



**Federal Aviation  
Administration**

# **Acquisition Career Certification & Management**

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# Topics

- **Drivers for Career Certification & Management**
- **Acquisition Competencies Related to V&V**
  - Test & Evaluation
  - Integration and Verification
  - Validation
- **Certification Models**
- **Next Steps**

# Business Drivers - NextGen



*Need to develop / acquire workforce to support NextGen*

- **NAPA Report “Identifying the Workforce to Respond to a National Imperative: The Next Generation Air Transportation Systems”**
  - Identify the skills needed by non-operational/acquisition workforce to accomplish transition to NextGen
  - Identify strategies for acquiring the necessary workforce competencies
- **GAO Report “Next Generation Air Transportation System, Status of Systems Acquisition and the Transition to the Next Generation Air Transportation System**
  - Need to compare the skills needed for NextGen with the current staff resources

# Business Drivers – Employee Growth



*Helping FAA employees manage and grow their careers*

- **Employees need the structure required to map out a career path in professions that are rewarding for them and important to the future success of the FAA**
  - Defined career paths and / or certification models based on federal government and industry standards
- **Employees need support in developing the knowledge, skills and abilities necessary to progress through career models within their chosen profession**
  - Training curriculum that matches certification requirements
  - Practices that help guide work
  - Communities of Practice to establish work relationships
- **Professions being modeled include: CO, COTR, System Engineer, Business Manager, Program Manager, Logistician, and T&E**

# Competencies – Test & Evaluation



- **Planning, monitoring, conducting and evaluating tests of prototype, new or modified systems equipment or materials**

## *Knowledge/Skill Required*

- **Knowledge of the efficient and cost effective methods for planning, monitoring, conducting and evaluating tests of prototype, new or modified system or material**
- **Skill in developing a thorough T&E strategy to validate system performance**
- **Skill in identifying testing needs and establishing and coordinating test conduct activities**

## *Behavioral Indicators*

- **Plans, develops or directs the development of T&E strategies and plans**
- **Oversees the execution of T&E strategies and plans to support program/project goals**

# Competencies – Integration and Verification



- Integrating system components into final products and verification of system requirements throughout the lifecycle

## *Knowledge/Skill Required*

- Knowledge of importance of verification against the systems requirements
- Knowledge of importance of integrating the system in a logical sequence
- Ability to plan for systems integration and verification
- Understanding of relationship between verification and acceptance

## *Behavioral Indicators*

- Identifies the integration and verification environment
- Traces verification requirements to system requirements
- Writes Integration and Verification Plan for a complex system, including identification of method and timing for each activity
- Demonstrates effective management of system integration and verification activities
- Writes detailed test procedures
- Diagnoses complex faults; documents, communicates and follows up corrective actions
- Plans and prepares evidence for customer acceptance and certification

# Competencies – Validation



- **Integrating system components into final products and verification of system requirements throughout the lifecycle**

## *Knowledge/Skill Required*

- **Knowledge of translation of mission needs into product functions**
- **Ability to plan for systems validation**
- **Understanding of relationship between validation and acceptance**

## *Behavioral Indicators*

- **Focuses on customer needs and communicates in the language of the customer**
- **Traces validation requirements back to the use needs and vice versa**
- **Writes validation plans for a complex system, including identification of method and timing for each activity**
- **Writes detailed validation procedures**
- **Demonstrates effective management of systems validation activities**
- **Assesses validation results**
- **Plans and prepares evidence for customer acceptance**

# Certification Models



- **Include multiple levels of experience and training**
  - Senior or highly experienced level
  - Mid or journeyman level
  - Entry or junior level
- **Fully mapped training curriculum aligned with each certification level to build out knowledge**
- **Experience requirements at each level to build up competencies and behaviors**
- **Based on industry and Federal Government standards to support recognition and acceptance (e.g. FAC PPM)**

# Certification Model - Sample



Specific real world experience to move from level to level and progress in career

## Level III

11 12 13 14 15

- 23 days training
- 5 + years experience

## Level II

6 7 8 9 10

- 17 days training
- 3 + years experience

## Level I

1 2 3 4 5

- 26 days training

Certification levels based on completed training and experience

Training courses in a fully mapped curriculum or documented equivalents



# Next Steps

- **Build out the T&E Certification Model**
  - Define T&E competencies
  - Establish levels with knowledge and experience requirements
  - Establish training curriculum for certification levels
- **Finish building out the FAA V&V Practices**
- **Explore infrastructure requirements for Community of Practice**
  - Central FAA Career Management Web Site
  - Symposia / Conferences
  - Rewards & Recognition
  - Mentor Relationships, etc.

*Build an environment and a culture where the FAA is seen as as a great place to develop a recognized professional capability and work on exciting and challenging national priorities.*