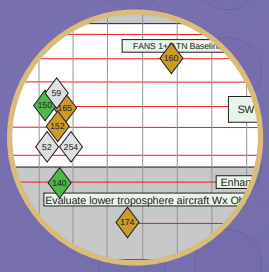
Federal Aviation Administration

Acquisition Workforce Plan

2010



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Foreword

This plan updates the Federal Aviation Administration (FAA) 2009 Acquisition Workforce Plan. It focuses on FAA employees who are directly engaged in the design and development of mission-critical technologies and systems (Capital Investment Programs) that provide the backbone of the National Airspace System (NAS), as well as employees engaged in non-NAS acquisitions. The 2010 plan:

- Extends the planning horizon to include projections of workforce needs through 2014
- Provides an expanded view of the acquisition workforce
- Includes acquisition employees in multiple FAA lines of business
- Incorporates acquisition workforce professionals who support non-NAS acquisitions and other types of procurement

FAA broadly defines its acquisition workforce to include employees in a number of key roles and disciplines:

- Program/Project Managers
- Researchers and Engineers/System Engineers
- Business and Financial Analysts
- Contracting Officers/Specialists
- Contracting Officer Technical Representatives
- Integrated Logistics Support Specialists
- Test and Evaluation Specialists
- Acquisition Attorneys
- Specialized Support

Many more employees across FAA support acquisitions, particularly those in the field who are key players in deploying and supporting in-service management of programs. Future updates to this plan will consider an expanded definition of the acquisition workforce.

Since publication of the 2009 Acquisition Workforce Plan, the agency:

- Met 99 percent of overall acquisition workforce hiring targets for fiscal year 2009, with a net gain of over 200 acquisition employees
- Maintained overall acquisition workforce attrition (retirement/non-retirement) at less than 4 percent in fiscal year 2009
- Made overall gains in developing and certifying the agency's acquisition workforce

This plan projects future workforce needs and will be used to guide recruitment, hiring, and development decisions and maintain a highly qualified, diverse workforce. The data presented are estimates for planning purposes only; actual hiring numbers may vary. Workforce analyses will be refined over time as the Next Generation Air Transportation System evolves.

Executive Summary

The FAA's continuing mission is to provide the safest, most efficient airspace system in the world. The National Airspace System is forecast to carry one billion passengers by 2023 with new types of aircraft taking flight, greater demand for aviation safety, and the need to reduce environmental impacts.

This Acquisition Workforce Plan is integral to FAA's effort to ensure its staffing and professional development needs for the acquisition workforce are met in the coming years. The plan serves as FAA's guide for workforce staffing and development decisions and provides strategies for hiring, training, developing, and retaining acquisition employees. The 2010 plan has been expanded to include planning through 2014 and a broader definition of the FAA's acquisition workforce.

Having a comprehensive plan is especially important as FAA transitions to the Next Generation Air Transportation System (NextGen), while simultaneously maintaining the current system safely and effectively. Today, FAA's acquisitions are more complex than ever and require new approaches and skills to support NextGen acquisition work.

The acquisition of mission-critical technologies is a complex, resource-intensive undertaking. It requires a highly skilled, flexible workforce that can keep pace with technological innovation, rapidly changing customer and supplier market environments, and the stringent safety and reliability demands of the air traffic control community.

As defined in this expanded plan, approximately 1,500 core acquisition employees have been identified across the agency. Factors contributing to the increase reported in this plan are the inclusion of other FAA lines of business beyond ATO and further redefinition of the acquisition workforce. An estimated 400 additional new hires will be needed in fiscal years 2010 to 2014. At the present time, the FAA's acquisition managers and executives estimate that existing acquisition programs are about 6 percent (97 full-time equivalents, or FTEs) understaffed. Without more hiring, this deficit could reach as high as 26 percent by 2014.

The primary staffing needs will be in the Research and Engineering/System Engineering, Program/Project Management, and Contracting disciplines. Over the next five years, the requirement for these disciplines will increase by an average of 27 percent.

FAA's executive-level Acquisition Workforce Council oversees the development and implementation of this plan. The Council works closely with FAA's Acquisition Executive Board (AEB), which provides oversight for developing and implementing acquisition management policy, processes, practices, procedures and tools.

Workforce planning is a continuous process. Given the workforce challenges in the coming years, implementing an iterative and transparent acquisition workforce planning process is critical to FAA's success in meeting its mission.

1. Introduction

Tens of thousands of aircraft are guided safely and efficiently through the National Airspace System (NAS) every day. However, a convergence of challenges requires nothing less than a complete transformation of this system. The system is forecast to carry one billion passengers by 2023, new types of aircraft such as unmanned systems and commercial space vehicles are taking flight, and demand continues for better safety and reduced environmental impacts. A comprehensive system upgrade is underway to allow a fundamental change to the way air traffic is managed. FAA is transitioning to this Next Generation Air Transportation System (NextGen) while safely and effectively maintaining the current system.

The acquisition of mission-critical technologies is a complex, resource-intensive undertaking. It requires a highly skilled, flexible workforce that can keep pace with technological innovation, rapidly changing customer and supplier market environments, and the stringent safety and reliability demands of the air traffic control community. These talented, experienced acquisition professionals are in high demand across the federal government but their numbers are limited.

NextGen is an umbrella term for the ongoing, wide-ranging transformation of the NAS. It represents an evolution from a ground-based system of air traffic control to a satellite-based system of air traffic management. This evolution is vital to meeting future demand and avoiding gridlock in the sky and at the nation's airports. NextGen will open America's skies to continued growth and increased safety while reducing aviation's environmental impact.

FAA focuses considerable resources on hiring, training, and certifying the air traffic controllers and technicians who operate and maintain the NAS. This plan addresses hiring, training, and certifying that critical portion of FAA's workforce charged with the design, development, procurement, and implementation (acquisition) of the mission-critical technologies and systems that make up the nation's air traffic control infrastructure.

Purpose

This Acquisition Workforce Plan focuses on:

- The disciplines and numbers of acquisition employees that FAA needs now through 2014
- Essential competencies
- Strategies to hire and develop FAA's acquisition workforce

The plan documents the workforce planning process that is being used to analyze workforce needs and metrics to track progress. It also provides detailed profiles of key acquisition workforce disciplines.

Workforce Planning Governance

An executive-level Acquisition Workforce Council (Council) oversees FAA's acquisition workforce planning and development. The Council, composed of executives with acquisition responsibilities from across the agency, provides a senior-level cross-organization focus, is the advisory body for setting acquisition workforce-related requirements, and oversees the development and implementation of this plan. The Council works closely with

FAA's Acquisition Executive Board (AEB), which provides oversight for development and implementation of acquisition management policy, processes, practices, procedures, and tools. Together, the Council and AEB ensure a tight link between organizational requirements and acquisition policy, processes, and workforce planning and development.

In 2009 a new executive position was established, reporting directly to the agency's Chief Acquisition Officer (CAO): Director of Acquisition Policy, Workforce Development and Evaluation. This moved responsibility and accountability for the Acquisition Career Management (ACM) function under the CAO, further institutionalizing and strengthening links between workforce programs and acquisition management.

The Director chairs the Council and is a member of the AEB. Working closely, the Council and the AEB establish requirements necessary to maintain a robust acquisition workforce. Staff offices and FAA's Office of Human Resources provide support through implementing recruitment, hiring, staffing, training and development, performance management, and retention programs.

Guiding Principles for Acquisition Workforce Planning

The Council established five guiding principles for acquisition workforce planning:

1. **Leverage Existing Programs and Best Practices from across Government.** Although FAA is unique in many of its challenges and drivers, its overall acquisition workforce needs are similar to those of other federal agencies. Several federal agencies and supporting organizations have developed strong human capital and development programs in many acquisition disciplines. FAA will use these programs, as appropriate, to reduce the time and cost of development and to capitalize on best practices in government.
2. **Staff and Shift Resources to Best Meet Needs.** As acquisition programs move through the phases of the acquisition life cycle, staffing needs change. FAA must staff according to these shifting needs. FAA will staff according to consideration of overall needs and priorities first and individual programs and organizations second. The agency will identify the best fit for each position and will look internally and externally to close skill gaps.
3. **Use an Appropriate Balance of Federal Employees and Contractors.** A stable cadre of federal employees will be supplemented by a fluctuating pool of Contractor staff as requirements dictate. FAA will use federal employees to provide consistent, long-term staffing and maintain core in-house capabilities, and will use Contractors to address staff and skill requirements that surge and decrease over time. This plan focuses on the federal workforce.
4. **Implement Innovative Workforce Strategies.** FAA will implement more aggressive strategies for recruitment, staffing, training and development, and retention. The agency will create multiple paths for attracting and retaining acquisition workforce talent.
5. **Update the Acquisition Workforce Plan Annually and Consider It a Living Document.** Workforce planning is a continuous process, and this plan will be treated as a "plan in motion." The hallmark of FAA's approach is a concerted, executive focus on developing FAA's acquisition capabilities. Numbers in this plan are planning estimates only. They serve to highlight areas for focus and provide a guide for workforce hiring and development decisions. Actual numbers will shift as the agency refines its definition of the acquisition workforce, employs new tools for workforce planning and analysis, and makes decisions on how best to address workforce gaps. More important than precise accuracy in numbers is keeping FAA's eye on identifying and addressing overarching critical needs, and doing so in an ongoing, iterative way.

