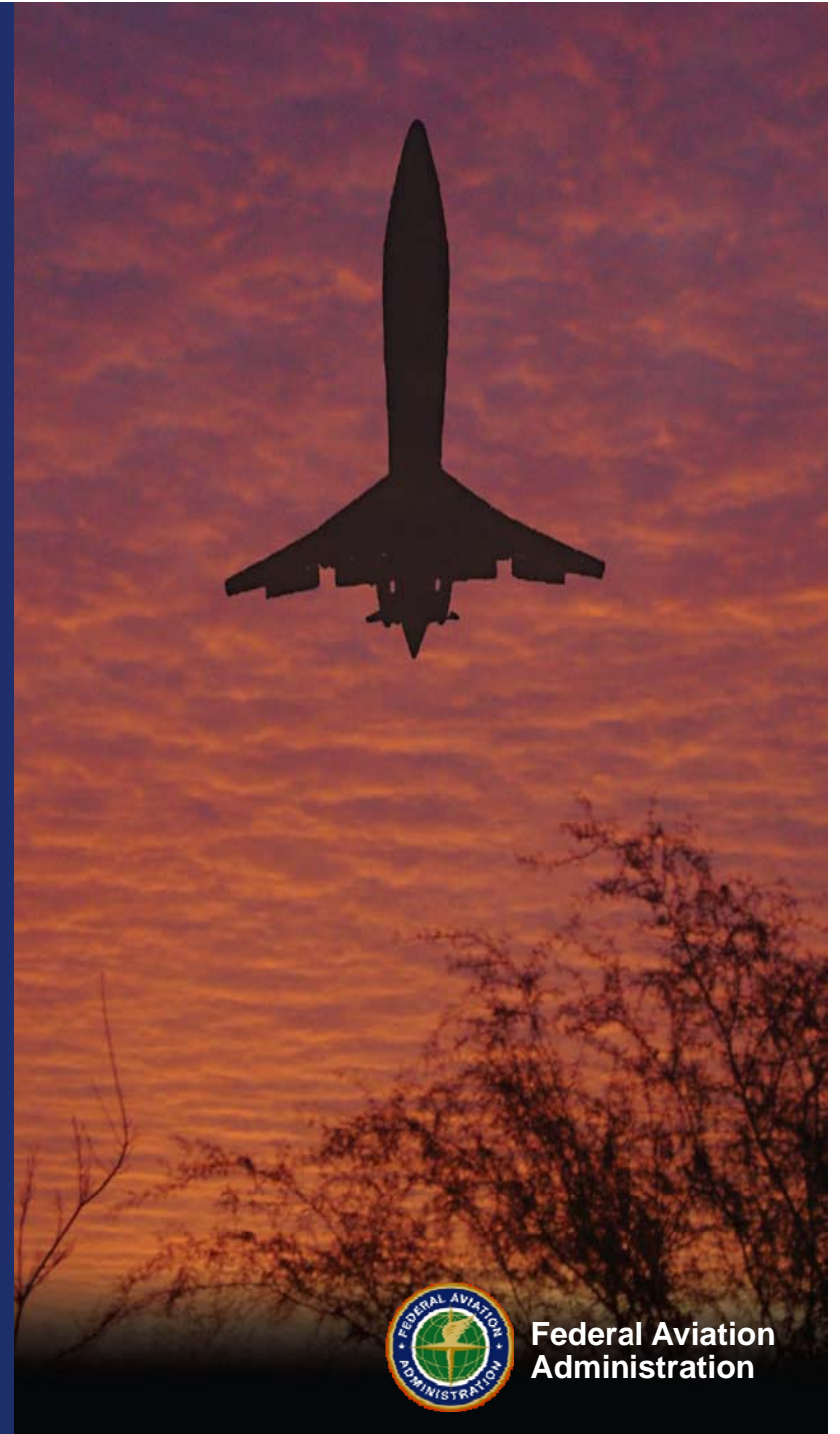# FAA ACADEMY

Addressing the Shortage of Air Traffic Control Professionals in the United States

