



# UPRT Synergy:

## Superior Upset Training Outcomes for Airlines and Flight Schools

[apstraining.com](http://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?

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**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



AVIATION  
PERFORMANCE  
SOLUTIONS

# 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?

# US - Airline Safety Act of 2010

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LOCART ARC recommendation:  
Require UPRT “in actual flight” prior  
to Commercial Licensing

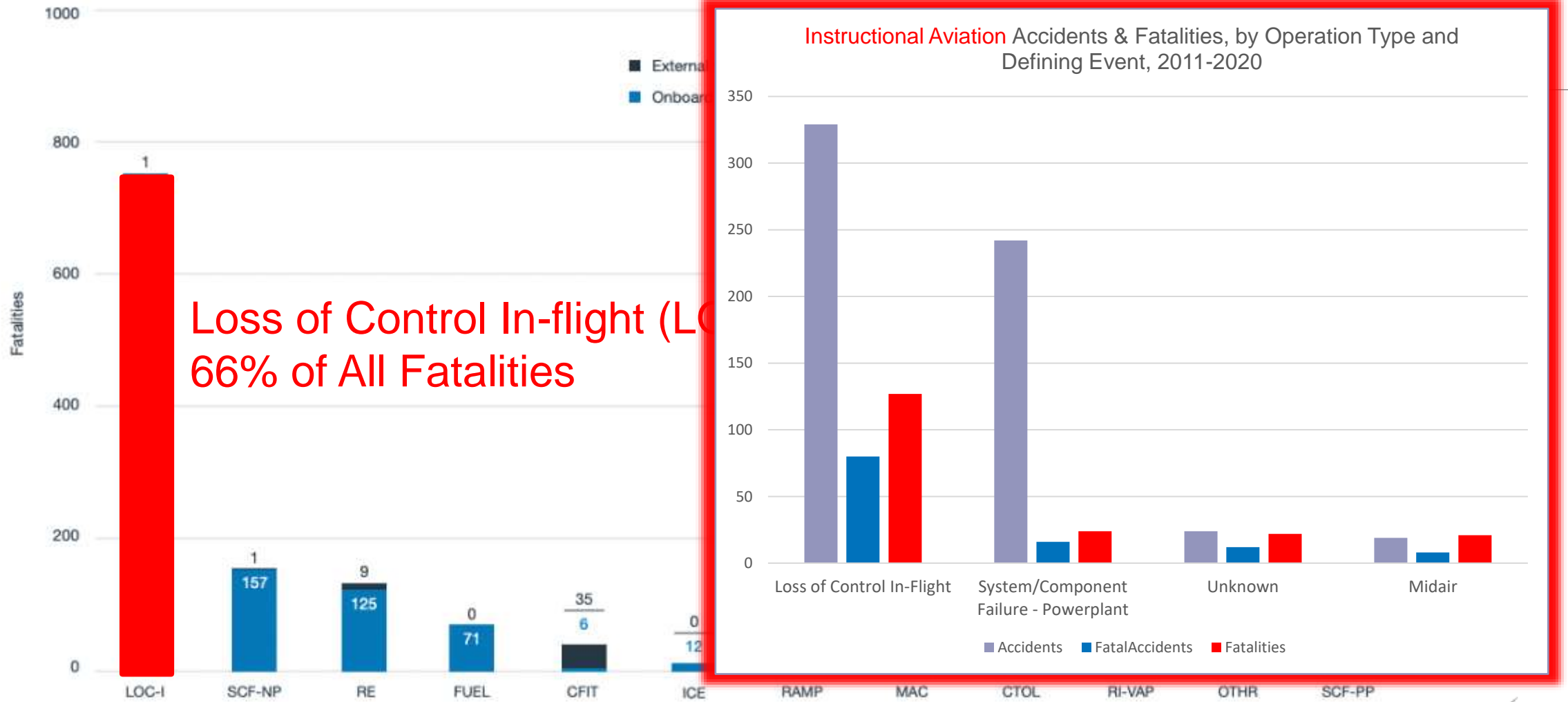
No UPRT requirement for US-based  
pilots at the licensing level

