

# Feasibility of Performance-Based Training Programs for Combat Aircraft Pilots

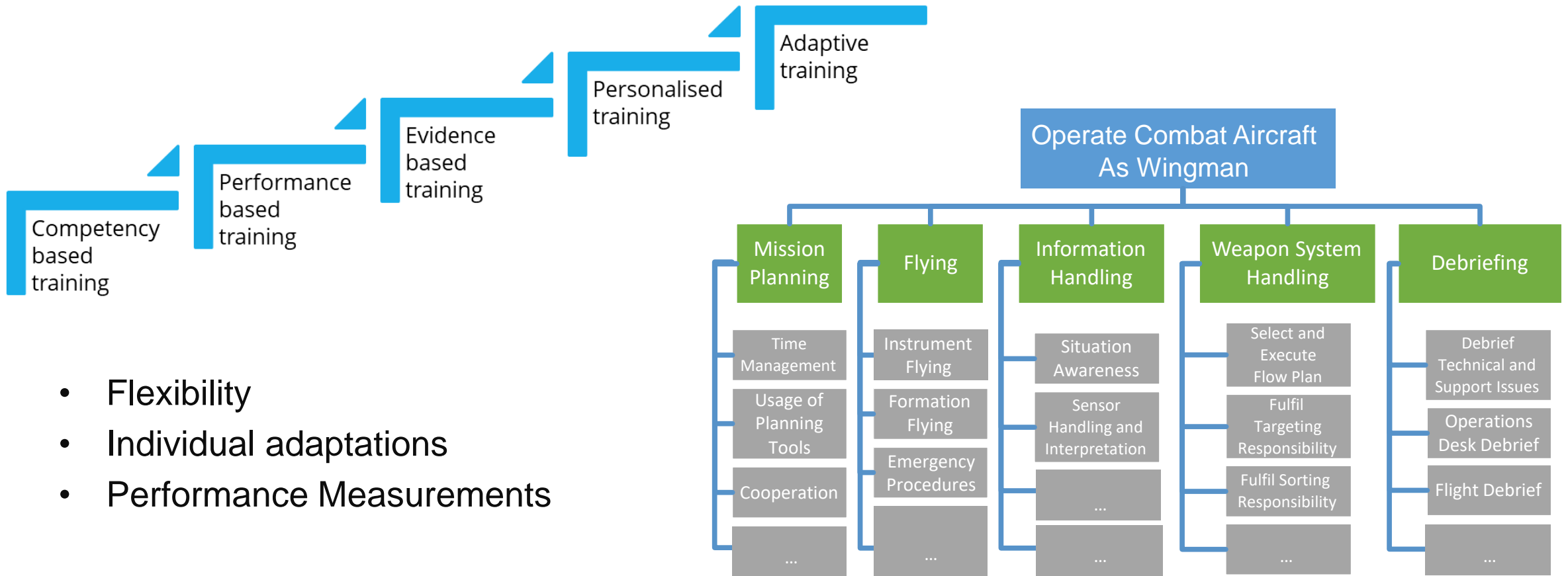
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# Outline

- Performance-Based Training
- Simulation tool for training analysis (TREFF)
- Test case
  - Training requirements
  - Training program
  - Simulation results