Presentation to: Next Generation Aviation Professionals Symposium

By: Gary Condley, Superintendent, FAA Academy

Date: March 2010

Federal Aviation Administration

Overview

- Background

- Air Traffic Controller Workforce Planning

- Selection

- Collegiate Partnerships

- Employee Orientation

- Air Traffic Training

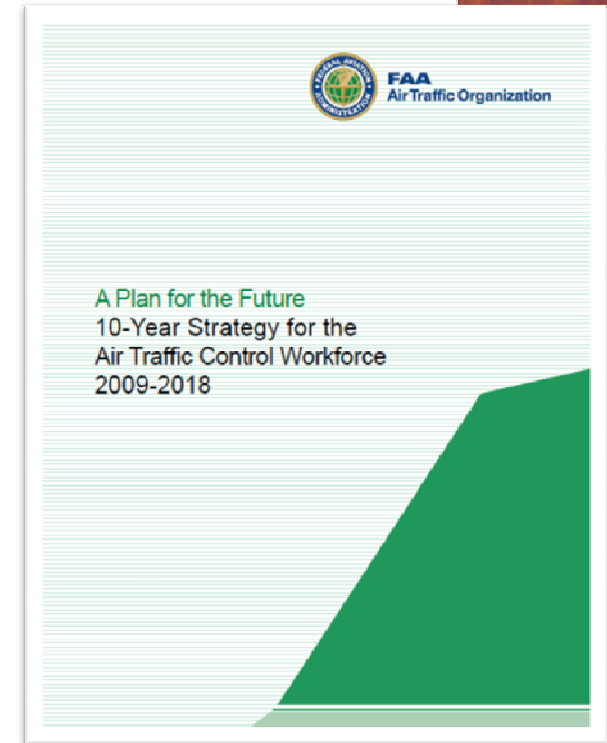- FAA Academy Scope of Responsibility

Background

- Air Traffic Controller strike on August 3, 1981

- Nearly 11,000 Controllers were fired

- Between 1981 and 1992, the FAA hired and trained thousands of controllers

- It is estimated that from 2005 to 2015, 73% of the controller workforce will be eligible to retire

- Situation necessitated the FAA to develop a systematic approach to recruiting, selecting and training the required large number of controllers
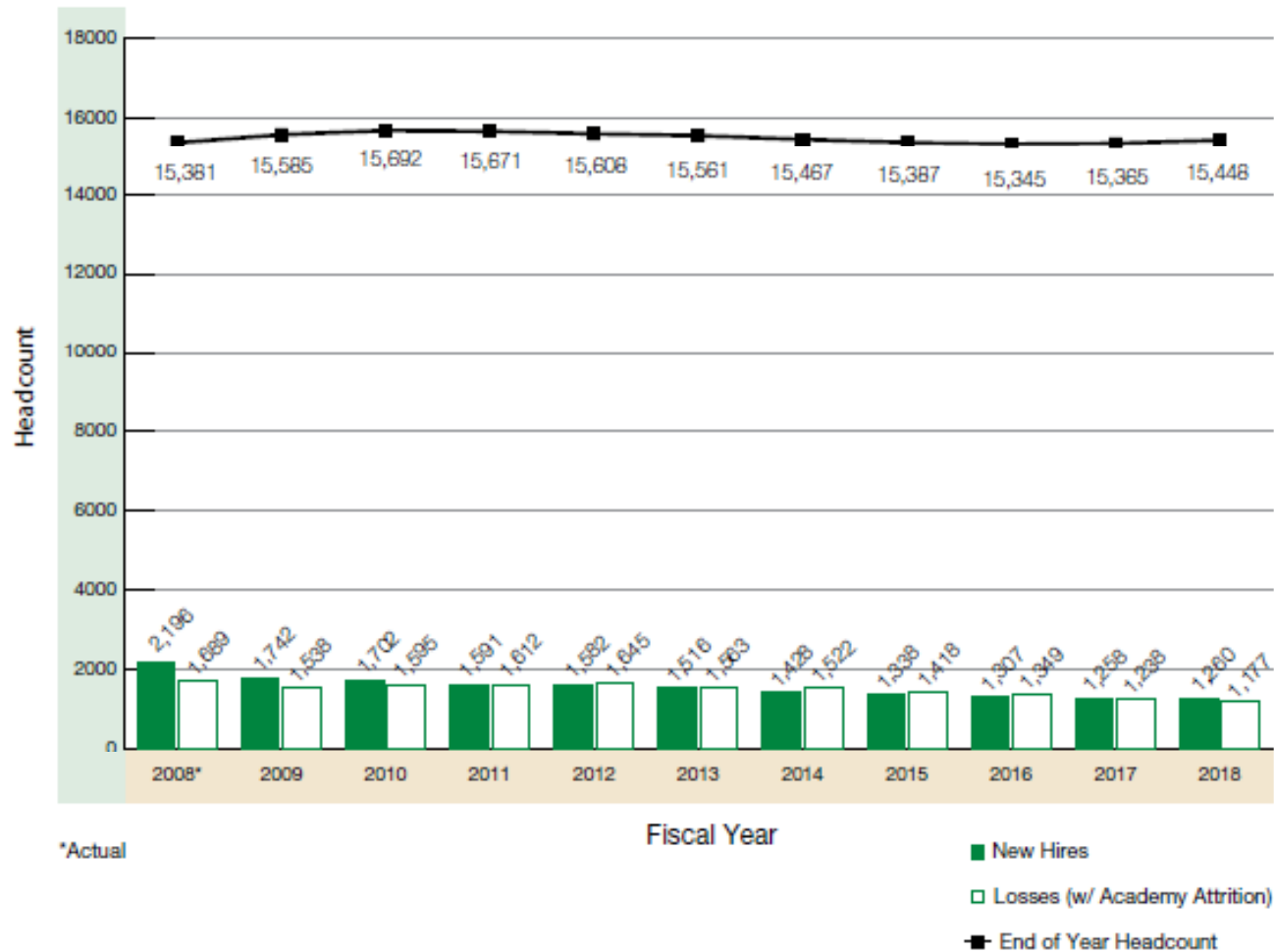
Air Traffic Controller Workforce Planning