EASA UPRT Implementation limitations

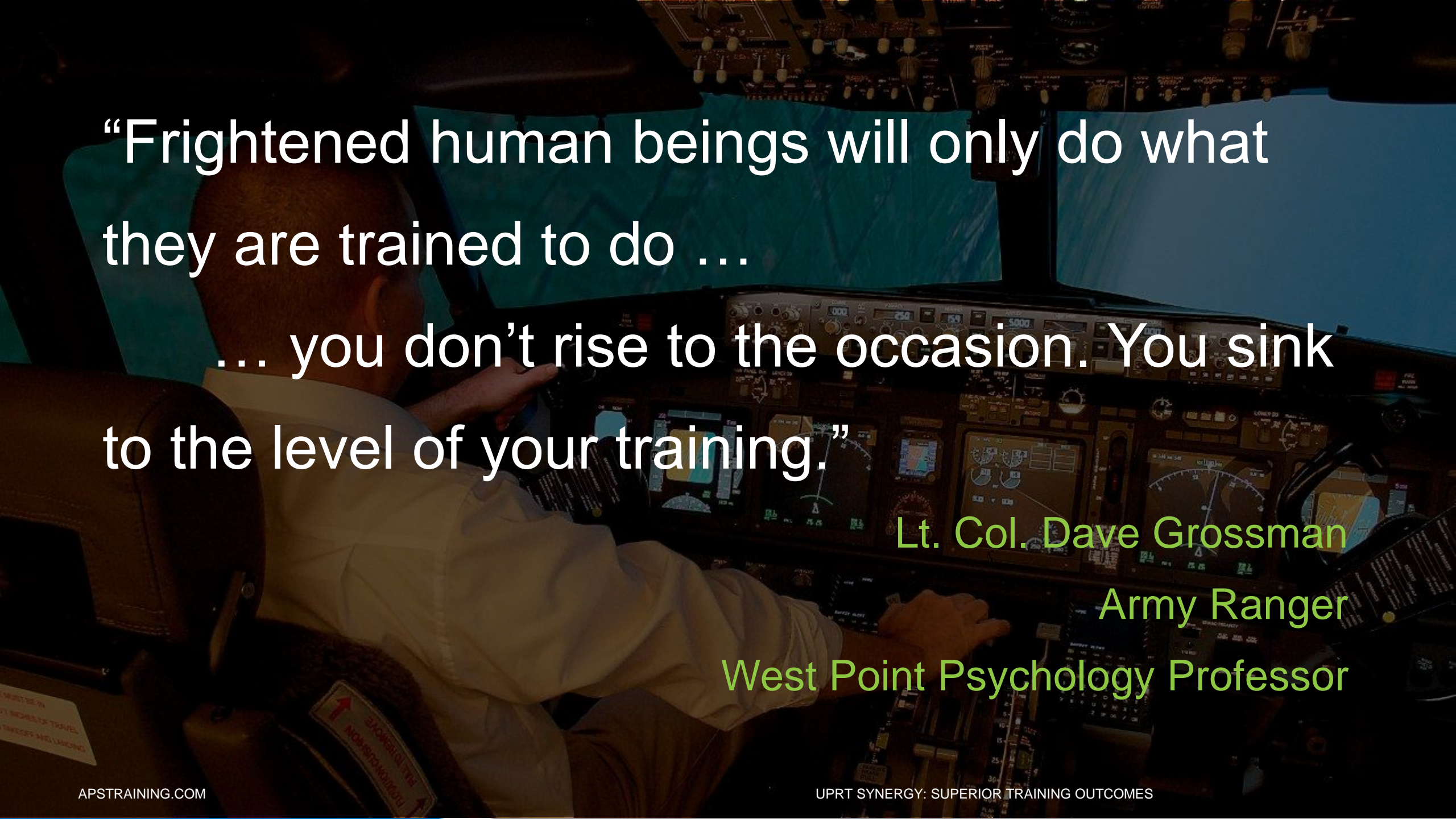
**What about the Law of Primacy?**



# Fatal Accidents | Worldwide Commercial Jet Fleet | 2013 - 2022



Boeing | A Statistical Analysis of Commercial Aviation Accidents 1958 – 2022

A photograph of a pilot in a cockpit, viewed from the side. The pilot is wearing a white flight suit and is looking out the windshield. The cockpit is filled with various instruments, dials, and screens. The background shows a blue sky and some clouds. A large white quote is overlaid on the image.