# Performance-Based Training

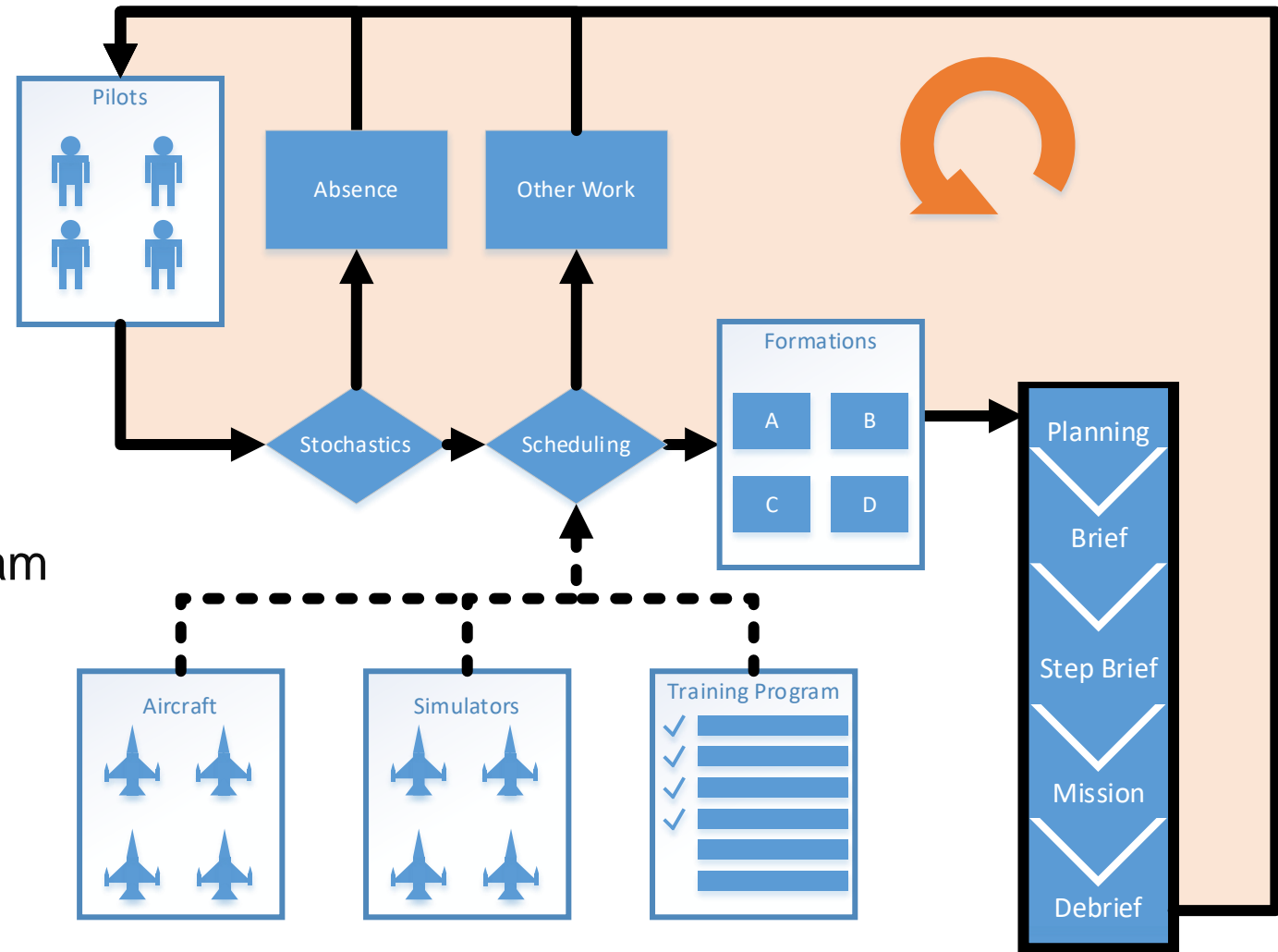


- Flexibility
- Individual adaptations
- Performance Measurements

# TREFF

**Aim:**  
Evaluate feasibility of  
annual training program

- Currency-based training program
- Activity breakdown
  - Brief, flying, debrief, ...
- Stochastic factors
  - Weather, absence, ...



# Joint Approach

- Feasibility of PBT requirements
- Analyse training programs
- Evaluate alternative training systems
- Scheduling algorithms