Contents

This Acquisition Workforce Plan is divided into nine major sections:

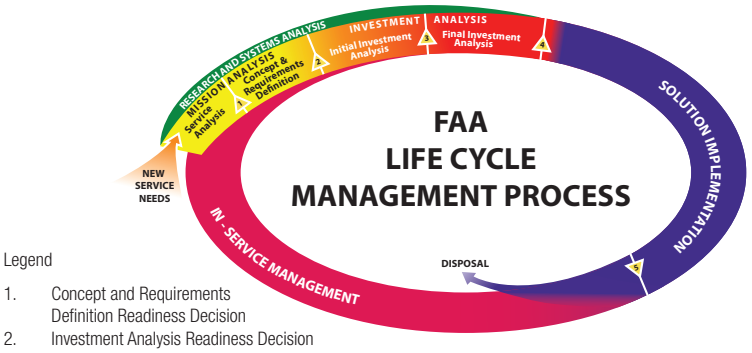
- Section 1 provides an introduction to the document and its purpose
- Section 2 defines the federal acquisition workforce at the FAA
- Section 3 highlights the drivers of change and acquisition workforce challenges
- Section 4 explains the workforce planning process
- Section 5 details the competencies required of the acquisition workforce
- Section 6 profiles the current acquisition workforce
- Section 7 depicts the future acquisition workforce requirements by discipline
- Section 8 presents acquisition workforce strategies, metrics, and initiatives and accomplishments
- Section 9 profiles each acquisition workforce discipline

2. Acquisition Workforce

FAA's Acquisition Management System

FAA's Acquisition Management System (AMS) is a network of policies and processes that govern FAA acquisitions. The AMS supports a broad definition of acquisition and the functions it encompasses. As shown in Exhibit 1, AMS addresses functions associated with the entire development life cycle from mission analysis through investment analysis, solution implementation, and in-service management.

Exhibit 1: FAA Acquisition Management Life Cycle



Legend

1. Concept and Requirements Definition Readiness Decision
2. Investment Analysis Readiness Decision
3. Initial Investment Decision
4. Final Investment Decision
5. In-Service Decision

Disciplines/Roles:
Program/Project Management
Research and Engineering/System Engineering
Business and Financial Management
(e.g., Cost Estimating and Investment Analysis)
Contracting
COTRs
Integrated Logistics Support
Test and Evaluation
Acquisition Law
Other Specialized Support

Defining the Acquisition Workforce

Given the range of acquisition and technical expertise required to manage large, complex procurements, FAA broadly defines the acquisition workforce, which spans a number of key disciplines. Employees from many different FAA organizations and functional areas provide support to acquisitions, from the beginning stages of research and service analysis through maintenance and sustainment of systems during the in-service management phase. For the purposes of this plan, the "core acquisition workforce" consists of:

- Employees in acquisition disciplines who directly and primarily support one or more Capital Investment Plan (CIP) programs, from service analysis through in-service decision (Milestone 5). This includes Service Life Extension Program (SLEP) activities.
- Contracting Specialists, Contracting Officer Technical Representatives, and Acquisition Attorneys for all procurements.

As listed in Exhibit 1 on the previous page, the core acquisition disciplines are: Program/Project Management (P/PM), Research and Engineering/System Engineering, Business and Financial Management (BFM), Contracting (CON), and Contracting Officer Technical Representative (COTR), Test and Evaluation (T&E), Logistics, Acquisition Law, and Specialized Support. These disciplines include employees with a diverse set of occupational series and specialties who engage in acquisitions at different phases of the AMS life cycle.

Exhibit 2 provides an overview of the disciplines and roles in the acquisition workforce. Section 9 of this plan highlights each acquisition discipline and associated curriculum and certifications. FAA acquisition certification programs closely align with federal acquisition certification programs, meeting or exceeding federal-wide requirements.

Exhibit 2: Acquisition Disciplines and Roles

Discipline	Typical Roles	Typical Job Series
Program/Project Management	Program Manager Project Manager Acquisition Manager Project Lead Portfolio Manager	2186, 800 series, 340, 334
Research and Engineering	Chief System Engineer System Engineer Software Engineer Human Factors Engineer/Specialist System Architect Operations Research Analyst	800 series, 1550, 180, 1300 series, 1500 series
Business and Financial Management	Cost Analyst/Estimator Business Manager Financial Analyst Operations Research Analyst	300 series, 500 series, 1500 series
Contracting	Contracting Officer/Specialist Realty Specialist Cost Price Analyst Quality and Reliability Officer Procurement Analyst	1102, 1170, 1101
COTR	Contracting Officer Technical Representative Contracting Officer Representative Technical Officer Representative	334, 856, 1500 series, Various series
Test and Evaluation	Test Team Manager Test Director Test Lead Test Engineer Operations Research Analyst Statistical Analyst Experimental Designer Flight Test Engineer	800 series, 334, 1300 series, 1500 series, 1550 Various series
Logistics	Logistics Management Specialist	346, Various series
Acquisition Law	Acquisition Attorney	905
Specialized Support	NAS Subject Matter Experts	Various series

Distribution of the Acquisition Workforce

The acquisition workforce is distributed across the FAA with the majority residing in the ATO, Aviation Safety (AVS), and Region and Centers Operations (ARC). The primary organizations with acquisition employees are highlighted below.

Air Traffic Organization

The primary service of the ATO is to move air traffic safely and efficiently. ATO customers are commercial, private, and military aviation. ATO employees are the service providers of the 34,000 controllers, technicians, engineers, and support personnel whose daily efforts keep the airplanes moving. The vast majority of the acquisition workforce is located in the ATO in the following business units and service organizations:

- **NextGen and Operations Planning Business Unit** facilitates the future vision of aviation by providing integrated strategies and solutions to achieve national and international goals. The acquisition employees in this business unit ensure that appropriate integration of systems, capabilities, and programs occur across and within FAA lines of business. These employees conduct planning; manage FAA's Research, Development, and Test and Evaluation programs; and create and maintain the NAS Enterprise Architecture and NextGen Implementation Plans.

- **Operations Business Unit (En Route and Oceanic Services, Terminal Services, Systems Operations Services, and Technical Operations Services)** delivers safe, secure, and efficient air traffic management services and aeronautical information to customers operating in the NAS and in the international airspace assigned to United States control. Acquisition employees in this business unit develop, acquire, deliver, and sustain NAS programs in accordance with NAS enterprise architecture and NextGen plans.

- **Acquisition and Business Services** supports ATO and FAA in all areas of acquisition including contracting, small business advocacy, acquisition policy, workforce planning and development, and acquisition evaluation. This organization develops agency-wide acquisition policy, guidance, and tools to manage and support FAA's AMS and provides procurement expertise and contracting services for headquarters and the Technical Center. The vice president serves as FAA's CAO and chairs the Joint Resources Council.

- **Finance Business Unit** provides financial and budget consulting services and products for the ATO. The employees in this service unit establish short- and long-term capital and research program and financial plans and ensure that new, proposed, and existing NAS investments meet established business case and economic criteria.

While not included in this plan, the **ATO Service Center and Mission Support Services** also performs acquisition support functions. They perform a support role in field pre-implementation planning activities, oversight and support for NAS procedures and changes which affect operations, and special activities within the NAS for service units and other FAA organizations. The Service Center also provides financial, materiel, procurement, and logistical support services to ATO service units and other FAA organizations, as requested.

Aviation Safety Organization

The FAA's Associate Administrator for Aviation Safety and the organization's approximately 7,400 employees are responsible for the certification of pilots, mechanics, and others in safety-related positions. In addition, AVS is responsible for the production approval and continued airworthiness of aircraft. In July 2009, the Associate Administrator for Aviation Safety signed a charter to establish the AVS Acquisition Program Management Office (APMO). The APMO places AVS in a stronger position to corporately manage AVS acquisition programs and to provide timely information to the AVS acquisition management community and stakeholders.

AVS plays an integral role in NextGen by setting, overseeing, and enforcing safety standards for all parts of the aviation industry. AVS employees must establish the standards and policies for NextGen operations, certify compliance with those standards, and assure continued operational safety once new aircraft technologies and change procedures for flight crews and controllers are adopted. Under the AVS umbrella, three primary organizations execute this responsibility: the Flight Standards Service, the Aircraft Certification Service, and the Air Traffic Safety Oversight Service.

Regions and Center Operations

The Assistant Administrator for Regions and Center Operations reports directly to the FAA Administrator and leads a nation-wide organization through a headquarters office in Washington, D.C., nine regional offices strategically located across the country, and the Mike Monroney Aeronautical Center in Oklahoma City. ARC delivers shared services throughout the agency and the Aeronautical Center. Acquisition, Real Estate, and Materiel Management is one of ARC's core activities. ARC performs acquisition and real estate functions throughout the FAA, as well as materiel management functions for both the FAA and the Department of Transportation.

Other Organizations

Organizations with lesser numbers of acquisition employees but which perform Program Management roles are the:

- **Office of the Assistant Administrator for Information Services,** which is a key player in the leadership and management of the agency's Information Technology enterprise, including applications and infrastructure.

- **Office of Security and Hazardous Materials,** which provides services to ensure and promote aviation safety in support of national security and the NAS.

3. Challenges

Business Drivers

The total number of commercial passengers in U.S. airspace is approaching 800 million per year. While safety is the FAA's number-one priority, dealing with congestion and delays is also a top priority. Despite the current economic downturn and the subsequent decrease in air traffic, delays repeatedly impact passenger travel and the forecasts of future demand remain high. New aviation modes are about to take flight, bringing even greater complexity to NAS operations. Though staffed by a capable, dedicated workforce, the current air traffic control system is not scalable or flexible enough to keep up with future demand.

NextGen Air Transportation System

The current radar-based system of air traffic control which has served the United States so well for the last 60 years has hit the ceiling of its growth capacity. Without the continued implementation of NextGen, NAS gridlock is inevitable. NextGen will improve efficiency and create additional airspace capacity. It also is needed to provide corresponding enhancements to safety and environmental performance.

Why NextGen Matters

- **More predictable travel with fewer delays**
- **Less impact on the environment**
- **Improved access to data, keeping airline employees and passengers better informed**
- **Better use of airports in taxpayers' communities**
- **Better accommodation of the country's future air travel needs**
- **Improved security and the highest levels of safety**

The FAA has created an acquisition portfolio framework that supports the tracking, planning, reporting, and execution needed to successfully implement NextGen. The framework contains enabling programs already in operation in the NAS, transformational programs that will fundamentally change how air traffic is managed, and solution sets focusing on a series of related operational capabilities. Together this portfolio framework will bring about NextGen's mid-term vision during the years 2012-2018.

Complexity of Acquisitions

The FAA faces unprecedented acquisition challenges to implement the NextGen portfolio framework. Today, FAA's acquisitions are more complex than ever and require new approaches and skills to integrate new capabilities into a system that can never be shut down. The FAA must ensure that the systems it delivers provide the reliability and capabilities needed in the NAS.