- To address the anticipated shortage of controllers, the FAA first needed to define the problem

- At the request of the US Congress, the FAA developed a comprehensive workforce plan

- The Workforce Plan defines how the FAA will hire and train the number of controllers required and addresses key elements such as:
  - ✈ Staffing requirements
  - ✈ Controller losses through retirement and attrition
  - ✈ Hiring Plan Numbers
  - ✈ Hiring Process
  - ✈ Training process including efficiencies gained through simulation

- Workforce Plan first published in 2005 and updated annually

FAA Air Traffic Organization

A Plan for the Future
10-Year Strategy for the
Air Traffic Control Workforce
2009-2018

Projected Controller Workforce

Selection

- Hiring Sources
    - ✦ Military
    - ✦ Graduates from the Air Traffic Collegiate Training Initiative
    - ✦ General Public

- Air Traffic Selection and Training (AT-SAT)
    - ✦ Computer-Based Cognitive Test
    - ✦ Takes 8 hours to complete
    - ✦ Predicts applicants ability to be successful through training

- AT-SAT is a unique test that measures:

    - Prioritization
    - Tolerance for High Intensity
    - Composure
    - Planning
    - Execution
    - Thinking Ahead
    - Taking Charge

    - Reasoning
    - Decisiveness
    - Problem Solving
    - Visualization
    - Working Cooperatively
    - Numeric Ability
    - Working with Angles
    - Movement Detection

Collegiate Partnerships

- Air Traffic Collegiate Training Initiative (AT-CTI)
    - Establishes collegiate aviation as one of the primary means of meeting the future needs of the agency for Air Traffic Control Specialists
    - A partnership agreement between select colleges and the FAA to provide specific air traffic curriculum to students enrolled in specific aviation degree programs
    - Does not guarantee employment
    - AT-CTI schools must meet all curriculum objectives established by the FAA
    - Students hired through the AT-CTI program bypass the first five weeks of Academy training
    - To qualify for employment consideration, students must meet all FAA hiring requirements

