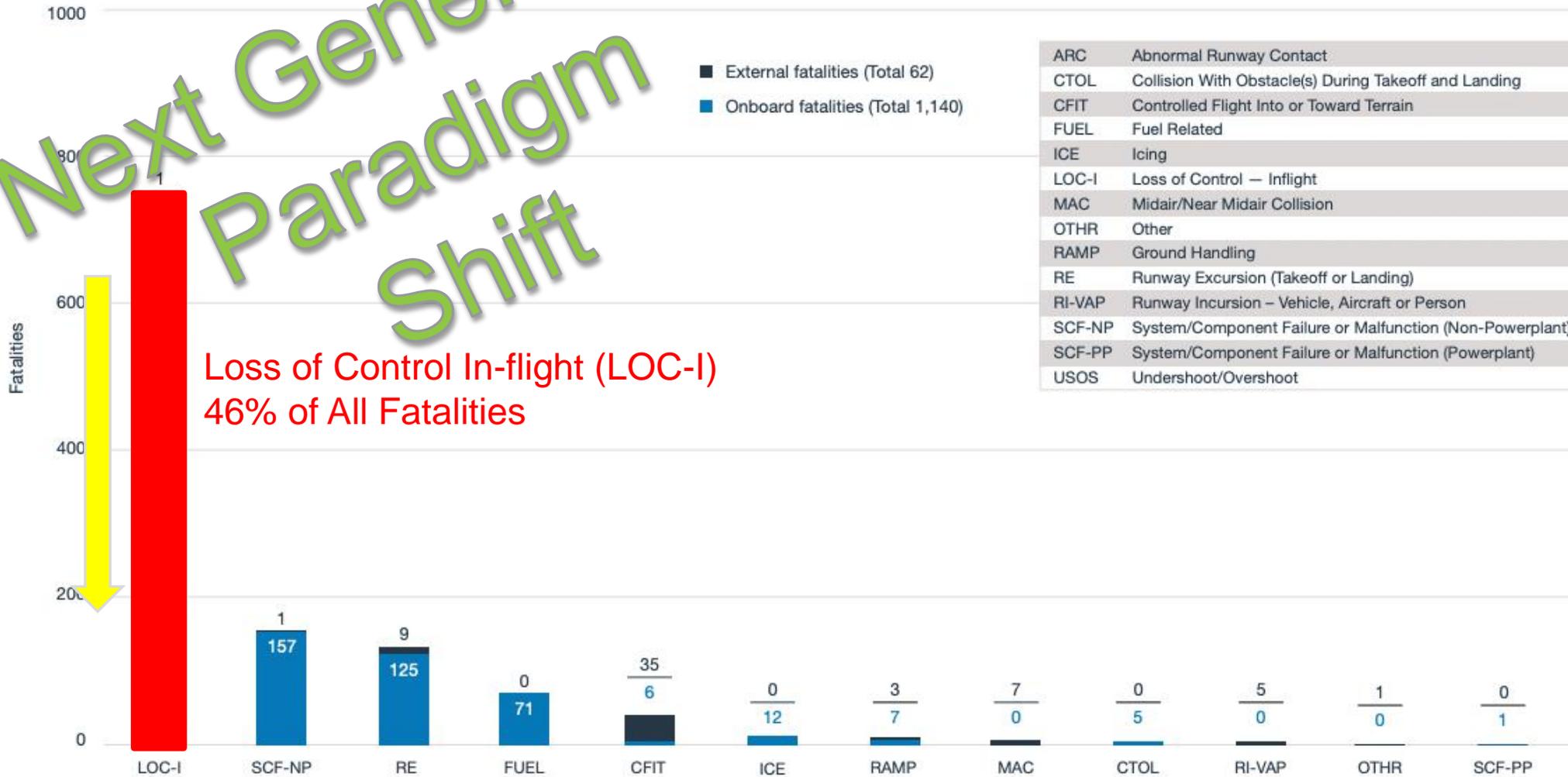
CRM and/or SRM (Single-Pilot)

Representative Control Feel & Responses



Fatal Accidents | Worldwide Commercial Jet Fleet | 2013 - 2022

Next Generation Paradigm Shift



ARC	Abnormal Runway Contact
CTOL	Collision With Obstacle(s) During Takeoff and Landing
CFIT	Controlled Flight Into or Toward Terrain
FUEL	Fuel Related
ICE	Icing
LOC-I	Loss of Control – Inflight
MAC	Midair/Near Midair Collision
OTHR	Other
RAMP	Ground Handling
RE	Runway Excursion (Takeoff or Landing)
RI-VAP	Runway Incursion – Vehicle, Aircraft or Person
SCF-NP	System/Component Failure or Malfunction (Non-Powerplant)
SCF-PP	System/Component Failure or Malfunction (Powerplant)
USOS	Undershoot/Overshoot

Loss of Control In-flight (LOC-I)
46% of All Fatalities

Top Five UPRT 'Instructor Drift' Challenges for Airlines



GET IT TODAY

bit.ly/uprtdrift





wats2024
O R L A N D O

Thank you for your
attention!

Capt. Clarke McNeace

Email:

clarke.mcneace@apstraining.com

480-279-1881

Harmonizing Excellence:

Tailoring UPRT Instructor Training for Airlines and Flight Schools

apstraining.com