# Test Case

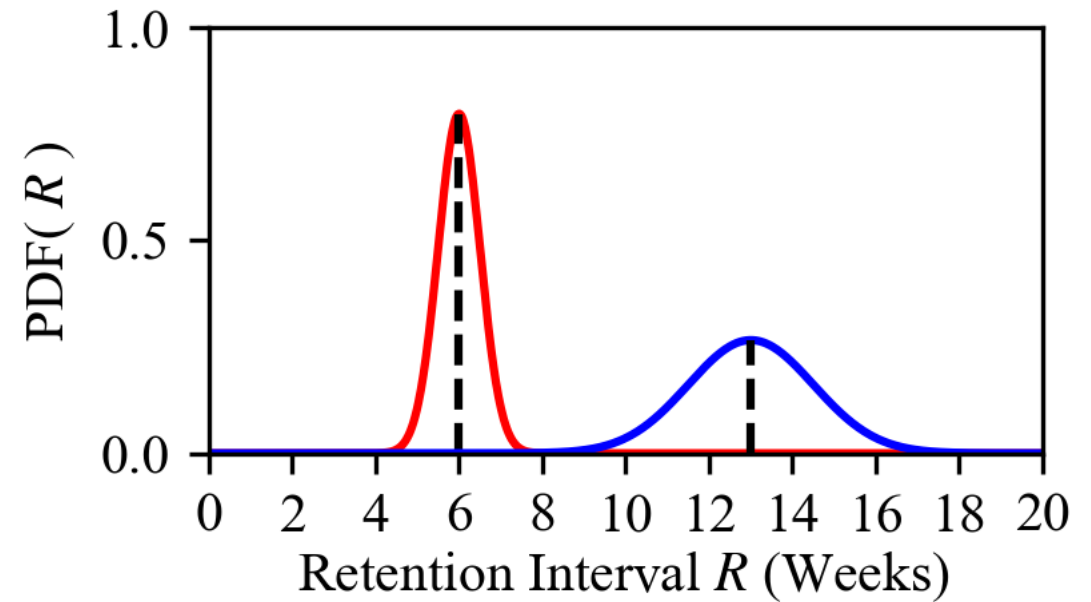
- Example data
- Competency-based (retention intervals)
- TREFF simulation

