

# Experimental- Amateur Built Policy

## FOR FAA FY 2013

**Presented to:** NTSB Experimental Aircraft Safety  
Seminar

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Federal Aviation  
Administration



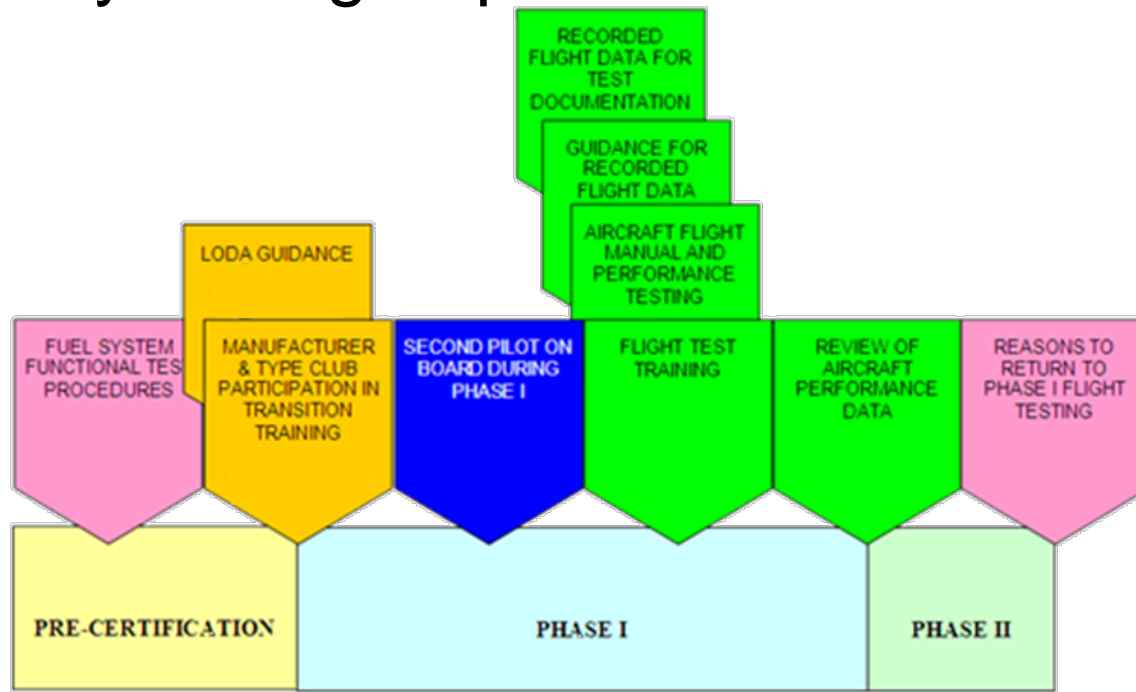
# Overview

- **Call for Safety**
- **Background**
- **Safety Statistics**
- **Phase I Safety Recommendations**



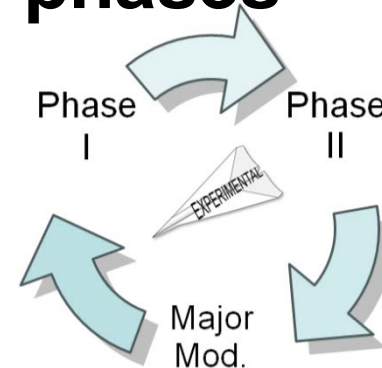
# Call for Safety

- NTSB Safety Recommendations
- FAA Safety Recommendations
- FAA/Industry Workgroups