The overarching business challenges affecting the acquisition community include:

- **Rapid Change.** Technology changes rapidly. In particular, the evolution of the NAS requires new and more integrated technology that will be refreshed more frequently than the legacy systems of the past. Today's integrated technology and end-to-end solutions demand collaboration across projects and lines of business.

- **Increased Complexity and Interdependence of Programs.** Programs are becoming more complex and interdependent. Today's acquisition programs involve enhancements to multiple components of the NAS that are being developed in parallel by different program offices. The globalization of the aviation industry, including an increasing focus on international standards, adds another dimension of complexity. Integrated, complex solutions require knowledge of the entire system, close collaboration, a coordinated approach to problem solving, and constant communication.

- **Delivering Best Value.** Public programs must demonstrate the value and outcomes of their work and link those outcomes to business and funding decisions. The FAA must make decisions based on a full understanding of what things cost when providing benefits to the taxpayer and flying public.

- **Portfolio Management.** The ability to manage a portfolio of investments to achieve mission effectiveness is critical. The FAA's Enterprise Architecture portrays the "as is" and "to be" state of FAA operational assets, along with roadmaps that lay out over time what investments will be made to achieve the end state configuration. The complex "system of systems" concepts and integration of new technologies is increasing the focus and requirements for portfolio management.

- **Investment Analysis.** A large influx of investment analysis efforts over the next five years will increase the need for business case and investment analysis expertise to determine the life cycle costs and economic benefits of interdependent programs and projects.

Number of Acquisitions

FAA manages more than 150 acquisition programs identified in its Capital Investment Plan. Programs and projects are categorized based on criticality, complexity, cost and other factors, and are assigned an Acquisition Category (ACAT) level from 1 to 5 (as listed in Exhibit 3). Approximately 20 percent of acquisition projects fall into the highest category, and nearly 50 percent of all projects fall into the top three of the five categories. The majority of these projects and programs involve the modernization and sustainment of current systems. New NextGen technologies and systems will add to the complexity of acquisitions.

Acquisition policies, processes, decision authorities, and workforce certification requirements are tailored to be commensurate with a program or project's ACAT level. Additionally, the number of acquisitions and their ACAT levels, current and projected, are used in defining and prioritizing workforce requirements.

Exhibit 3: Acquisition Categories (ACATs)

Program Category	Program Criteria
1	1. Facilities and Equipment (F&E) costs greater than $800 million, or 2. Single year of F&E funding greater than $200 million, or 3. Capital Program has operations and management (O&M) costs greater than $500 million, or 4. Aggregate rating of the following factors is high: a. Political sensitivity b. Risk c. Complexity d. Likelihood of changes impacting the safety of the NAS
2	1. F&E costs greater than $300 million but less than $800 million, or 2. Single year of F&E funding greater than $100 million but less than $200 million, or 3. Capital Program has O&M costs greater than $250 million but less than $500 million, or 4. Aggregate rating of the following factors is medium to high: a. Political sensitivity b. Risk c. Complexity d. Likelihood of changes impacting the safety of the NAS
3	1. F&E costs greater than $100 million but less than $300 million, or 2. Single year of F&E funding greater than $50 million and less than $100 million, or 3. Capital Program has O&M costs greater than $100 million but less than $250 million, or 4. Aggregate rating of the following factors is medium: a. Political sensitivity b. Risk c. Complexity d. Likelihood of changes impacting the safety of the NAS
4	1. F&E costs greater than $20 million but less than $100 million, or 2. Single year of F&E funding greater than $20 million but less than $50 million, or 3. Capital Program has O&M costs greater than $20 million but less than $100 million, or 4. Aggregate rating of the following factors is medium to low: a. Political sensitivity b. Risk c. Complexity d. Likelihood of changes impacting the safety of the NAS
5	1. F&E costs less than $20 million, or 2. Capital Program has O&M costs less than $20 million, or 3. Aggregate rating of the following factors is low: a. Political sensitivity b. Risk c. Complexity d. Likelihood of changes impacting the safety of the NAS

Workforce Challenges

The future direction of acquisition work will place many challenges on the acquisition workforce and on the agency culture in which these employees perform their jobs. The FAA culture must continue to promote the business value of workforce competency in non-operational positions as well as operational ones. The agency's policy initiatives establishing formal certification programs for the acquisition workforce and its support of many externally recognized certifications are important foundation steps for continued progress.

Workforce Competency

According to a FAA-commissioned study, a smaller number of more highly paid, more highly skilled workers is more cost-effective than having larger numbers of lesser paid, lesser skilled staff.[1] The FAA must continue to provide acquisition excellence by strengthening the capabilities of its existing and future workforces through ongoing emphasis on professional development and certification for acquisition employees.

Because of the interdependence of acquisition programs, the agency recognizes the need for workforce competency that promotes increased cooperation among organizations. Systems thinking continues to be emphasized to develop and implement programs and projects with multiple and highly interactive components. Effective communications are important to support the large amount of information that must be exchanged with internal and external stakeholders and to negotiate and influence stakeholders to reach agreement on key decisions. The ability to integrate and proficiency in operational transition as NextGen acquires more complex component systems, and as more information systems come online, also are essential.

Discipline-Specific Impacts

The demands of deploying NextGen have distinct implications for each of the acquisition disciplines. Examples include:

- **Program Management.** A significant increase in the need for technical and program integration across service units, domains and agencies, and the ability to identify and manage interdependent program risks.
- **Business and Finance.** A large influx of investment analysis efforts over the next five years and an increasing need for expertise to derive accurate, interdependent program costs and economic benefits.
- **Contracting.** Continued use and expansion of innovative, performance-based contracts for transformational NextGen technologies such as the Automatic Dependent Surveillance–Broadcast program.
- **Research and Engineering/System Engineering.** The execution of rapid prototyping and technology demonstrations, development of performance-based requirements and specifications, and the conduct of system-of-systems integration.

[1] See "Systems Engineering, Systems Integration, and Software Engineering Competencies Required for Successful Acquisition of the Next Generation Air Transportation System," a FAA-commissioned study by Stevens Institute conducted in 2009, page 36.

Current NextGen planning calls for developing and integrating implementation of transformational air traffic management capabilities into the NAS over the next 15–20 years. Given this evolutionary approach to NextGen implementation, FAA must maintain the competencies and technical expertise of its current acquisition workforce and develop new capabilities relevant to the technical and programmatic challenges of the network-centric complexities posed by the NextGen concept of operations.

Identifying and Tracking the Acquisition Workforce

The dispersion of talent across FAA promotes better collaboration between acquisition employees and the user community. It also supports a seamless life cycle acquisition management process. However, it has made identifying and tracking the workforce challenging.

Typically, organizations use occupational series to identify and track members of a given occupation. However, acquisition work is in large part role based, not series based, which presents a challenge in identifying and tracking members of the acquisition workforce.

Examples of this challenge include:

- Some engineers are part of the acquisition workforce; others are not.
- Some employees of the acquisition community spend 100 percent of their time performing acquisition duties; others do not.
- Many positions supporting NextGen are in the acquisition workforce; others are not.

Consequently, FAA cannot simply pull data from its personnel database to identify and track members of the acquisition workforce and full-time equivalents (FTEs). Currently, managers must individually identify each member of the acquisition community by role and the percentage of time dedicated to that role.

A new initiative in 2010 is to "tag" acquisition employees in the FAA's personnel system using a consistent coding structure that identifies the associated discipline of the employee and the highest level of certification required for the position. Additional tagging will enable the agency to designate an acquisition employee as supporting a project or program within the NextGen portfolio. These designations will support better workforce planning and analysis and, more importantly, ensure that individuals receive training, development, and certification opportunities at a level consistent with acquisition responsibilities.

Demand for Talent

FAA faces the same challenges confronting many federal agencies and acquisition organizations. The number and complexity of acquisitions across the federal government have increased significantly at the same time that retirement eligibility is on the rise. These combined factors are resulting in an ever-increasing competition for acquisition talent. The Federal Acquisition Institute (FAI) and the Government Accountability Office (GAO) have reported on the shrinking pool of certified and experienced acquisition professionals. Currently, about 15 percent of FAA's core acquisition workforce is eligible to retire with a cumulative eligibility of 32 percent by FY 2014. As increasing numbers of acquisition employees retire, FAA's pipeline could shrink. To combat this, FAA has a concerted focus on bringing in and developing new talent.

4. Acquisition Workforce Planning Process

FAA follows the Office of Personnel Management (OPM) Workforce Analysis Framework[2] as well as the Key Principles for Effective Strategic Workforce Planning identified by GAO.[3]

What distinguishes FAA's approach is the high level of commitment and active engagement of senior management from across the agency. The agency's strategic plans, especially the transformation to NextGen, serve as the basis for assessing future workforce requirements. However, workforce planning is not a precise science. The acquisition workforce, in particular, is hard to count and track because it is role based, not job series based. Further, demand projections are complicated by the nature of the work, which is not easily measured in terms of numbers and transactions. While the FAA is developing and maturing staffing models, more important is the expert judgment and experience of senior acquisition professionals. FAA's approach is about engaging management, linking to the agency's strategic direction, focusing on critical requirements, and treating the plan as a plan in motion, to be refined on an ongoing basis and formally updated annually.

Exhibit 4 on the following pages highlights key elements of FAA's process and how it aligns with the OPM and GAO frameworks.

2 Workforce Planning Best Practices, OPM, May 23, 2008.
3 GAO Report to Congressional Requesters titled "Key Principles for Effective Strategic Workforce Planning."