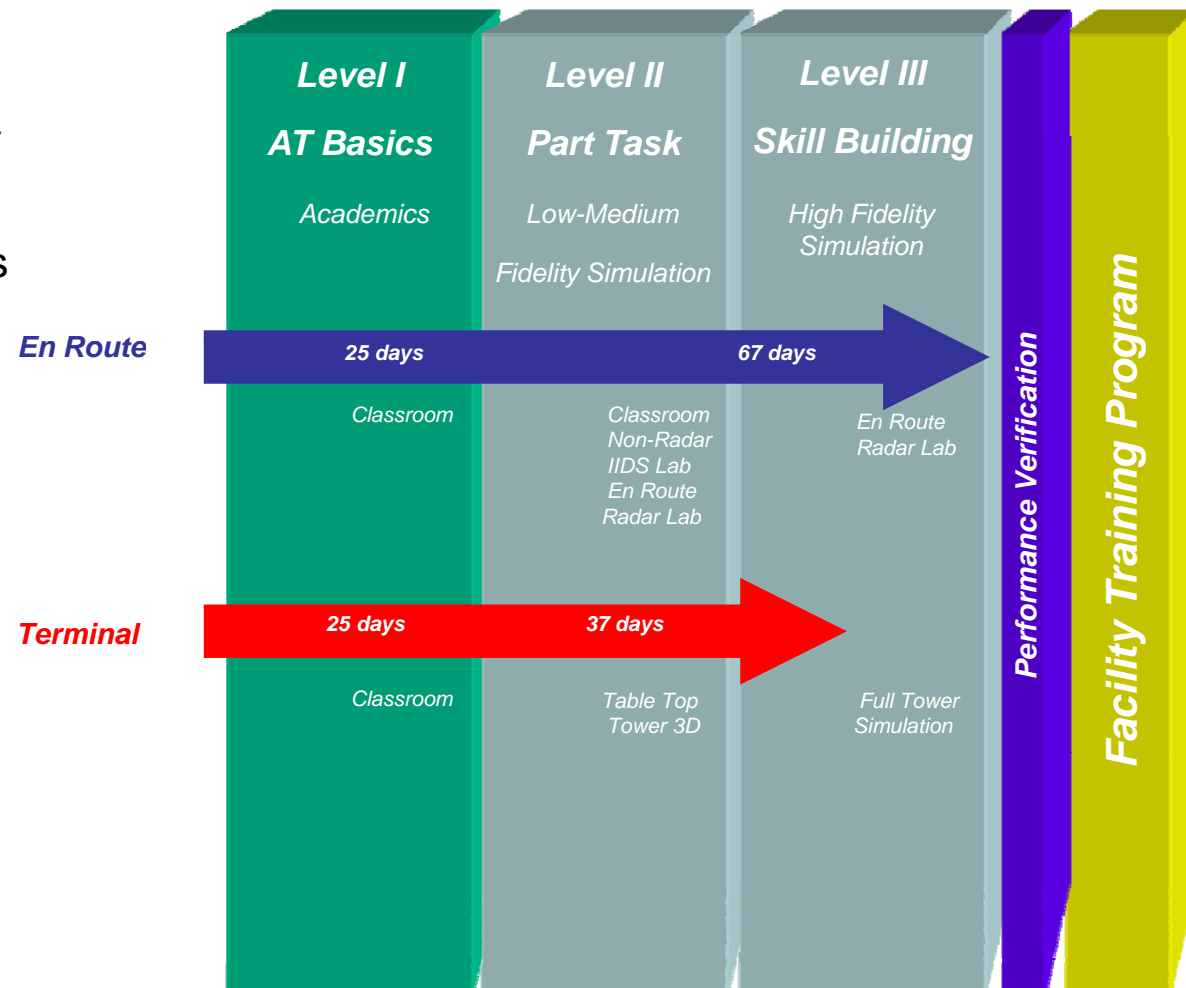- The FAA currently has partnership agreements with 31 colleges and universities

Employee Orientation

- Onboarding Process

- "Meet and Greet" sessions with students and FAA managers

- Executive Orientation for new students at the FAA Academy

- New Websites
  - Designed to connect with new students
  - YouTube and Facebook
  - Facility Websites with contact information
  - ATO Leading Edge Forum