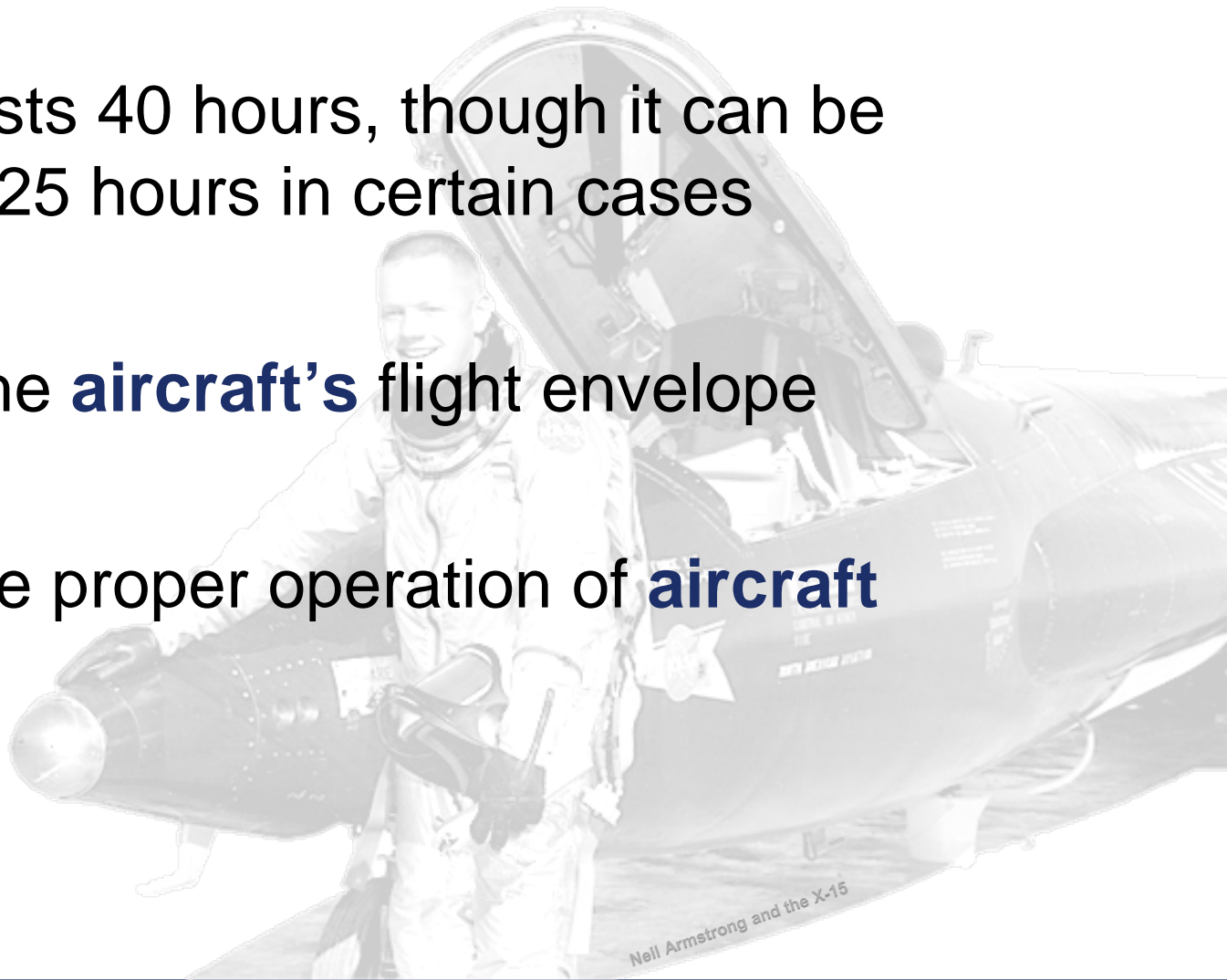
# Amateur-Built Background

- **Operating limitations are found in:**
  - Title 14 Code of Federal Regulations part(s) 61 & 91
  - FAA Order 8130.2G: changes are “non-regulatory” in nature
- **E-AB aircraft operated in two phases**
  - Phase I, Testing of aircraft
  - Phase II, Normal operations