Exhibit 4: FAA Workforce Planning Process and OPM/GAO Frameworks

OPM Framework	GAO Key Principles	FAA's Process
	Involve top management, employees, and other stakeholders in developing, communicating, and implementing workforce plan	• FAA's Acquisition Workforce Council, comprised of executives with acquisition responsibilities from across FAA, actively engages in and leads the development, implementation and annual update of the Acquisition Workforce Plan • Senior managers help define and validate staffing demand projections • Managers and Subject Matter Expert employees from across FAA are engaged in development of competency models and assessments, training and certification programs/policy, recruitment strategies and activities, and other workforce initiatives • Acquisition Workforce Plan is published and posted online for employees and other stakeholders, and the plan and associated initiatives and programs are briefed to myriad internal and external audiences, including employee forums
Analyze mission, vision, strategic plans, budgets, and resource allocations	Set strategic direction	FAA strategic and business plans help to inform acquisition workforce requirements. Examples include: • FAA Strategic Plan ("Flight Plan") • NextGen planning documents • NAS Enterprise Architecture • Five-year Capital Investment Plan[4] The resulting workforce plan will be used to inform future budget formulations.

4 The FAA Capital Investment Plan (CIP) is a five-year plan that describes the NAS modernization projects and lists the activities the FAA intends to accomplish during that period. The CIP contains both projects that modernize existing systems and projects that begin the transformation to NextGen.

Exhibit 4: FAA Workforce Planning Process and OPM/GAO Frameworks

OPM Framework	GAO Key Principles	FAA's Process
Analyze demand (forecast)	Define critical skills and competencies needed to achieve current and future results	**Staffing Projections** The Capital Investment Plan serves as an organizing construct for workload projections: • For each Capital Investment Plan program, identified its Acquisition Category (ACAT) level and phase of the acquisition life cycle it is/will be in each year (2010-2014) • Applied Acquisition Program Staffing Model (developed in 2009) to see model-generated staffing requirement for each year, by discipline (based on ACAT and AMS Phase) • Managers validated staffing demand projections based on knowledge and judgment • Managers and directors provided staffing projections for other acquisition personnel, who support multiple programs or other types of procurement, based on workload projections **Skills and Competency Requirements** Aligned with other government and industry competency models for like positions but tailored to the unique needs of FAA. FAA analysis included: • NAPA study of acquisition skills needed for NextGen (2009) • Stevens Institute study of engineering competencies to design, develop NextGen (2009) • Review of government and industry competency models and benchmarking with other agencies with large, complex acquisitions • Competency model reviews, validation, and assessments with subject matter expert focus groups and Council, identifying competencies most critical to achieving FAA's strategic goals

Exhibit 4: FAA Workforce Planning Process and OPM/GAO Frameworks

OPM Framework	GAO Key Principles	FAA's Process
Analyze supply		• Defined "Acquisition Workforce" - Nine role/discipline families - Direct engagement in acquisition programs • Program-by-program analysis of current employees supporting NAS and non-NAS Capital Investment Plan programs and other acquisitions
Conduct gap analysis		• Compared demand projections to onboard staff, by discipline, for programs/offices and at a macro level • Assessed competency requirements and relative "bench strength"
Create workforce strategy and plan	Develop strategies tailored to address gaps	• Council defined Guiding Principles and a set of key strategies, highlighted in the plan
Implement and evaluate strategy and plans	Monitor and evaluate agency's progress	• Council monitors implementation and progress against the workforce plan

5. Acquisition Workforce Competencies

FAA uses competency models to inform and support recruiting, staffing, performance management, training, development, and certification of the acquisition workforce. Competencies are measurable patterns of knowledge, skills, abilities, behaviors, and other characteristics that an individual needs to perform work roles or occupational functions successfully. Exhibit 5 lists the competencies for each acquisition discipline. The Council considers the competencies listed in bold as the most critical. Skill deficiencies in these would present the most risk in carrying out FAA's acquisition mission.

Exhibit 5: Competencies by Discipline[5]

Program/Project Management	
Benefit-Cost Analysis Budget Execution Contract Administration Contractor Performance Management Cost Estimating Development of Supportability Requirements Earned Value Management (EVM) Financial Planning Formulation of Financial Programs and Budget Life Cycle Logistics Strategy Development Market Analysis Organizational Awareness	Performance-Based Logistics Procurement Planning **Program/Project Management Processes** **Program/Project Planning Processes** **Requirements Management** **Risk Management** Source Identification and Selection **Stakeholder Management** Strategic Alignment System Safety Systems Thinking and Integration Test and Evaluation Management Technical Expertise
Research and Engineering/System Engineering	
Systems Concepts **"System of System" Capability Issues** Enterprise and Technology Environment Stakeholder Management System Design for— Architectural Design Concept Generation Functional Analysis Interface Management Maintaining Design Integrity Modeling and Simulation **Solution Selection**	System Design for— System Robustness Human Factors Engineering **Integration and Verification** Validation Transition to Operation Concurrent Engineering **Enterprise Integration** Integration of Fields of Specialization Life Cycle Process Definition Planning, Monitoring and Controlling Risk Assessment

[5] The competencies listed here are specific to core technical competency requirements; other general and leadership competencies are also applicable.

Exhibit 5: Competencies by Discipline (continued)

Business and Financial Management	
Basic Budgeting and Accounting **Financial Budget and Data Analysis** Financial Management Project Management Performance Management/Cost Accounting **Cost Estimating** Federal Budgeting Agency Budgeting	Strategic Planning Organizational Forecasting **Risk Analysis and Internal Management Control Concepts and Principles** **Program Evaluation** **Reconciliation and Financial Reporting** Productivity Improvement Systems and Business Reengineering Processes
Cost Estimation	
Data Collection and Analysis **Financial Analysis** **Program and Portfolio Investment Analysis** Acquisition and Contracts	FAA Organizational Policies and Procedures Financial Management Investment Analysis Project Management System Evaluation
Contracting	
Acquisition Strategy Development Award Resolution **Defining Contractual/Business Relationships** **Defining Government Requirements in Commercial Non-Commercial Terms** Defining Requirements Detailed Bid Evaluation Skills **Financial Management** Managing Competition Market Research	Negotiation **Performance-Based Acquisition** Performance Management Procurement Planning Proposal Analysis and Evaluation **Requirements/Contract Management** Resolution of Contract Termination and/or Closeout Small Business and Preference Program Participation Solicitation of Offers
Contracting Officer's Technical Representative	
Acquisition Planning **Defining Government Requirements in Commercial Non-Commercial Terms** **Effective Contract Management** Effective Pre-Award Communication	Market Research (Understanding the Marketplace) Negotiation **Performance Management** **Technical Analysis of Proposals**
Leadership	
Achieving Results Managing Organizational Performance Accountability and Measurement Problem Solving Business Acumen Customer Focus Leading People Building Teamwork and Cooperation Building a Model EEO Program Developing Talent	Building Relationships Communication Building Alliances Interpersonal Relations and Influence Integrity and Honesty Leading Change Vision Strategy Formulation Agility Innovation
Competency Models to be Developed or Validated	
Research and Engineering/System Engineering Test and Evaluation	Acquisition Law

6. Profile of the Current Acquisition Workforce

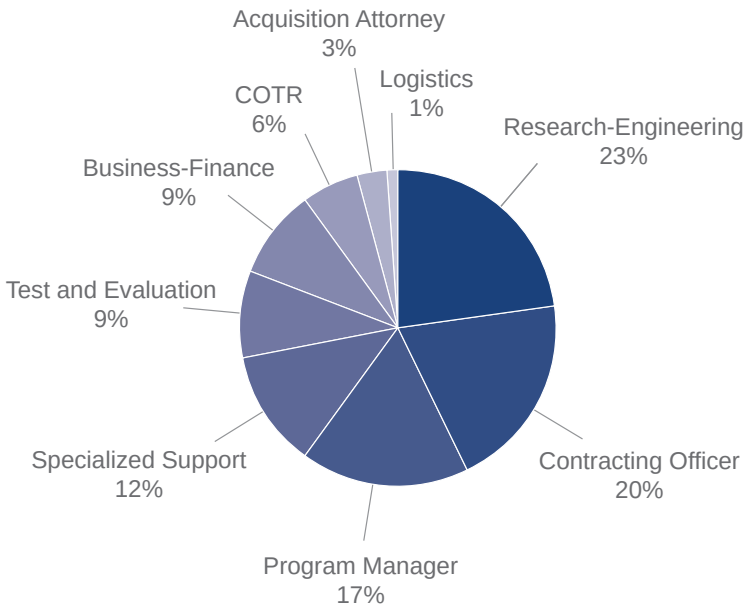
The core acquisition workforce consists of approximately 1,500 federal employees. As explained in Section 2, the workforce disciplines addressed in this plan are:

- Program/Project Managers
- Researchers and Engineers/System Engineers
- Business and Financial Analysts
- Contracting Officers/Specialists
- Contracting Officer Technical Representatives
- Integrated Logistics Support Specialists
- Test and Evaluation Specialists
- Acquisition Attorneys
- Specialized Support

At 23 percent, as shown in Exhibit 6, the Research and Engineering/System Engineering discipline represents the largest percentage of federal full-time equivalents (FTEs) in the acquisition workforce.

It is important to note that the COTRs represented in Exhibit 6 are only the COTRs who support capital investments. There are many more COTRs throughout the agency who support other procurements, such as services contracts. FAA tracks and ensures training is completed for the full COTR population. Additionally, the Logistics population included here is only the Integrated Logistics Specialists who support capital acquisitions during the upfront phases of the acquisition; there are many more logistics specialists across the field who provide in-service logistics support.

Exhibit 6: Distribution of Acquisition Workforce by Discipline



As shown in Exhibit 7, the average member of the FAA's acquisition workforce is 48.6 years of age with 18.3 years of federal service.