**FFI**

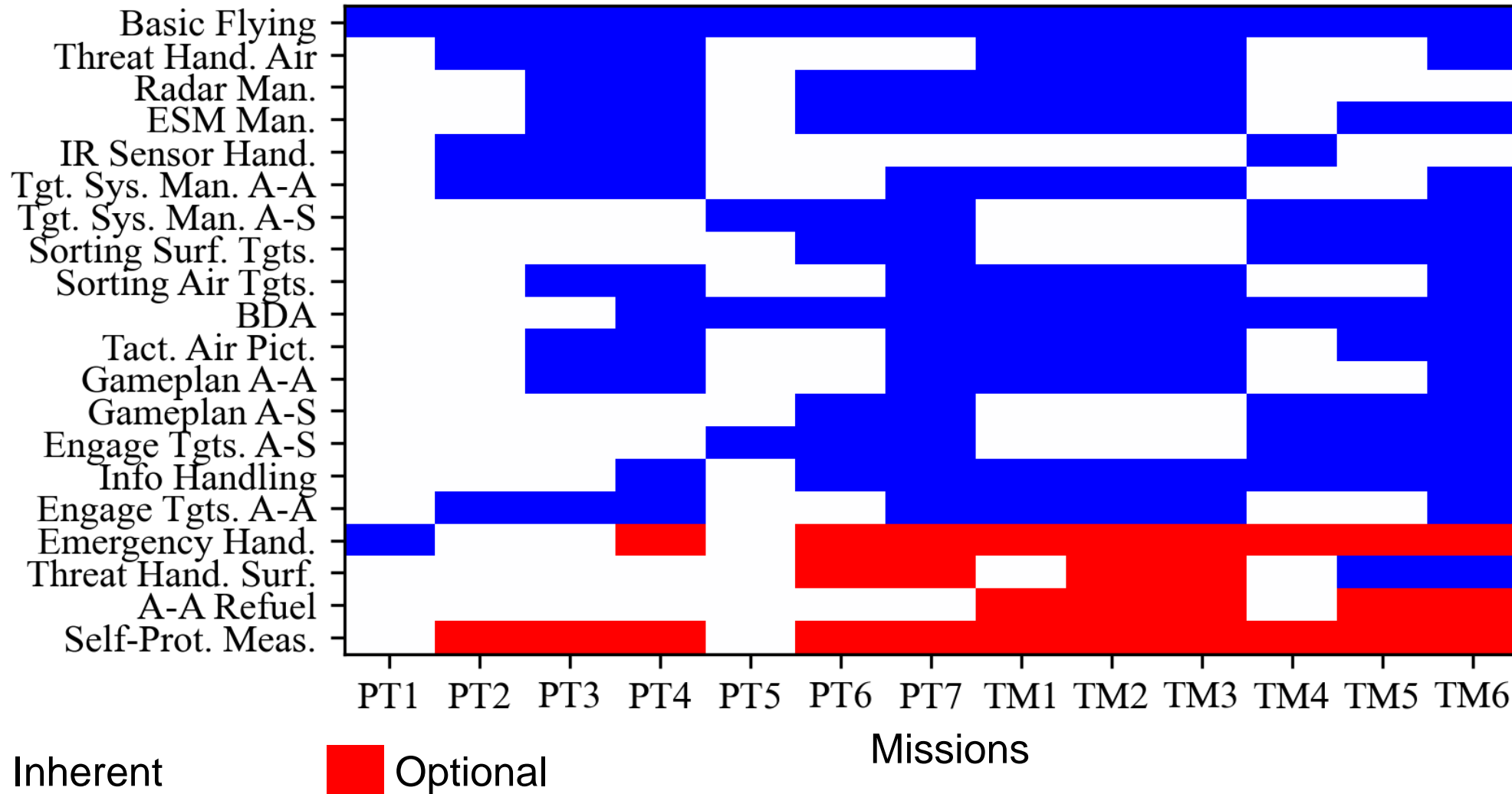


# Competency-Based Training Requirements

