

# COE TTHP Fourth Annual Technical Webinar Meeting

**TASK# HF-015:**

**EFFECTIVE TRAINING AND CHECKING METHODS  
FOR THE EMERGING PILOT WORKFORCE**

**PRINCIPAL INVESTIGATOR:**

**James Birdsong, PhD**

**STUDENTS:**

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**Center of Excellence for  
Technical Training &  
Human Performance**

# FAA Project Scope

- The purpose of this research is to provide scientific and technical data on effective training and checking methods for the **current and projected pilot workforce**, with emphasis on **pilot information management, decision-making, command judgment**, and **flight path management**.
- Data will support updates to guidance for FAA inspectors and operators.
- Data-driven training guidance based on the findings of the research may be added to FAA regulations.

# Objectives

1. Assess current practices and learning methods for current and next generation of pilots.
2. Provide scientific and technical data to support recommendations for training the emerging pilot workforce.

# Team

## FAA

Kathy Abbott, PhD – Chief Scientific and Technical Advisor for Flight Deck Human Factors – Executive Sponsor

Barbara Adams – Management and Program Analyst – Co-sponsor

Chuck Perala, PhD – Program Manager, NextGen Human Factors

## Auburn University

### Aviation

James Birdsong, PhD - PI

Kurt Reesman

Carl Thompson, Captain (Ret), Delta

David Miller, Captain (Ret), American

### Psychology

Ana Franco-Watkins, PhD

### Adult Education

Jim Witte, PhD – EFLT

### Kinesiology

Matthew Miller, PhD

JoEllen Sefton, PhD

## Industry

Virtual Flight Academy  
AI Partner

Delta Air Lines

# Auburn University

- Economics are driving change to how we develop pilots in the US
- R1 university, interdisciplinary research team
- 75+ years of flight education
- Elevated opportunities with A320
- Lead = James Birdsong, PhD, Aviation Program Coordinator