Exhibit 7: Average Age and Years of Federal Service for the Acquisition Workforce

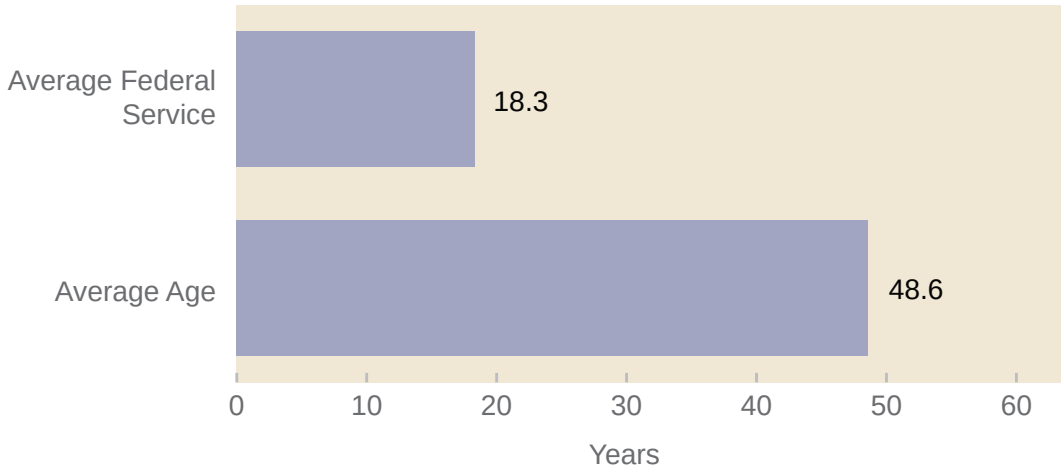
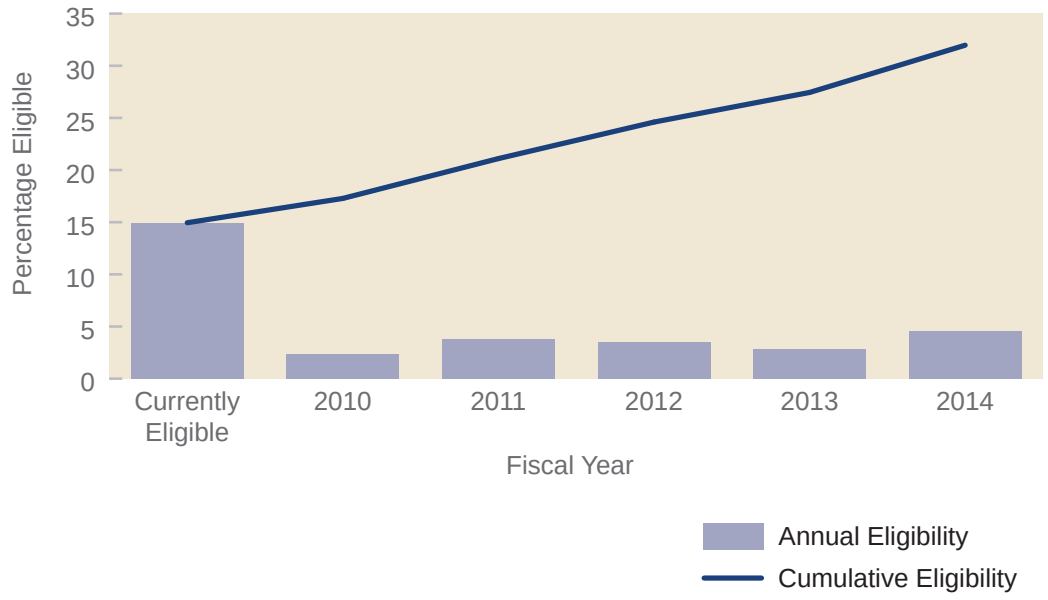


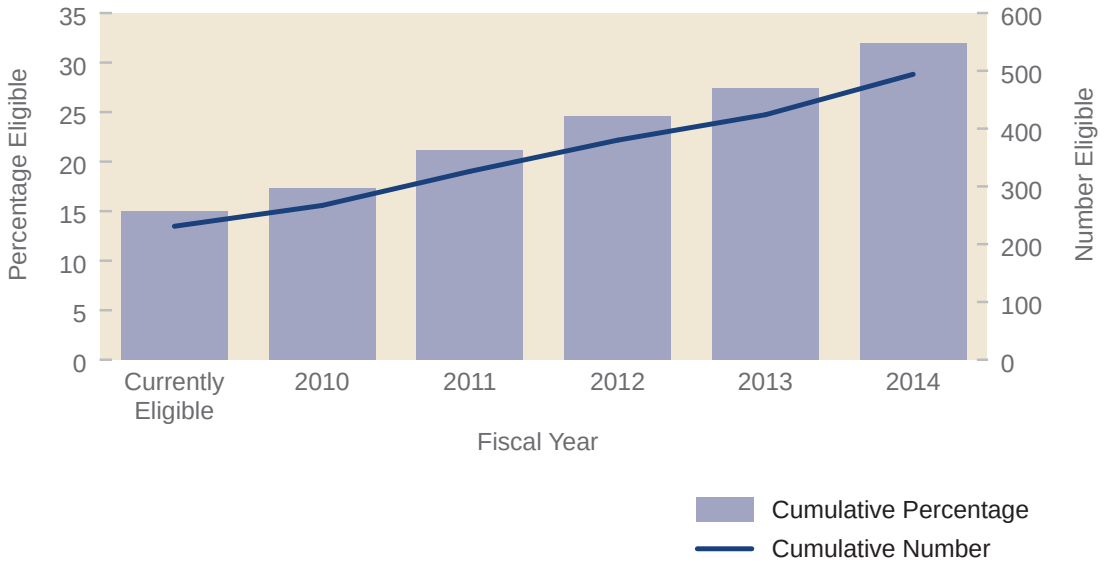
Exhibit 8 shows retirement eligibility through the end of FY 2014 for the FAA's acquisition workforce. At the present time, almost 15 percent of this workforce is eligible to retire. This percentage will grow to nearly 32 percent by the end of FY 2014.

Exhibit 8: Annual and Cumulative Retirement Eligibility for the FAA Acquisition Community



Percentages only tell part of the story. Exhibit 9 shows how the number of retirement eligible individuals grows over the next five years.

Exhibit 9: Cumulative Retirement Eligibility Percentage and Number

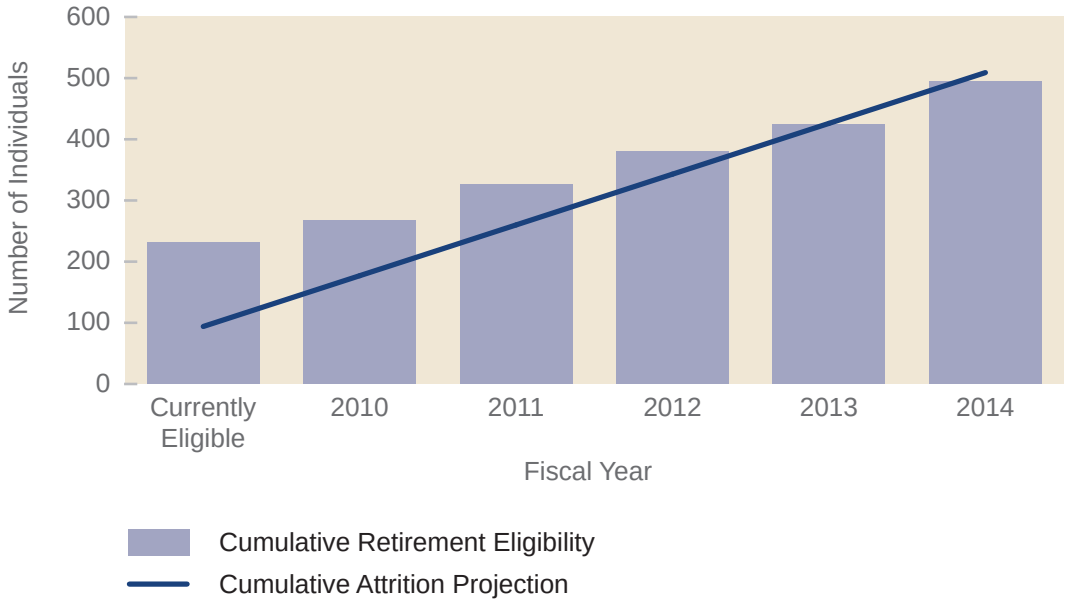


Retirement eligibility is a key measure of attrition potential, but there are other factors to consider. From 2005 to 2009, the FAA experienced an overall 6.3 percent [6] attrition rate.

[6] This does not include the departure of over 800 personnel due to the 2006 outsourcing of Flight Services.

Of this, approximately 4.8 percent was due to retirements and 1.5 percent due to other causes. If these rates hold, the acquisition workforce of approximately 1,500 can expect to lose about 23 individuals per year for non-retirement issues and another 70 to 75 through retirements. Exhibit 10 shows the relationship between the number of retirement eligible individuals and the projections based on recent history.

Exhibit 10: Comparison of Retirement Eligibility and Attrition Data Projections



Although historical attrition initially lags behind the estimates based on retirement eligibility, the two trends produce a very similar result at the end of five years. Even with this convergence of data, the future attrition of acquisition personnel will depend upon a number of factors, such as the economy, the type of retirement plan an individual has (e.g., CSRS, FERS), and the level of satisfaction an individual gains from his or her job. Therefore, perhaps the most important message coming from the attrition data is that over the next decade, the FAA's acquisition workforce will undergo a significant change in personnel. This change will result in significant loss of knowledge and skill but will also provide the opportunity to bring individuals into the organization who possess knowledge and skills in newer and emerging technologies.