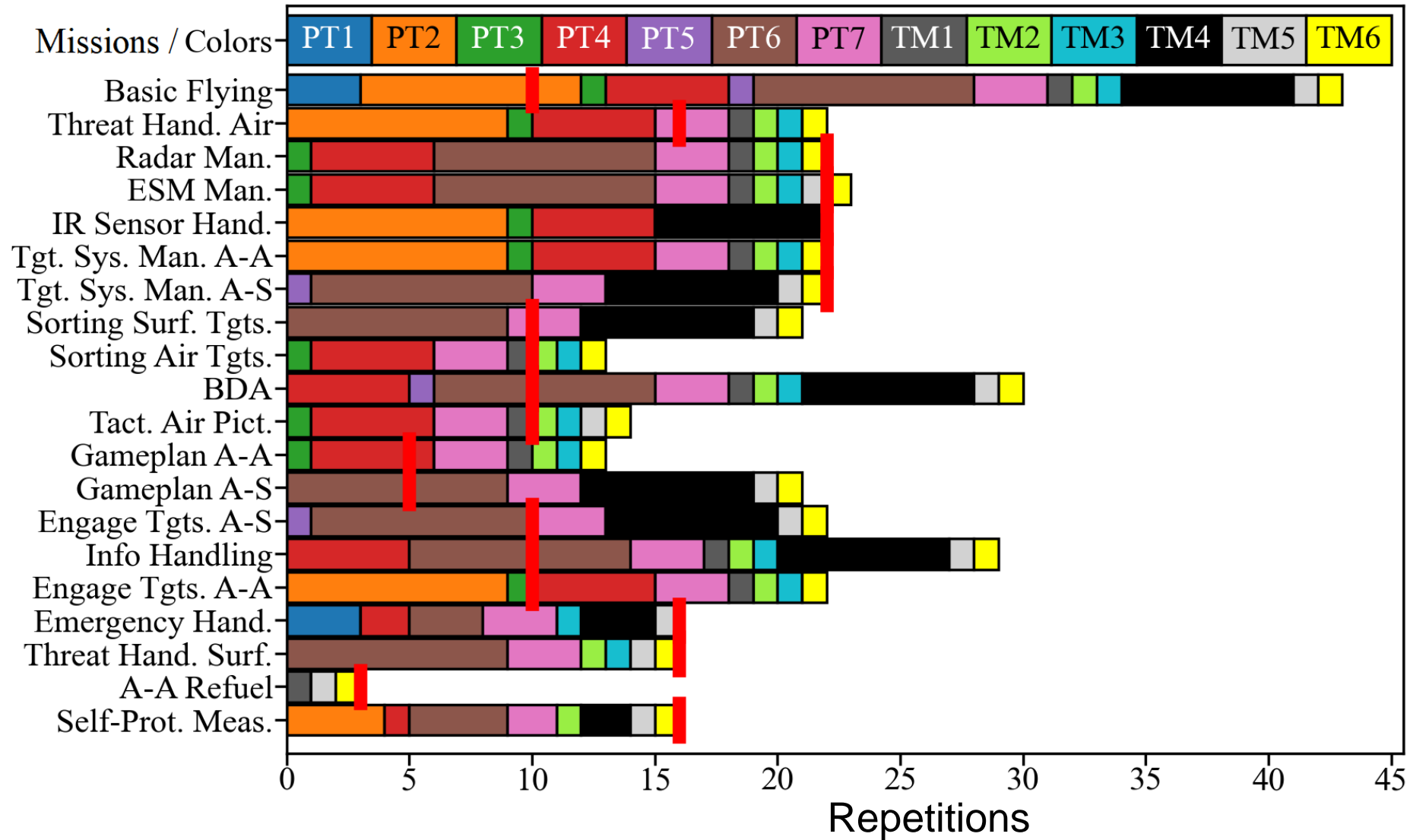
- Missions
- Competencies
- Complexity factors
- Retention intervals