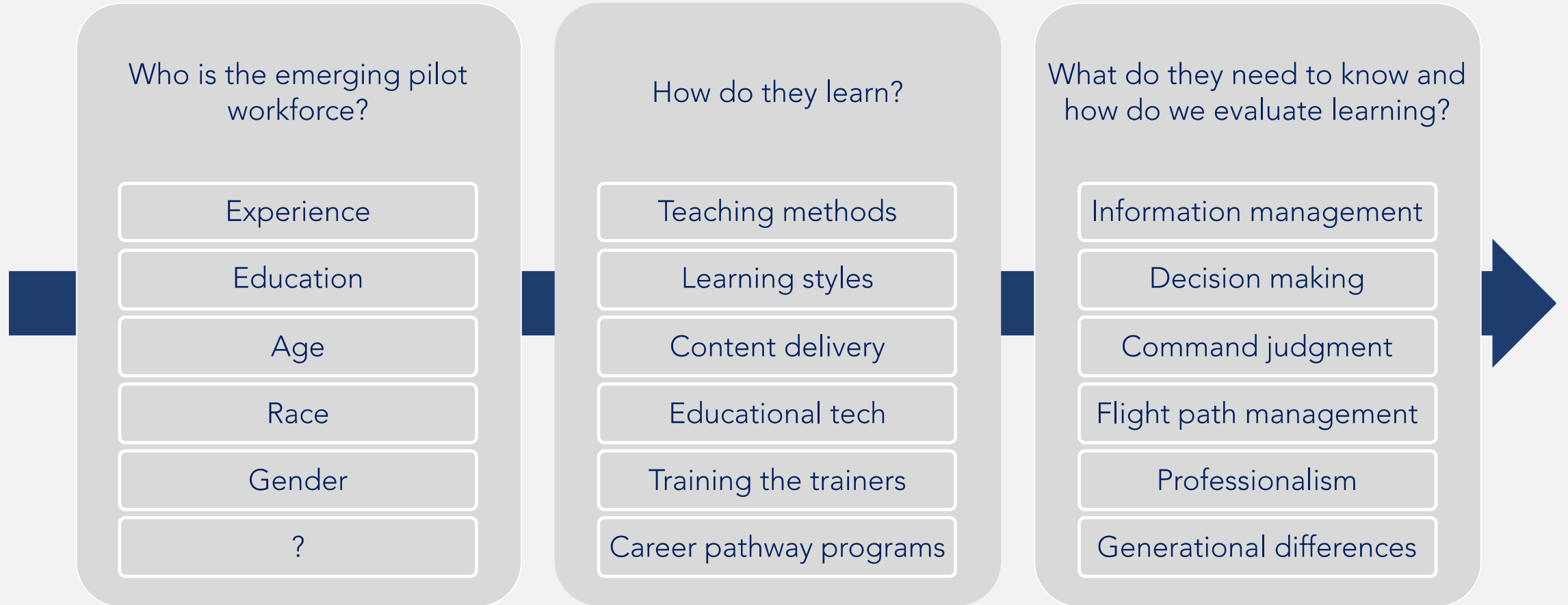
# Virtual Flight Academy

- Long history of working with military
- “Heisman Trophy” model
- Left shift (military, general, and commercial aviation)
- Artificial Intelligence (AI) partner selection
- Remote instructor pilots (RIPs)
- Lead = Flack Maguire, Founder, Chairman and Executive Director

# Delta Air Lines

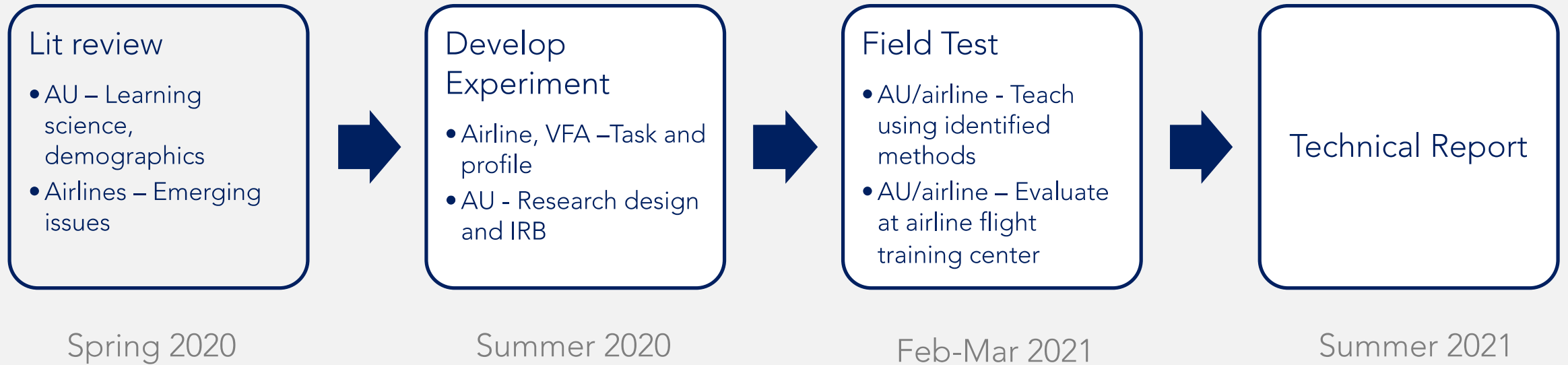
- SME: Part 121 training and checking
- Emerging issues
- Generational differences
- Task, profile selection
- Research design
- Testing and evaluation
- POC = Captain Chris Frederick, Director of Flight Training