Some of the challenges that the FAA faces include:

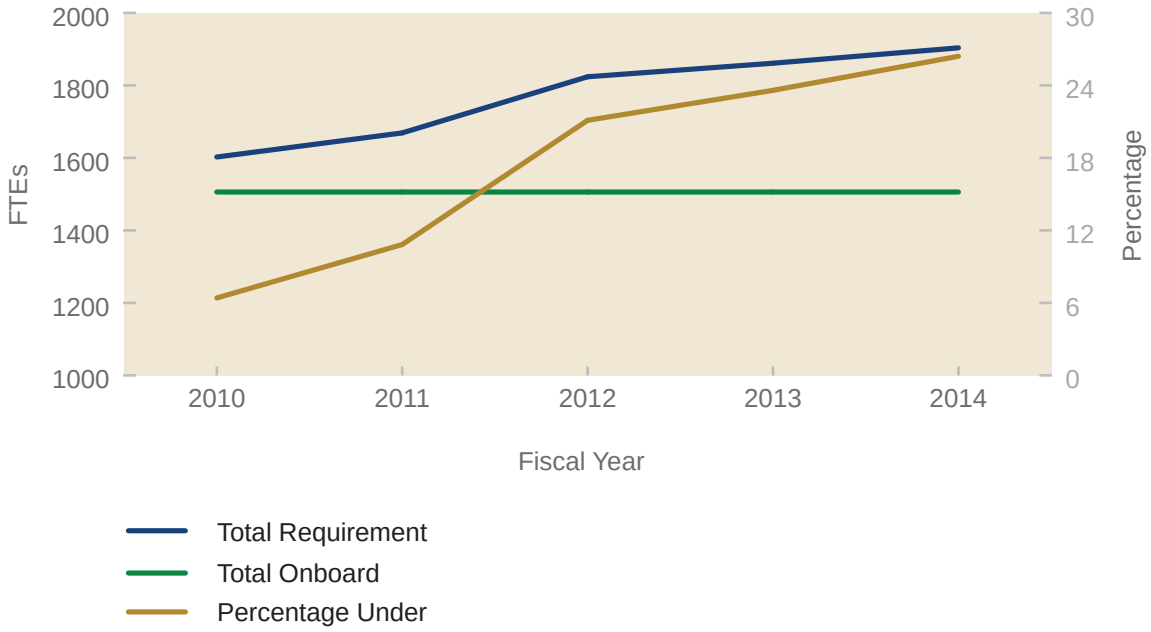
- Capturing and disseminating the knowledge and skills of the senior members of the acquisition community
- Identifying the knowledge and skills that will be required of the future workforce
- Finding, hiring, and retaining individuals who possess those knowledge and skills

Specific information about the retirement eligibility of the various acquisition disciplines is provided in Section 9.

7. Future Workforce Requirements

As defined in this plan, the acquisition workforce includes approximately 1,500 individuals across nine disciplines. Exhibit 11 shows that the requirement for acquisition personnel will grow over the next five years. At the present time, the FAA's acquisition managers and executives estimate that existing acquisition programs are about 6 percent (97 FTEs) understaffed. Without growth, this deficit could reach as high as 26 percent by 2014.

Exhibit 11: Estimated Growth in Acquisition Workforce Requirements



The future requirements for the acquisition workforce look somewhat different depending upon the specific discipline. Exhibit 12 on the following page shows the estimated requirements growth for each discipline.

Exhibit 12: Estimated Growth in Acquisition Workforce Requirements by Discipline

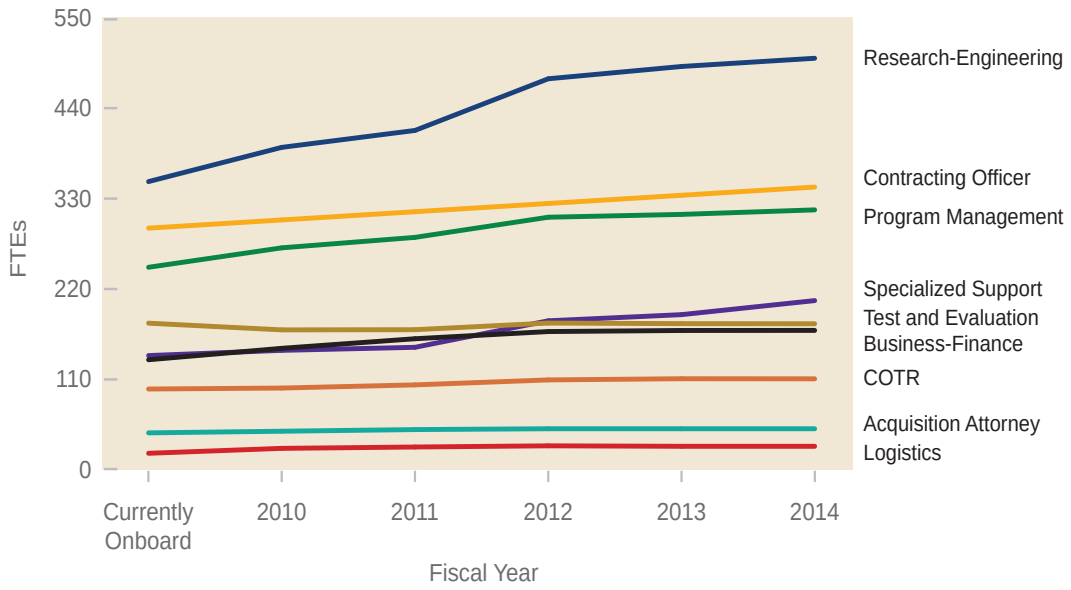
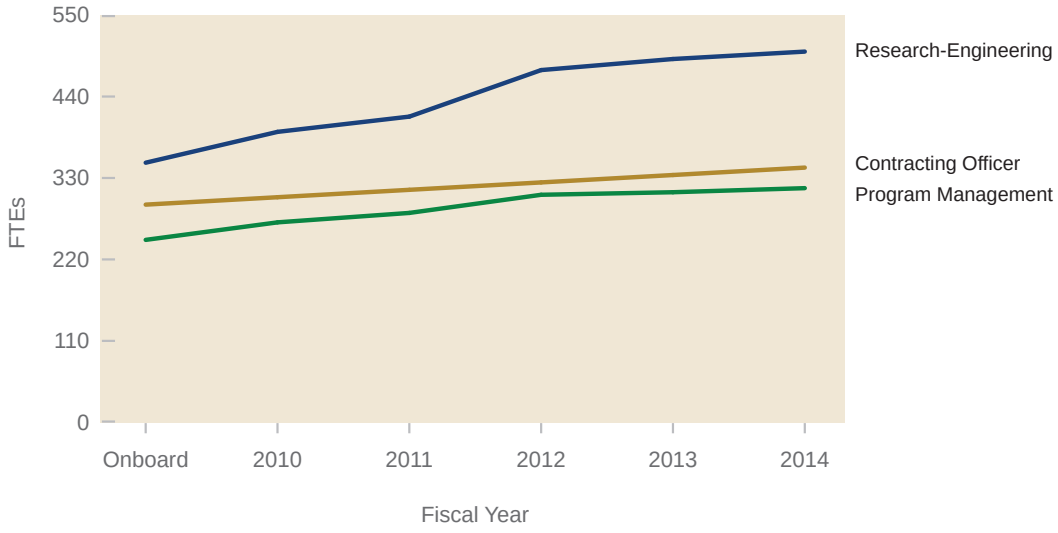


Exhibit 12 shows that some of the disciplines, while critical to acquisition, will not present major workforce management challenges. The three areas of greatest concern based on both the size of the workforce associated with the discipline and the predicted growth in requirements are Research-Engineering, Contract Officer and Program/Project Management. Over the next five years, the requirement for these disciplines will increase by an average of 27 percent. Exhibit 13 shows the estimated growth in FTEs for these disciplines.

Exhibit 13: Estimated Growth in Acquisition Workforce Requirements for the Three Highest Growth Disciplines



8. Acquisition Workforce Strategies

Workforce Planning Strategies

The agency has a wide variety of programs and initiatives in place to address recruitment, development and retention. The strategies in this section build on existing activities and provide the roadmap for addressing agency acquisition workforce needs. Metrics identified at the end of this section are being used to track and assess progress in closing workforce gaps. Exhibit 14 lists the four high-level strategies; each one is explained is more detail below.

Exhibit 14: High-Level Strategies

Acquisition Workforce Strategies	
Strategy One	Fill gaps based on workforce analyses
Strategy Two	Develop and execute a consolidated acquisition recruitment and hiring plan
Strategy Three	Create an integrated acquisition career development program
Strategy Four	Institutionalize an acquisition workforce planning process

Strategy One: Fill Gaps Based on Workforce Analyses

Filling the most critical hiring gaps is a high priority for the agency to support the successful design, development, deployment, and sustainment of current and future NAS technologies and infrastructure. FAA is using the acquisition workforce data and analysis to identify priority and relative needs and make staffing and position allocation decisions accordingly. For example, the acquisition workforce demand projections were used in making decisions on the allocation of 75 new NextGen positions across ATO organizations in FY 2010.

Moreover, to fill the gaps in a timely manner, the overall hiring process is being analyzed to find ways to more effectively and efficiently meet agency needs and make the hiring process the first in a series of positive experience for new employees. This analysis requires a clear understanding of hiring flexibilities for acquisition professionals and how they can be used.

In FY 2009, FAA met 99 percent of its overall acquisition workforce staffing goal, with a net gain of over 200 acquisition employees. In addition to hiring successes, attrition was modest and efforts at retention have been successful. For example, the agency maintained overall acquisition workforce attrition (retirement/ non-retirement) at less than 4 percent in fiscal year 2009.