Air Traffic Training – FAA Academy

- All newly hired controllers begin training at the Academy

- AT-CTI students bypass the AT Basics course

- Combination of classroom and simulation training

- Performance Verification is the final graded scenario

Level I AT Basics	Level II Part Task	Level III Skill Building	Performance Verification	Facility Training Program
Academics	Low-Medium Fidelity Simulation	High Fidelity Simulation		

En Route → 25 days 67 days

| Classroom | Classroom
Non-Radar
IIDS Lab
En Route
Radar Lab | En Route
Radar Lab |

Terminal → 25 days 37 days

| Classroom | Table Top
Tower 3D | Full Tower
Simulation |

Air Traffic Training – Facility

TERMINAL FACILITY TRAINING					
Stage II **Flight Data**	**Stage III** **Clearance** **Delivery**	**Stage IV** **Ground Control**	**Stage V** **Local Control /** **Cab Coordinator**	**Stage VI** **Non-Radar** **Terminal Control**	**Stage VII** **Radar Control**
1. Classroom 2. OJT 3. Certification	1. Classroom 2. OJT 3. Certification	1. Classroom 2. OJT 3. Certification	1. Classroom 2. OJT 3. Certification	*(if applicable)* 1. Classroom 2. Simulation 3. OJT 4. Certification	*(if applicable)* 1. Classroom 2. Simulation 3. OJT 4. Certification

Note: The order of Stages III through VII may be changed at the discretion of the facility manager.

EN ROUTE FACILITY TRAINING		
Stage II **Assistant Controller (Flight Data)**	**Stage III** **Non-Radar and Radar Associate (RA)**	**Stage IV** **Radar Controller**
1. Classroom 2. OJT 3. Certification	•Classroom •OJT •Simulation •Certification **Note:** Certification on two (2) positions qualifies a developmental to work independently and to proceed to Stage IV training.	•Classroom •OJT •Simulation •Certification **Note:** Certification on two (2) radar positions qualifies a developmental to work independently.

Air Traffic Training

- In order to achieve hiring and training targets, the FAA needed to reduce training time

- Achieved efficiencies by improving the training and scheduling process, increased use of simulation, and increased management oversight

Fiscal Year	En Route	Terminal	Overall
2005	4.1 years	3.1 years	3.9 years
2006	3.7 years	2.7 years	3.6 years
2007	3.1 years	1.9 years	2.8 years
2008	2.6 years	1.1 years	1.7 years

Air Traffic Training

- **FAA Academy Simulation**
  - ✈ **Tower**
    - ✈ 14 Tower Simulators with 2 additional planned in 2010
    - ✈ Desktop Tower Simulation (Tower 3D)
    - ✈ Table Top Simulation

  - ✈ **Terminal Radar**
    - ✈ High fidelity simulation

  - ✈ **En Route (Area Control Centers)**
    - ✈ High fidelity simulation identical to field facilities
    - ✈ En Route Training Simulation System (ERTSS)

Air Traffic Training

- **Field Facility Simulation**
  - ✈ **Tower**
    - ✈ 20 Tower Simulators installed at high density airports
    - ✈ 8 additional simulators planned
    - ✈ Serves up to 90 airports in a hub configuration
  - ✈ **Terminal Radar**
    - ✈ Labs installed in most terminal radar facilities
  - ✈ **En Route (Area Control Centers)**
    - ✈ Labs installed in all Area Control Facilities

FAA Academy

- Mission: Provide premier cost-efficient training solutions for the FAA workforce and global community.

- Location: Oklahoma City Campus of the Mike Monroney Aeronautical Center

- Facilities & Campus

  - Approximately 459,650 square feet of space.

  - 70% Classroom/Lab, 30% Office/Support Space

  - Over 2,500 classes conducted each year.

- Staffing: 974 Employees (includes 451 FAA FTE's and 523 Contractors, as of Feb 2010)

Products & Services

- Resident/Non-Resident Technical Training

- Management & Executive Training

- Training Assessments/Evaluations

- Courses available in:
  - ✈ Air Traffic
  - ✈ Technical Operations
  - ✈ Flight Standards
  - ✈ Airports
  - ✈ ICAO Endorsed Government Safety Inspector
    - Operations
    - Airworthiness
    - Personnel Licensing
  - ✈ Instrument Flight Procedures Development
  - ✈ Aviation English

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