

# COE TTHP 5<sup>th</sup> Annual Virtual Administrative Meeting

Explore Use of Gamification for Training

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

# Project Purpose

Model the application of gamification, game-based learning (GBL), and simulation/virtual and augmented working environments (VR) to provide state-of-the-art training solutions to Aviation Safety Training.

# Project Goals

1. Complete a comprehensive review of current use of gaming/VR, virtual environments, task trainers and simulators in aviation safety training, in the civilian and military environments
2. Determine successful/unsuccessful components of gaming/VR use in training
3. Develop a prototype of a simulated work environment for a common training task
4. Develop assessment methods and outcomes for the prototype and for future gaming/VR training environments



**Innovative, Interactive,  
State-of-the-Art Training**

**Multiple delivery methods:**

- ✓ VR
- ✓ Desktop
- ✓ Mobile devices

# Project Impact

- Innovative training is one key to attracting top talent
  - Dynamic, strategic training creates flexible, critical thinkers able to quickly respond, improving efficient use of airspace and improved safety
  - FAA can lead through state-of-the-art training
  - The 'workforce' and training is the most critical piece of the NAS future
- SafeSkies:
  - Nimble and adaptable, integrating with current training and compatible with other software, systems and technologies
  - SafeSkies platform is easily updated, with new scenarios added to address unforeseen circumstances and new challenges (e.g. UAS)
  - New systems and NAS procedures can be immediately implemented into training, decreasing time to full implementation

# VR Demo at Wittman Regional Airport (KOSH)

## Start in the ATC lounge

- Talk to a local ATC to learn more about the game
- Explore ATC learning resources
- Learn how to use the controller, change the scenario, visit the hangar, tower, or tarmac

## Visit hangar

- Talk to 3 different pilots to learn aircraft specifications
- Ask questions about specific game aircraft

## Join ATCs in the tower

- Take a quiz to demonstrate proficiency
- Take over from the ATC in charge
- Talk to aircraft in the pattern
- Land aircraft, interact with ground vehicles and test your skills
- Compete with yourself or classmates for the top of the leaderboard





- Force multiplier for instructors and resources
- Allows students and instructors to see/work on problem areas
- Students gain as much practice time as they want
- ‘Downtime’ becomes productive practice time – anywhere
- Competitive gaming encourages interest, practice and skill building
- Enables ATCs to review infrequently experienced scenarios (e.g. snow in ATL)
- Innovative, state-of-the-art training attracts high quality and diverse students





# Questions?





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