Strategy Two: Develop and Execute a Consolidated Acquisition Recruitment and Hiring Plan

Sources for experienced acquisition professionals are diminishing while the need for their skill sets in FAA and throughout the federal government is increasing. This strategy focuses on targeted outreach and recruitment for senior-, mid-, and entry-level acquisition professionals by discipline, as well as broad-based outreach to attract a diverse applicant pool. The agency is developing additional sourcing strategies for acquisition

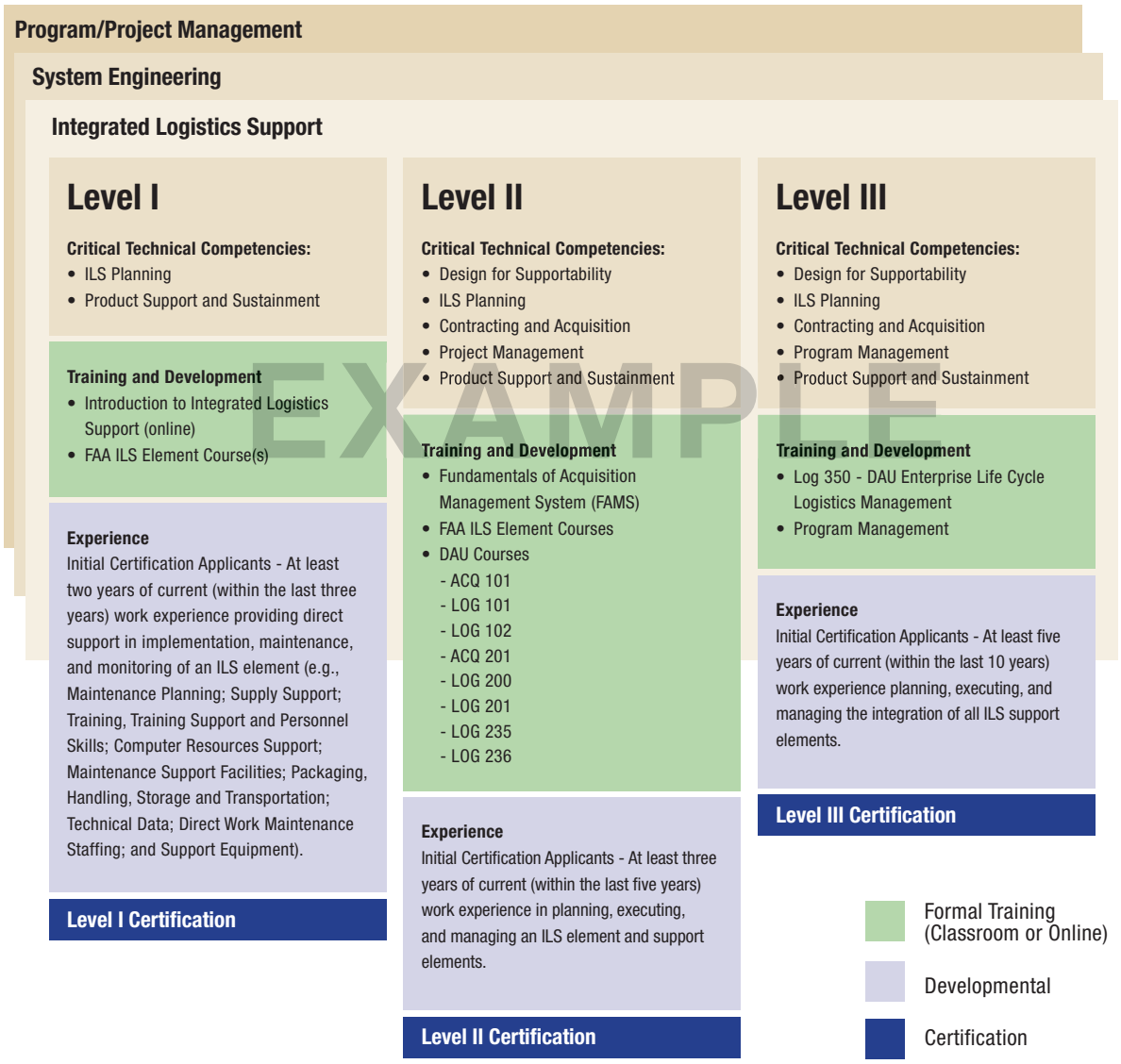
professionals using best practices and alliances with acquisition communities. FAA is increasing partnerships with colleges and universities, resulting in a sourcing pool for candidates. This strategy supports coordinated recruiting efforts for acquisition professionals across service units.

FAA has implemented several key initiatives in support of this strategy. For example, the agency has created a Recruiting and Marketing Outreach Plan for the Acquisition Workforce, and recently participated in the NASA Kennedy Space Center job fair to recruit applicants for key technical positions, scheduling 30 interviews for the first day of the job fair. Recruitment initiatives have been expanded to target skill needs, promote workforce diversity, and increase veterans outreach through participation in more than a dozen job fairs and employment summits thus far in 2010. FAA has developed branding and materials to better market the FAA as an employer of choice. The agency also has piloted improved processes for recruitment planning for acquisition professionals, initially targeting the Contracting Specialist 1102 workforce. In 2010 the FAA benchmarked recruitment and hiring processes for Acquisition Attorneys, receiving useful information on other agencies' practices in these areas.

Strategy Three: Create an Integrated Acquisition Career Development Program

To remain competitive and be an employer of choice, the agency is developing a career-long training and development roadmap for acquisition professionals that contains career paths/networks, a comprehensive career development framework, competency models, communities of practice technologies, and a well-defined training plan. Each career path in the program will clearly define typical job responsibilities and developmental requirements and opportunities (education and experience) for each experience level. The delivery of timely, relevant and targeted training and development will enhance technical proficiency, support career development, and promote career-long learning. Exhibit 15 is an example of a career development model for Integrated Logistics Support Specialists. The primary goal of this strategy is to create career development frameworks for each acquisition discipline/role within an integrated structure.

Exhibit 15: Sample Career Development Model



The Acquisition Community Profiles in Section 9 provide details of the work being done in this area for each discipline. Highlights of recent activities include: publication of a certification guide for employees and managers, online publication of new and updated certification policy, development of a competency model for Cost Estimating, development and delivery of new courses in acquisition areas such as Test and Evaluation and Cost/Price analysis techniques, and the start of development of career paths for acquisition professionals. For example, ARC's Office of Acquisition Services developed a 1102 career path for newly hired Contracting Specialists. During the 30-month program, candidates are assigned a formal mentor and provided ongoing oversight and feedback to develop in their profession.

Strategy Four: Institutionalize an Acquisition Workforce Planning Process

FAA is continuing to refine and mature its workforce planning processes and tools. It is an evolving, ongoing process, and the data published in this plan are not static.

For the 2010 update to this plan, FAA extended acquisition workforce planning across the FAA with an expanded five-year planning horizon. FAA also advanced its workforce analyses to assess staffing and requirements at both program and organizational levels. This allows for a greater view across FAA of patterns in staffing, for example, how requirements shift by ACAT level and life cycle phase. This level of analysis can be useful in helping to inform shifts in personnel assignments. For example, as staffing requirements decrease for programs as they near the end of solution implementation, personnel could be moved to support other programs.

Initiatives under this strategy focus on processes and tools required to support robust acquisition workforce planning and analysis. They include refining and enhancing the acquisition workforce staffing model, better defining the core acquisition workforce, "tagging" the acquisition workforce in the personnel and learning management systems, and improving data collection and management, including metrics and reporting.

Metrics

FAA has established the metrics listed in Exhibit 16 to help measure the success of the Acquisition Workforce Plan. These metrics will be used to track and report progress over time.

Exhibit 16: Metrics

Metric/Measure	Strategy 1: Fill Gaps Based on Workforce Analyses	Strategy 2: Develop and Execute a Consolidated Acquisition Recruitment and Hiring Plan	Strategy 3: Create an Integrated Acquisition Career Development Program	Strategy 4: Institutionalize an Acquisition Workforce Planning Process
Actual Onboard Number of acquisition positions encumbered	X	X		X
New Hires Percentage of positions filled against the hiring plan (by year and discipline)	X	X		X
Time to Fill Length of time to fill acquisition positions (end-to-end)	X	X		X
Certified Staff by Discipline Percentage of individuals certified against total of those whose position requires certification (by discipline)			X	X
Attrition Rate Percentage of acquisition workforce leaving the agency (by attrition type)	X			X

In fiscal year 2010 metrics data collection began with a baseline definition of the current state of the FAA's acquisition workforce followed by ongoing data management and reporting. Data discussions at Acquisition Workforce Council meetings have provided context to the data so that issues and priorities can be identified along with appropriate next steps.

9: FAA Acquisition Community Profiles

Program/Project Management Acquisition Community Profile

Definition

The Program/Project Manager occupation includes employees who have primary responsibility for the management and oversight of major and non-major FAA acquisition programs and projects. This occupation supports all phases in the acquisition life cycle: Research and Systems Analysis, Mission Analysis, Investment Analysis, Solution Implementation, and In-service Management. It involves establishing, tracking, managing, and reporting all aspects of program/project planning and execution, including budgeting, technical requirements, personnel, and customer needs.

Issues

- Entry-level hiring is not effective because of the complexity of Program Management. Program Managers require years of experience and often are promoted from other career disciplines (e.g., Engineering).

- The ability to manage a portfolio of investments to achieve mission effectiveness is critical. There will be a significant increase in the need for technical and program integration across service units, domains and agencies, and the ability to identify and manage interdependent program risk.

Initiatives

- Acquisition Executive Board is a corporate, cross-organizational body chaired by the FAA Federal Acquisition Executive (FAE) to support the Joint Resources Council (JRC). The AEB was chartered to establish a cross-organization, collaborative approach to developing acquisition policy, practices, and tools, and to institutionalize acquisition management policy and best practices at all levels of the agency. Membership on the AEB includes senior executives representing all of the major acquisition organizations across the agency. A significant accomplishment of the AEB has been the establishment of ACATs, each with corresponding governance and documentation requirements.

- Acquisition Practices is a series of toolkits built to provide Program/Project Managers and program staff with centralized access to information needed to implement, manage and perform key acquisition practices related to Program Management, Quality Assurance, Measurement and Analysis, Verification and Validation, Requirements Management, Risk Management, and Contractor Management. Each practice is aligned with industry standard practices and the FAA operational environment.

- Program/Project Management Certification Policy has been developed and is available in AMS Policy Section 5.0 at http://fast.faa.gov/acquisitioncareer/index.htm.

- Annual Acquisition Excellence Summits bring together acquisition professionals from all disciplines and across the agency to focus on changing policy, governance, roles, processes and practices, and initiatives that support the agency in successfully managing FAA's complex acquisitions. The most recent event, held in June 2010, featured live broadcast to audiences at multiple sites across the country as well as streaming across the web for desktop access, with interactive Q&A sessions. The two-day summits are jointly sponsored by the AEB and the Council.

Membership

In FY 2010 there are approximately 246 acquisition employees in the FAA performing Program/Project Management duties. The majority of Program Managers are located in the ATO with smaller numbers in Aviation Safety, Regions and Center Operations, Information Services, and Security and Hazardous Materials.

Typical Job Roles

- Program Manager
- Project Manager
- Acquisition Manager
- Project Lead
- Portfolio Manager

Typical Job Series

- 2186 - Aviation Technical Systems Specialist
- 800 series - Engineering and Architecture Group
- 340 - Program Manager
- 334 - Computer Specialist

Years of Service and Retirement Eligibility

As shown in Exhibit 17, individuals who perform Program/Project Management duties are, on the average, the most experienced and tenured of the acquisition workforce, with an average age of 51.7 years and 21.3 average years of federal service.