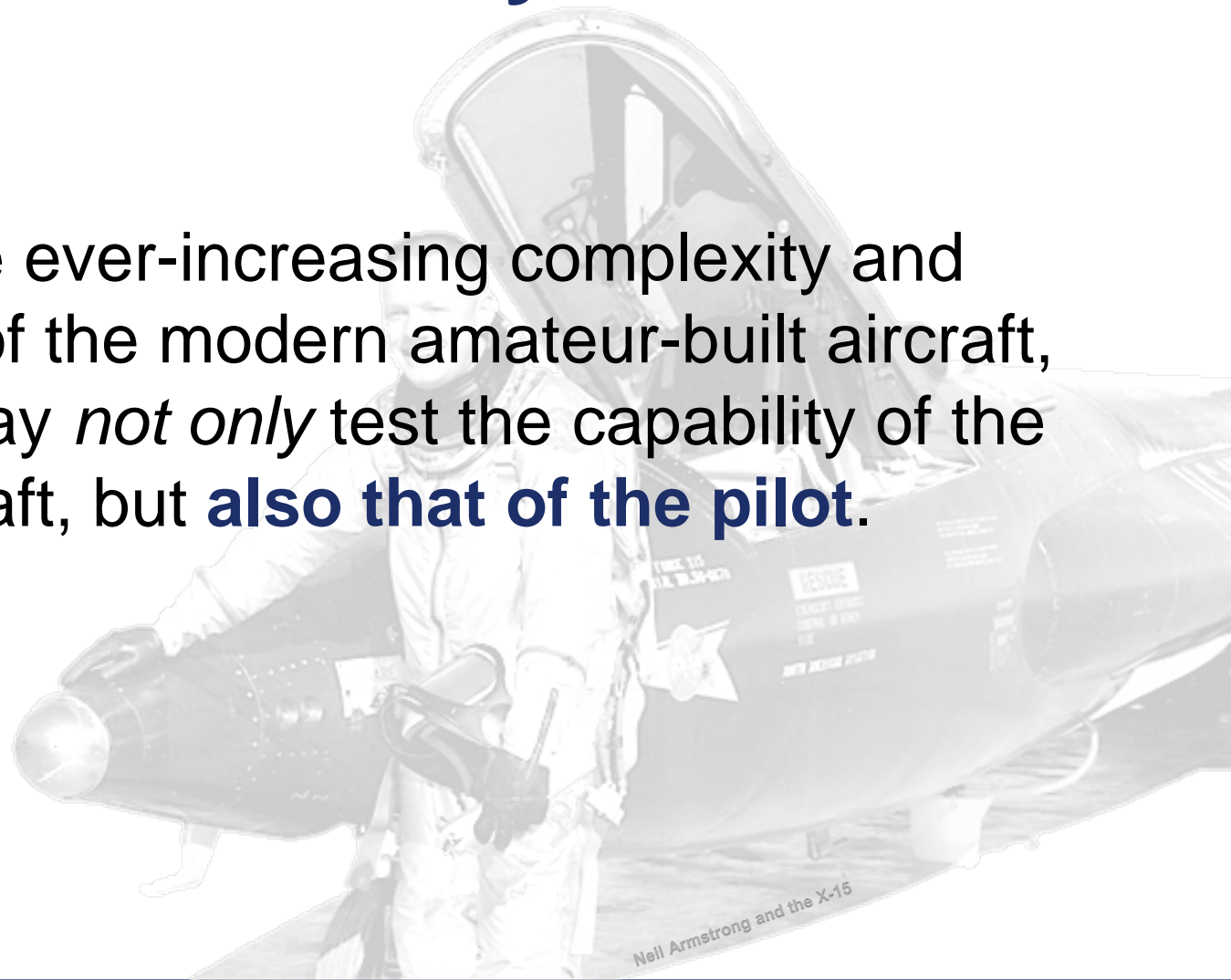
# Phase I

- Typically lasts 40 hours, though it can be reduced to 25 hours in certain cases
- Develops the **aircraft's** flight envelope
- Tests for the proper operation of **aircraft systems**



# Phase I...the “Reality”

With the ever-increasing complexity and capability of the modern amateur-built aircraft, Phase I may *not only* test the capability of the aircraft, but **also that of the pilot.**





# Increasing Phase I Safety

1. Explore allowing an additional pilot with certain qualifications to assist in Phase I flight testing of the aircraft
2. Improve pilot skills through transition training