“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

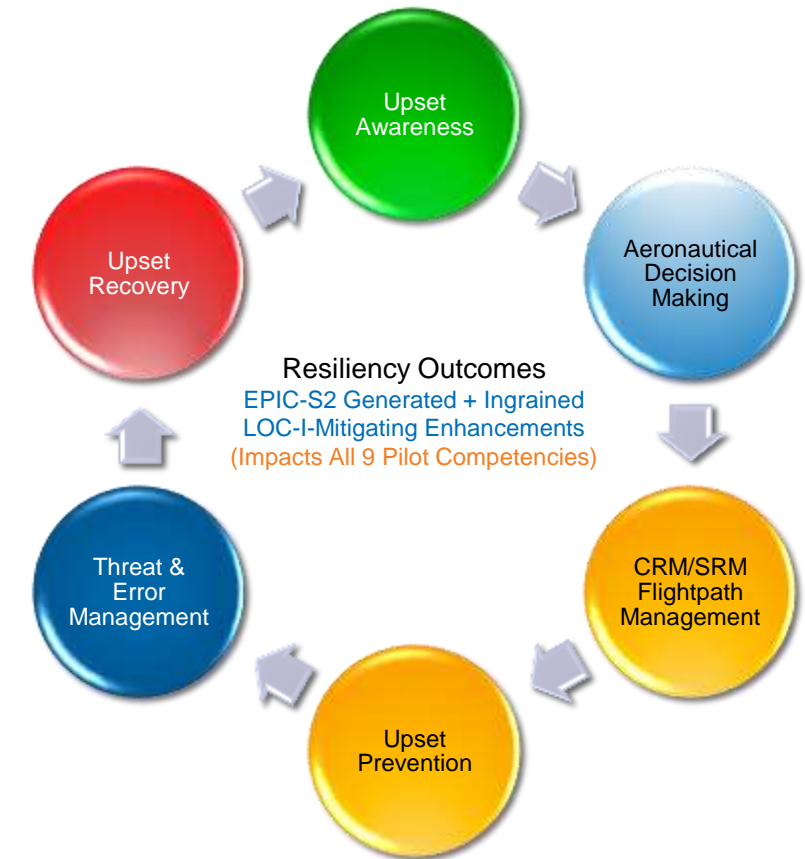
G-Awareness

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





# DELTA

Five Year, Five Million Flight FOQA Study  
Upset Prevention and Recovery Training