# Mission-Competency Mapping



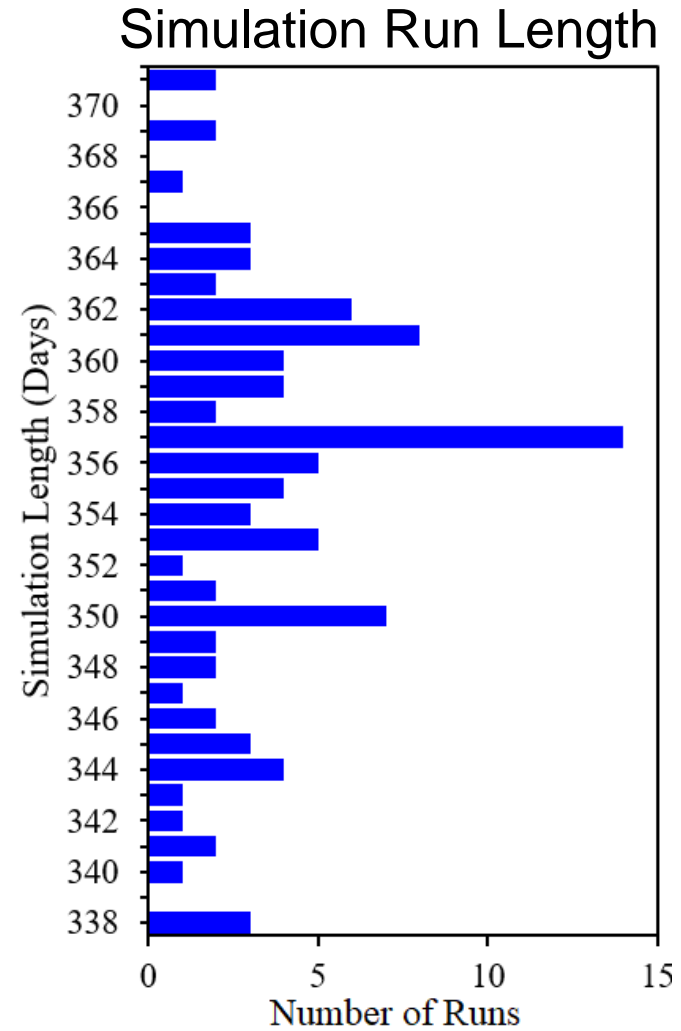
# Training Program



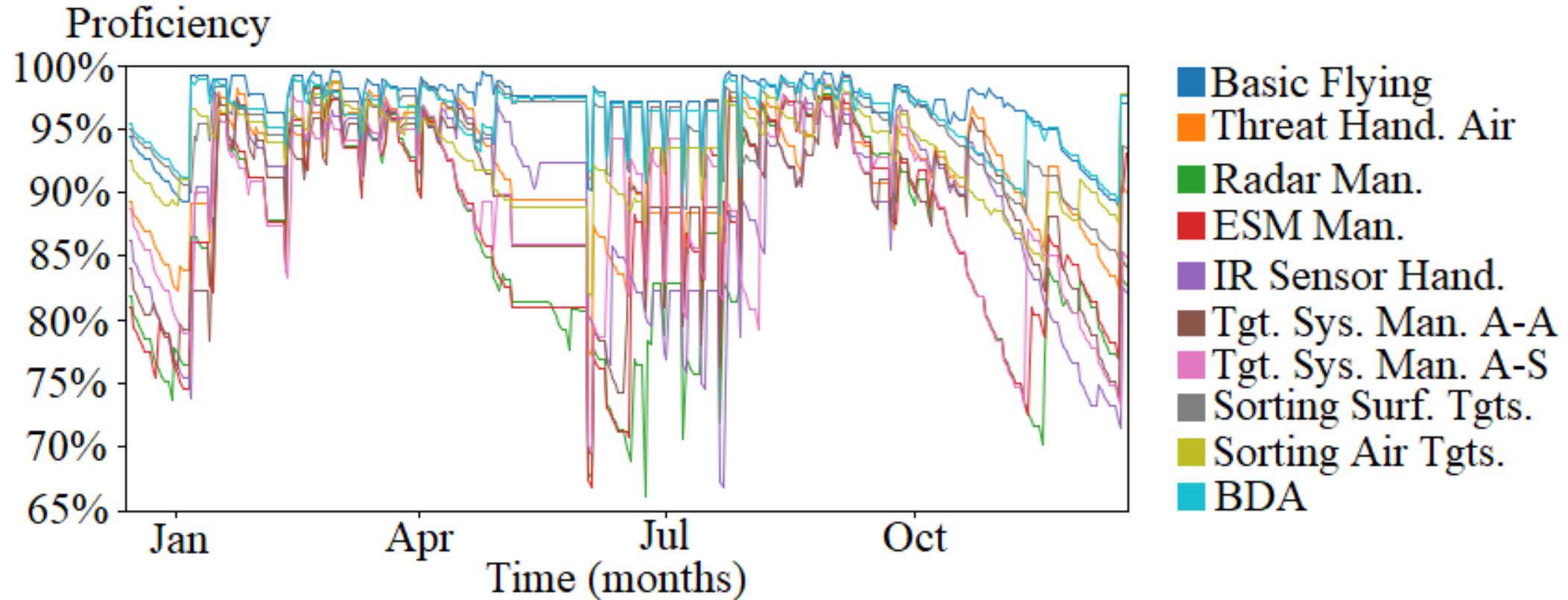


# Simulation Results

- Activity breakdown
- Repetitions per mission
- Aircraft utilization
- Simulator utilization
- Mission completion dates
- Formation sizes
- ...