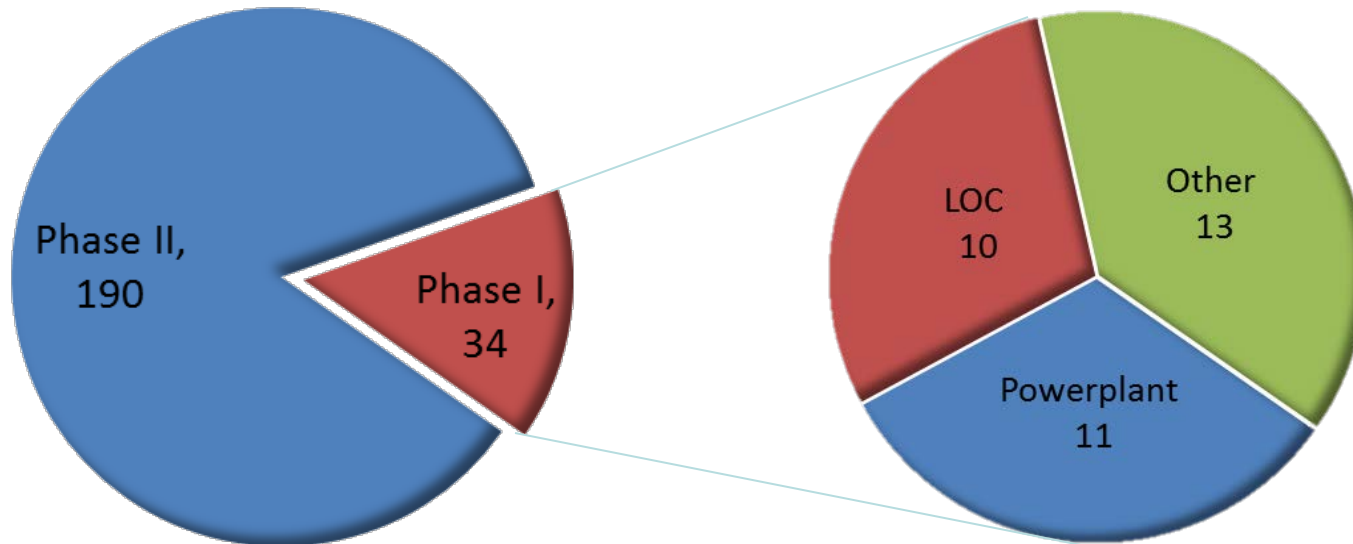


# Phase I Statistics

## 2011 Total Accidents (E-AB)

224 Total E-AB Accidents

Occurrence Category



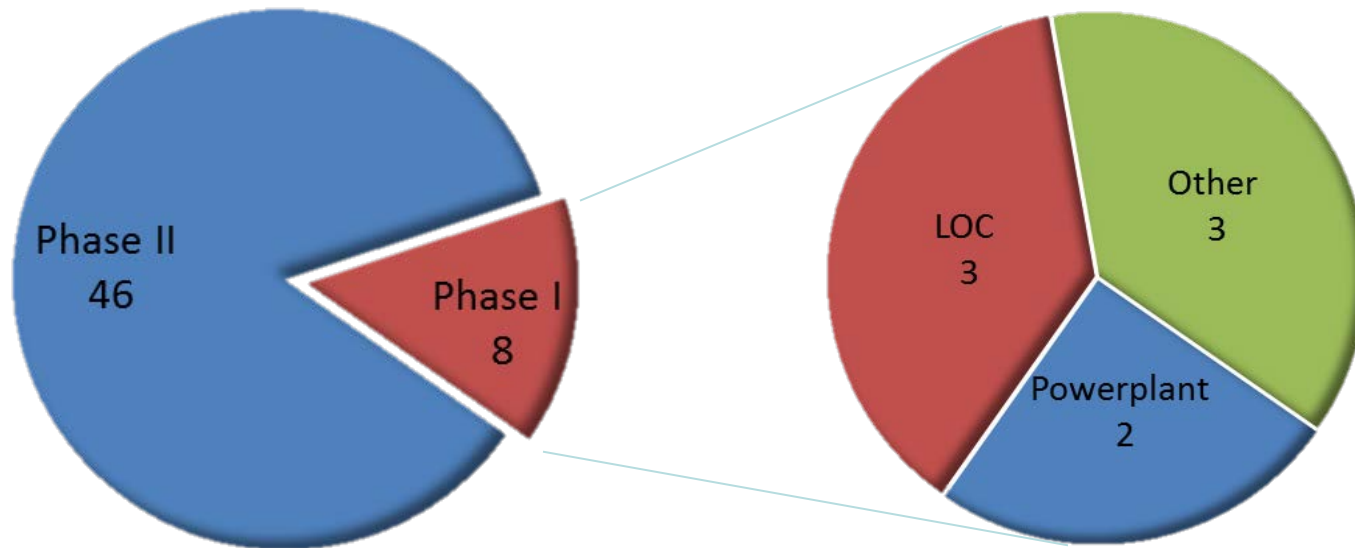


# Phase I Statistics

## 2011 Fatal Accidents (E-AB)

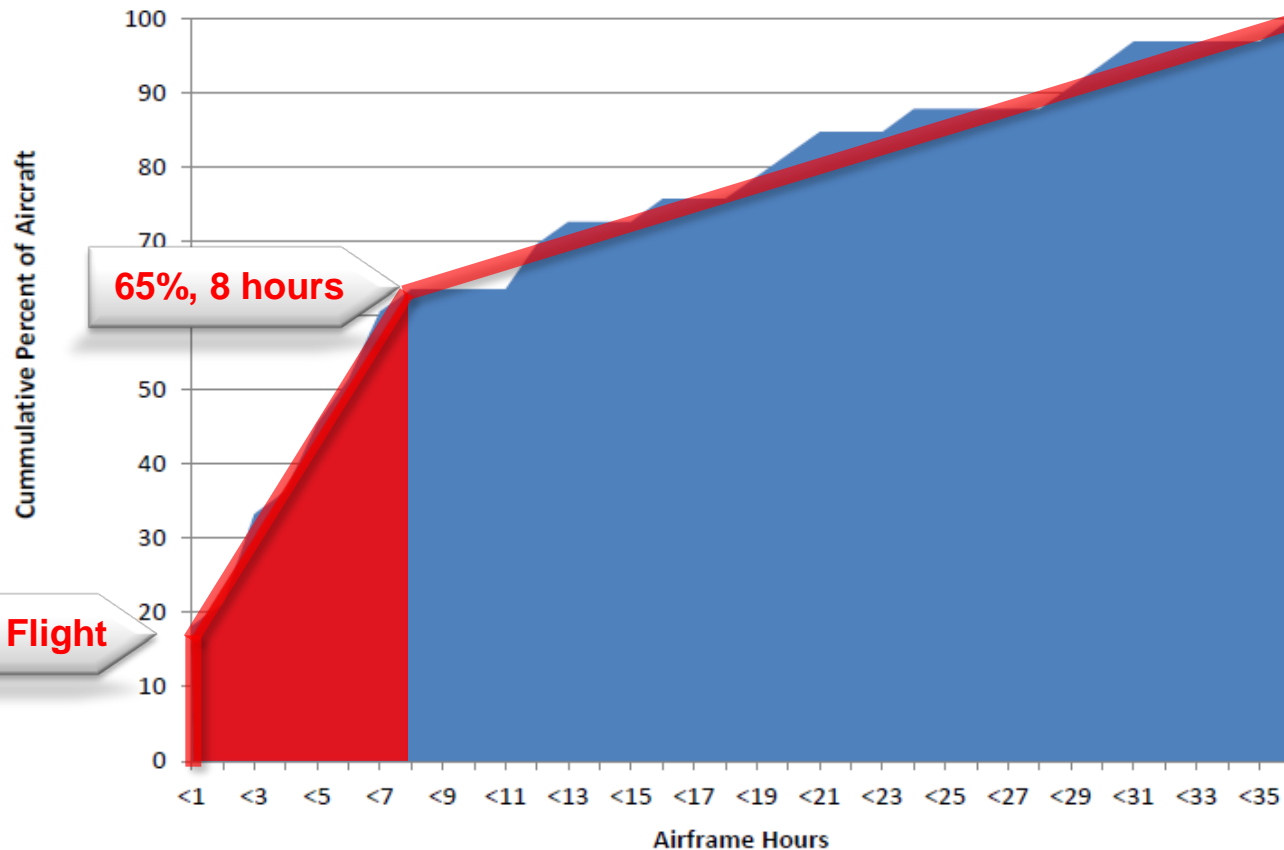
54 Total E-AB Accidents

Occurrence Category



# Phase I Statistics

**Cumulative Proportion of Phase I E-AB Accidents  
with Less Than 35 Airframe hours**

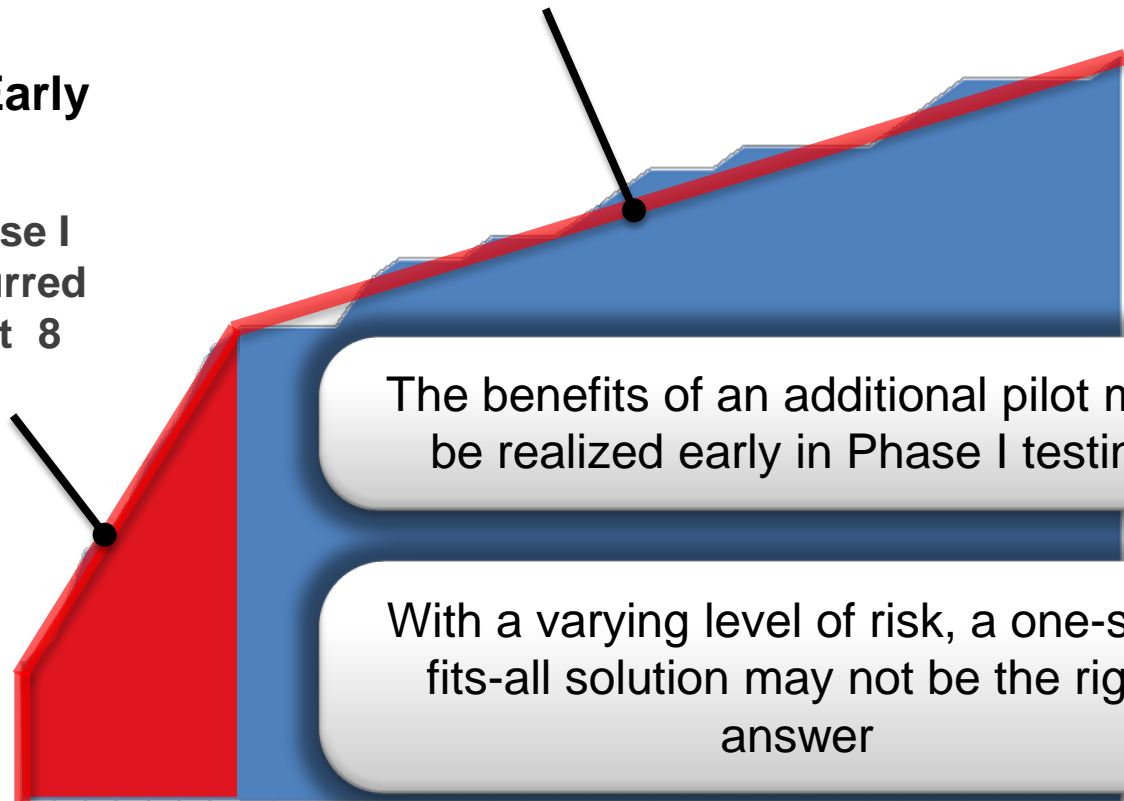


# Phase I Statistics

## Higher Risk Early in Phase I

65% of all Phase I accidents occurred within the first 8 hours

## Reduced Risk



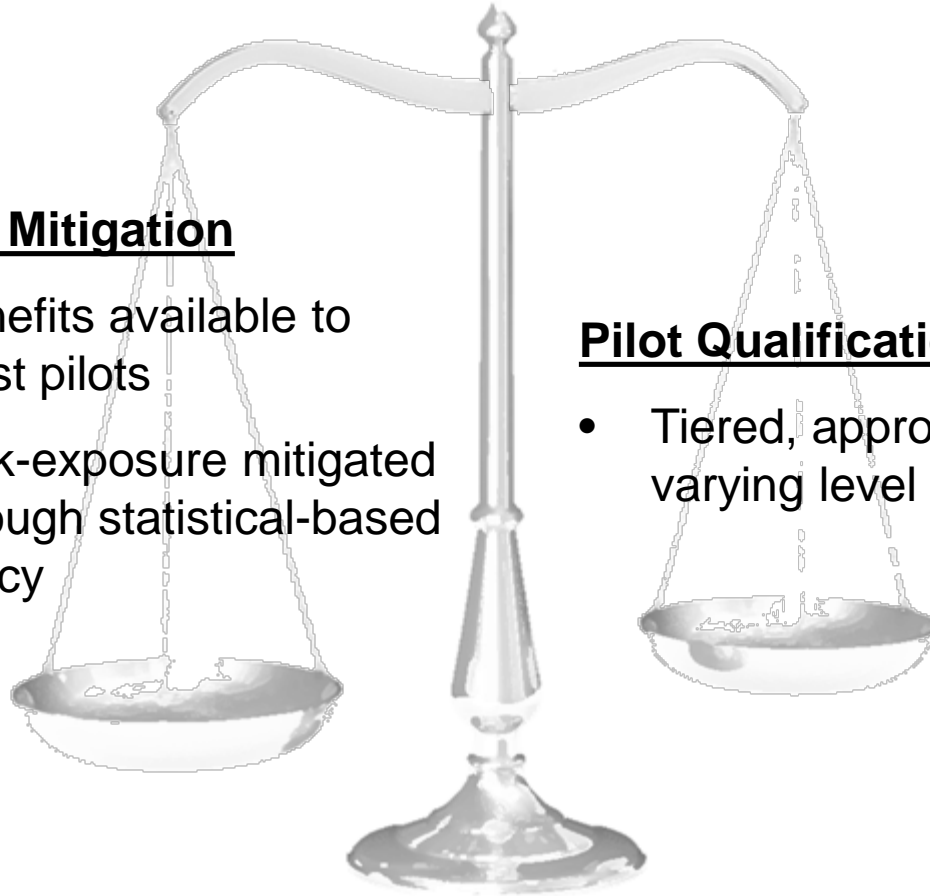
# A Balanced Approach

## Safety Mitigation

- Benefits available to most pilots
- Risk-exposure mitigated through statistical-based policy

## Pilot Qualifications

- Tiered, appropriate to the varying level of risk