AVIATION  
PERFORMANCE  
SOLUTIONS



## Example of Effective Airline UPRT Implementation



### **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

# 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

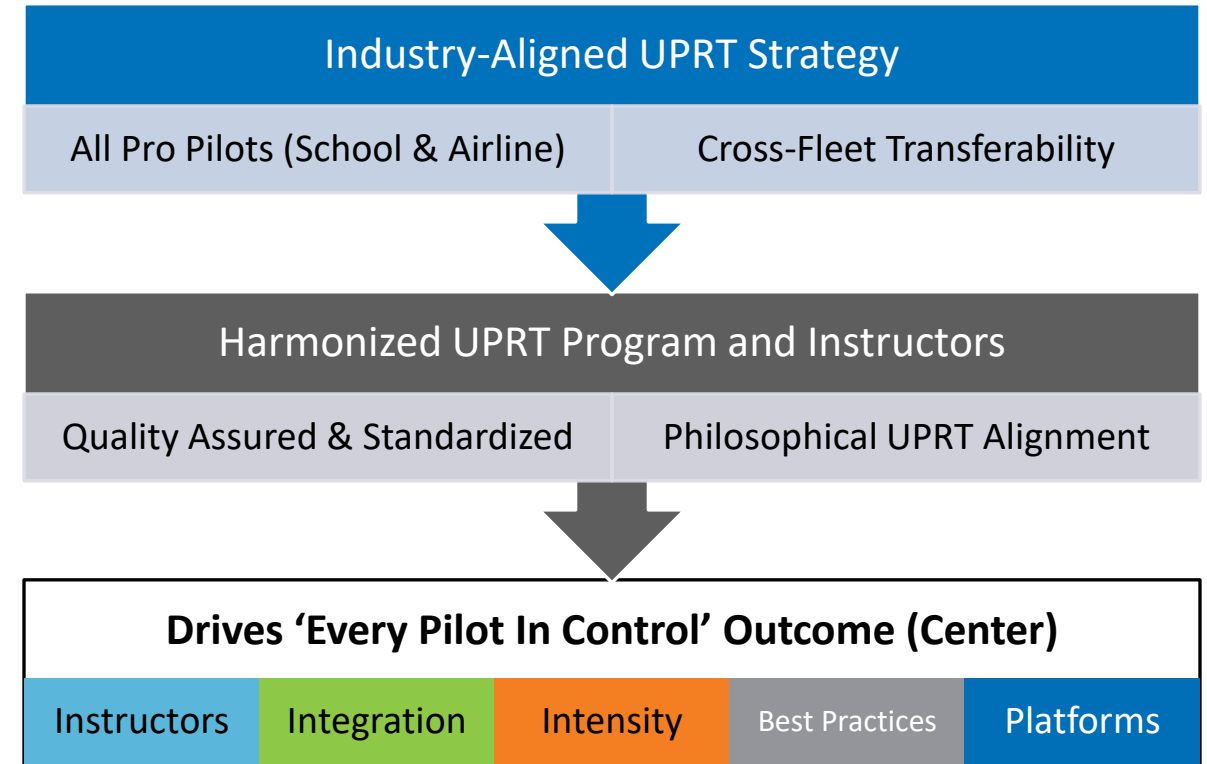
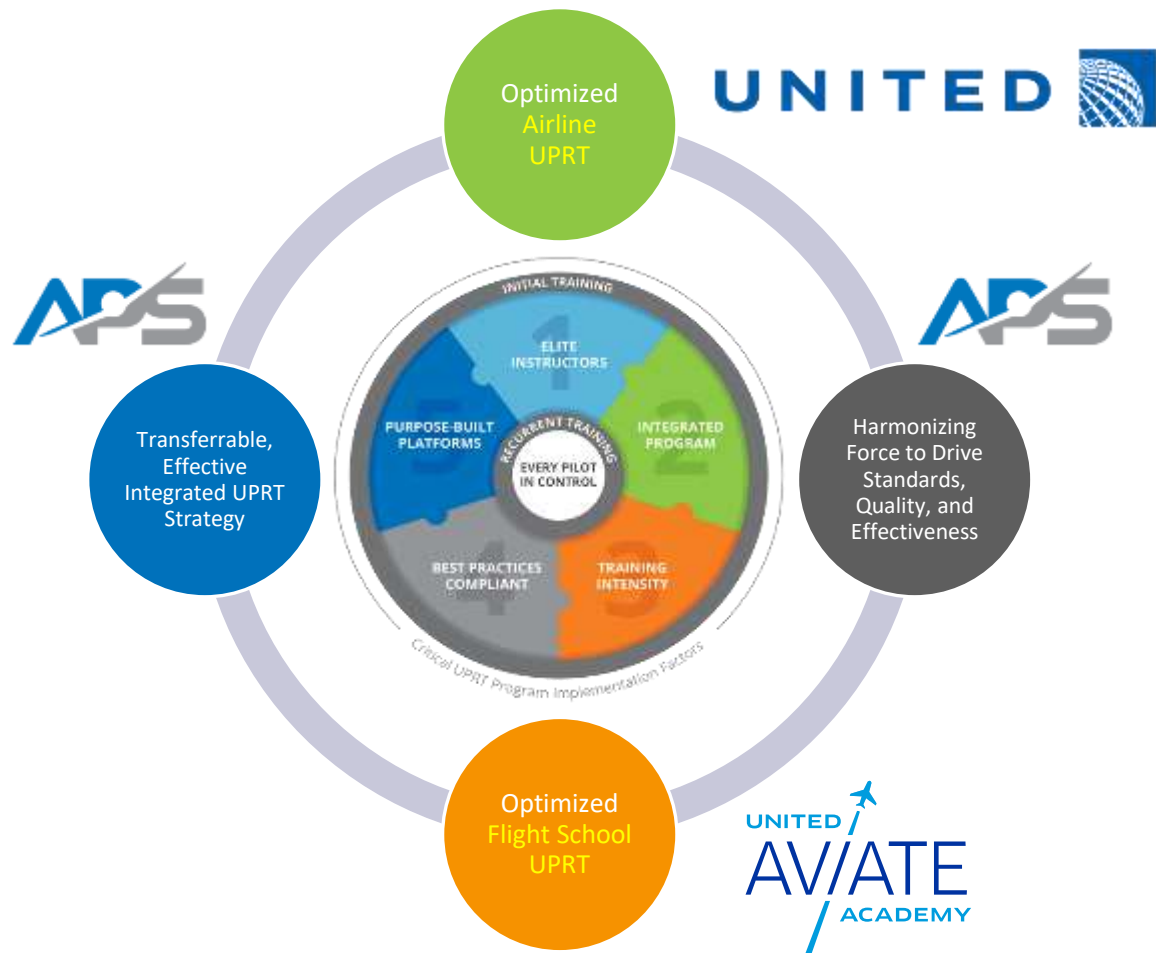


**#4**  
High  
Instructor  
Drift in UPRT  
vs Other  
Competencies



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

# Next Generation Upset Training Structure









# Every Pilot In Control

Solution Standard™



## Online Preparatory Self-Study



## 8-Critical LOC-I Mitigation Criteria

Human Factors

All-Attitude Environment Immersion

Strategy Application, Resilience in Crisis

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# Top Five UPRT 'Instructor Drift' Challenges for Airlines



**GET IT TODAY**

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Thank you for your  
attention!

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