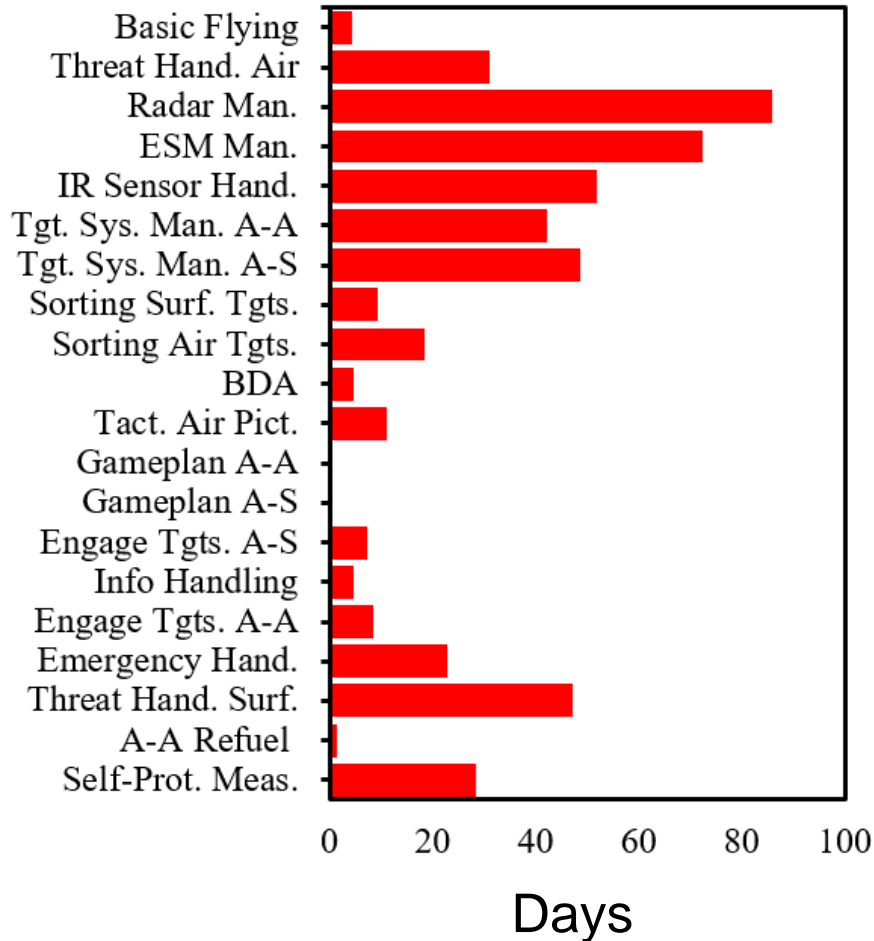


# Proficiencies (minimum among the pilots)

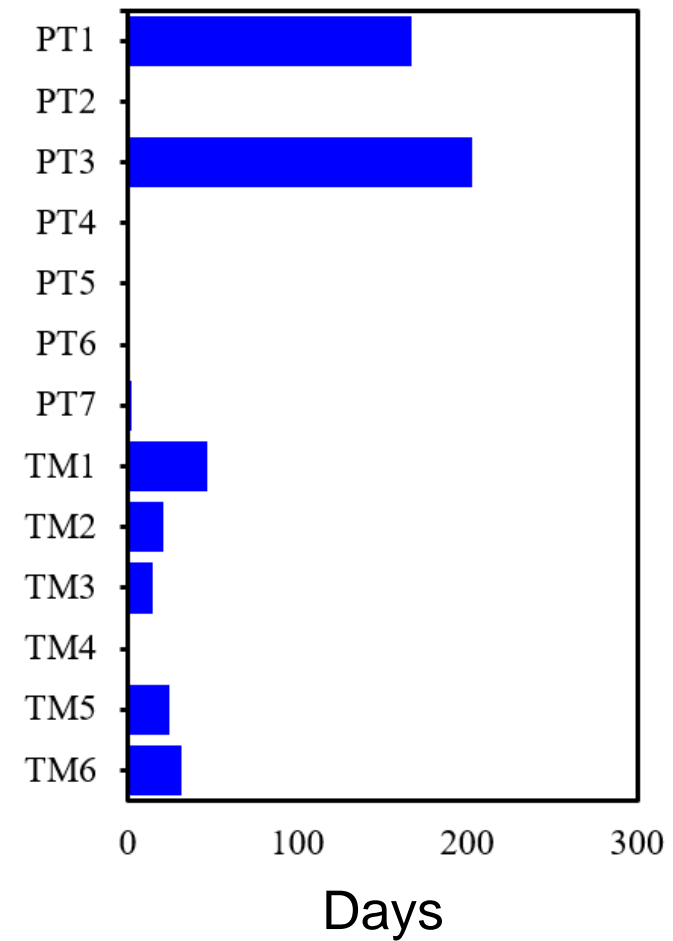


# Proficiencies below 90%

## Competencies



## Missions



# Summary and Outlook

- Joint Approach
  - Performance-based training
  - Discrete-event simulations for training analysis
- Test Case
  - Feasibility of competency requirements
  - Identify problematic requirements
  - Starting point
- Outlook
  - Competency breakdown
  - Operational requirements
  - Performance measurements