# Increasing Phase I Safety

1. Explore allowing an additional pilot with certain qualifications to assist in Phase I flight testing of the aircraft

**2. Improve pilot skills through transition training**



# Publications

- **Advisory Circular 90-109: Airmen Transition to Experimental or Unfamiliar Airplanes**
  - Identifies handling characteristics for common E-AB aircraft
  - Suggests similar aircraft that can be used to obtain beneficial training when target aircraft is unavailable
  - Provides outline used generate a successful transition training program



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# Providing Training with an E-AB Aircraft

## 14 CFR §91.319: Aircraft having experimental certificates: Operating limitations.

- No person may operate an aircraft that has an experimental certificate **carrying persons or property for compensation or hire.**
- The FAA may issue deviation authority using a **letter of deviation authority (LODA)** for the purpose of conducting flight training.



# Acceptable Training for a LODA

- **Flight training for the operation of a specific make and model** of experimental aircraft.
- Training for the **operation of ultralight vehicles** only when conducted in low-mass, high-drag aircraft with an empty weight less than 500 pounds and a maximum speed in level flight with maximum continuous power (VH) less than 87 Knots Calibrated Airspeed (KCAS).
- **Jet unusual attitude and upset training.**
- **Instrument competency training** for specific make and model of experimental aircraft.
- **Training for a flight review** in a specific make and model of experimental aircraft.
- **Formation training** for a specific make and model of experimental aircraft.
- Training for a **rotorcraft gyroplane rating or certificate.**
- Training for a **Sport Pilot Certificate or operating privilege**
- Other specific training approved by the General Aviation and Commercial Division, AFS-800.



# LODA Application Process

- 1. Contact the FAA and provide intentions**
- 2. Create an application package that contains a description of:**
  - Visual aids used
  - Flight simulator or flight training device (FTD) used
  - A description of any special equipment used for each phase of training;
  - The qualifications and ratings for each instructor providing flight training or ground training; and
  - A training outline
- 3. The FAA reviews the submission**
- 4. Aircraft not inspected in accordance with an FAA-approved inspection program must have an operating limitation requiring a condition inspection within the preceding 100 hours of time in service.**



# Questions?



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