# Research Questions





# Flow



# Milestones

M1 + M2 inform M3

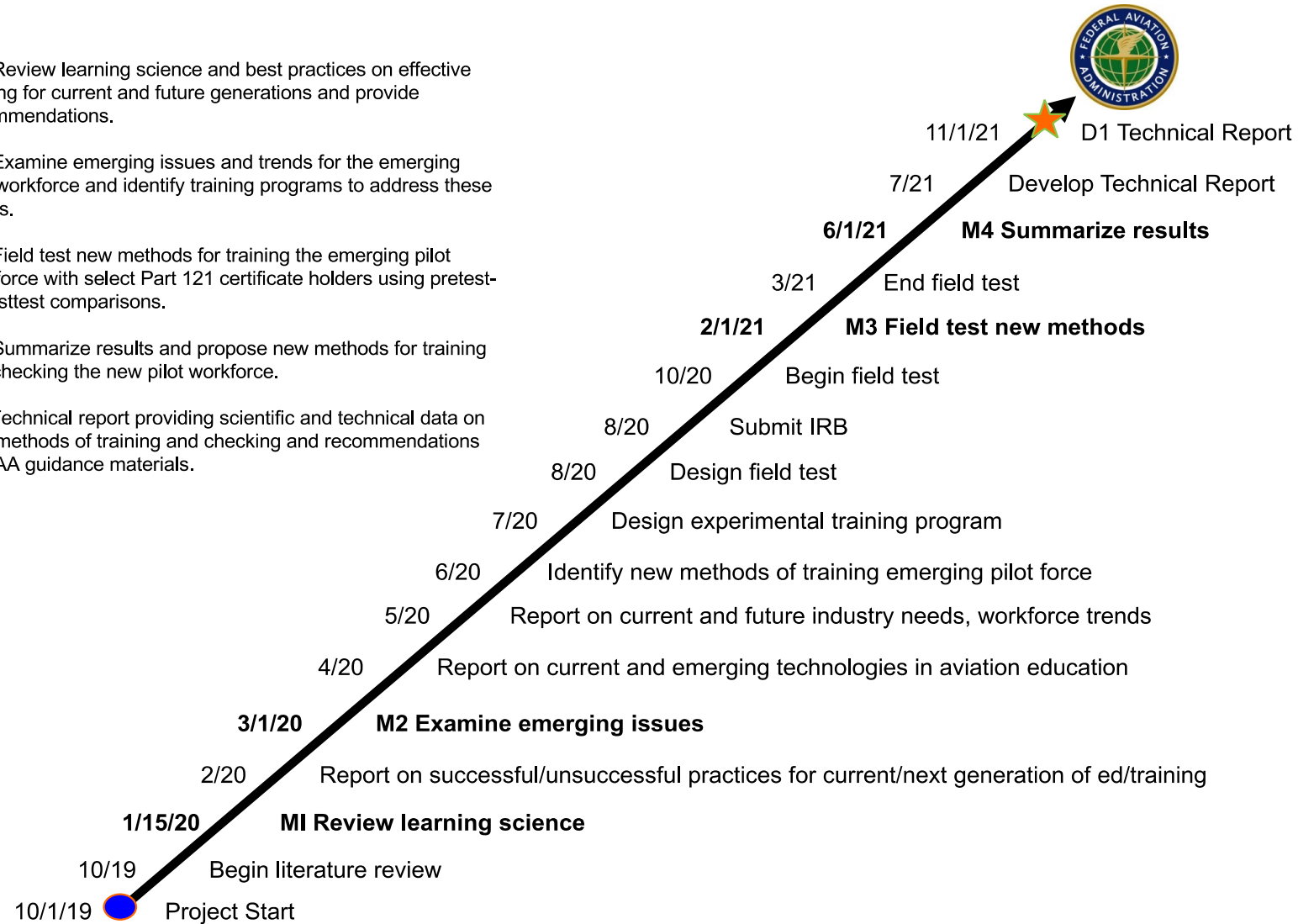
M1: Review learning science and best practices on effective training for current and future generations and provide recommendations.

M2: Examine emerging issues and trends for the emerging pilot workforce and identify training programs to address these issues.

M3: Field test new methods for training the emerging pilot workforce with select Part 121 certificate holders using pretest-to-posttest comparisons.

M4: Summarize results and propose new methods for training and checking the new pilot workforce.

D1: Technical report providing scientific and technical data on new methods of training and checking and recommendations for FAA guidance materials.



# Questions?

For more information, please contact  
Dr. James Birdsong at [jgb0013@auburn.edu](mailto:jgb0013@auburn.edu).