Exhibit 17: Average Years of Service and Age: Program/Project Management Discipline

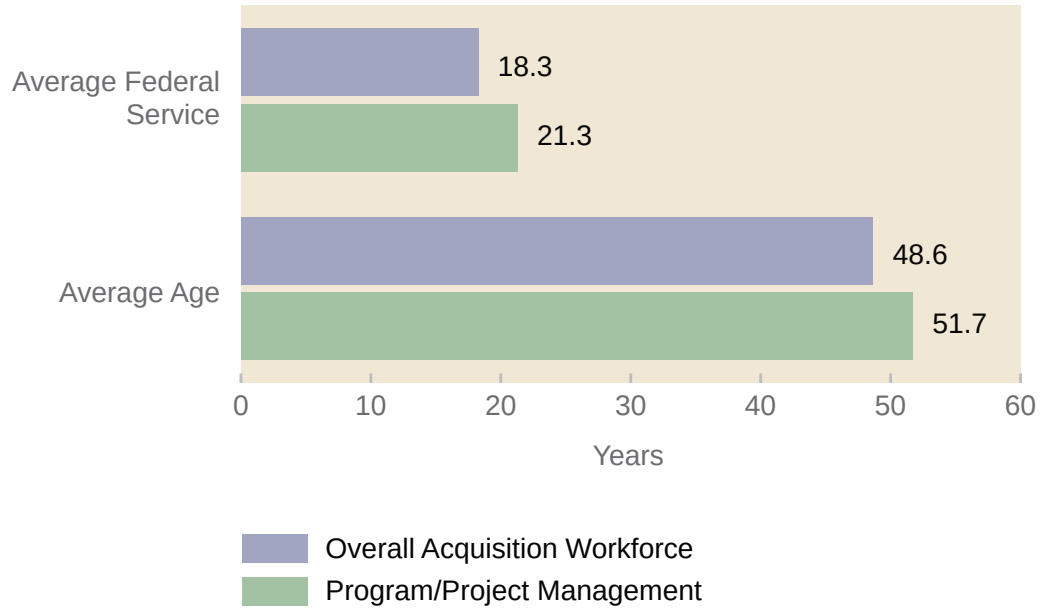
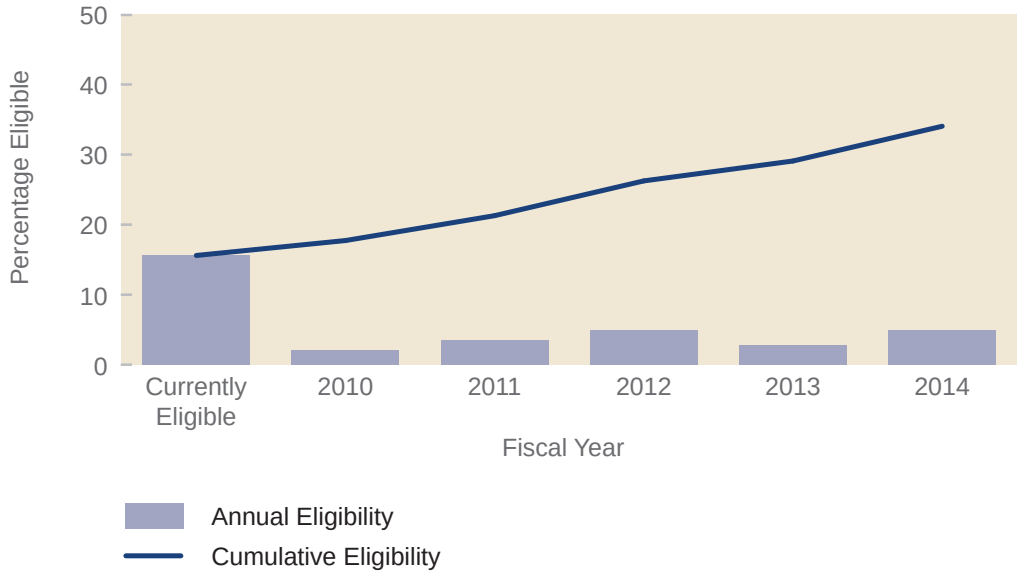


Exhibit 18 shows the retirement eligibility through the end of FY 2014 for the FAA's acquisition-related Program/Project Management discipline. At the present time, 15 percent of the members of this community are eligible to retire. This percentage will grow to 34 percent by the end of FY 2014.

Exhibit 18: Retirement Eligibility for the Program/Project Management Discipline



Overview of Critical Competencies

The Acquisition Workforce Council considers the competencies listed in bold as the most critical.

Program/Project Management	
Benefit-Cost Analysis	Performance-Based Logistics
Budget Execution	Procurement Planning
Contract Administration	**Program/Project Management Processes**
Contractor Performance Management	**Program/Project Planning Processes**
Cost Estimating	**Requirements Management**
Development of Supportability Requirements	**Risk Management**
Earned Value Management (EVM)	Source Identification and Selection
Financial Planning	**Stakeholder Management**
Formulation of Financial Programs and Budget	Strategic Alignment
Life Cycle Logistics Strategy Development	System Safety
Market Analysis	Systems Thinking and Integration
Organizational Awareness	Test and Evaluation Management
	Technical Expertise

Certification/Curriculum

FAA acquisition certification programs closely align with federal acquisition certification programs, meeting or exceeding federal-wide requirements. Certification requires experience and documented competency proficiency in addition to completion of core training and certification requirements; continuing professional development is required to maintain certification.

Individuals seeking to increase their knowledge and capabilities in project management may also take the available PM courses and training programs through FAA's electronic Learning Management System (eLMS).

Level I Certification

Experience: At least two years of acquisition experience or one year of project management experience within the last five years.

Core Training:

- Introduction to the Acquisition Management System (AMS)
- Principles of Federal Appropriations Law
- Managing Projects
- COR/COTR Basic Training or Equivalent
- Introduction to FAA Risk Management
- Introduction to Cost Estimating
- Earned Value Management Basic
- Key Ingredients of Systems Engineering
- FAI FAC-P/PM 100 – FAC-P/PM Entry Level Capstone Course
- Electives (select one):
  - Requirements Analysis and Development Workshop
  - Introduction to Integrated Logistics (online)
  - Project Leadership, Management and Communications
  - PM Simulation Workshop (Fundamentals)

External Certifications Required: N/A

Level II Certification

Level I requirements plus:

Experience: At least three years of acquisition experience required within the last five years, at least two years of this experience must be in program or project management.

Core Training:
- Fundamentals of Acquisition Management System (FAMS)
- Requirements Management
- Cost Estimating for Project Managers
- Earned Value Management (Advanced)
- Fundamentals of Enterprise Architecture for Program/Project Managers
- FAI FAC-P/PM 200 – FAC-P/PM Mid/Journeyman Level Capstone Course
- Electives (select one):
  - High Impact Communications
  - Human Factors Awareness Training (online)
  - Configuration Management Awareness (online)
  - Advanced PM Simulation Workshop

External Certification Requirements: PMI PMP Certification

Level III Certification

Level II requirements plus:

Experience: At least five years of acquisition experience within the last seven years. Three of the five years must be directly related to managing acquisition federal projects and/or programs.

Core Training:
- FAC-P/PM Level III Program/Project Management
- FAC-P/PM Level III Acquisition Management
- FAC-P/PM Level III Leadership and Interpersonal Skills
- FAI FAC-P/PM 300 – FAC-P/PM Senior/Expert Level Capstone Course

External Certification Requirements: PMI PMP Certification

Research and Engineering Acquisition Community Profile

Definition

Research is the process of investigating and examining an issue or need from different perspectives that may lead to the development of a practical issue or approach. This community profile focuses on Applied Research that is conducted to solve problems or answer specific questions in response to a stakeholder requirement. In contrast, Engineering is the discipline and profession of applying scientific knowledge and using natural laws and physical resources to design and implement materials, structures, machines, devices, systems and processes that realize a desired objective and meet specified criteria.

As a combined community, Research and Engineering contains many professional sub-disciplines and roles. System Engineering and Human Factors Engineering are highlighted here followed by a discussion of FAA Research.[7]

System Engineering. The field of System Engineering concentrates on the design and application of the whole system as distinct from its parts. At a NAS level, System Engineering cuts across individual systems and acquisition programs to achieve an integrated, consistent, and consolidated NAS design. System Engineering has two main purposes in FAA acquisitions. The first is to ensure that acquisitions are conducted from initial requirements to deployment and life cycle support in a consistent, repeatable, well-formulated manner. The second is to ensure that these acquisitions form an integrated whole. High quality individual pieces only make an improved NAS if their integration is specifically considered during acquisition. While policy, politics, benefits, and cost will ultimately determine what will be acquired, these all must be addressed in a context of cross-NAS implication and integration provided by NAS-level System Engineering.

Human Factors Engineering. Human Factors Engineering is an integral part of System Engineering and ensures that human-in-the-loop system performance objectives are met. The application of Human Factors Engineering during all phases of an acquisition program addresses the role of the human component in system design. One objective of Human Factors Engineering is to reduce the number and consequences of human errors that may result in incidents/accidents by aviation equipment users and maintainers. The application of Human Factors Engineering can also increase productivity and improve overall NAS performance.

Issues

- Recruiting and hiring to meet the increased demand for System Engineers, and various Engineering roles, on acquisition programs at all levels.
- Ensuring there are sufficient tools and environments to effectively execute System Engineering with a focus on integration, requirements management, functional analysis, risk management, and software techniques and skills.
- Human Factors Engineers must develop and maintain a systems view of their projects and studies to ensure that interdependencies are effectively managed. They must coordinate across workstation and domain boundaries and with other Research communities.
- Both the Research and Engineering communities must ensure that they maintain up-to-date technical and scientific knowledge in their specialty area.

[7] Other skill areas within Specialty Engineering include: System Safety Engineering; Reliability, Maintainability, and Availability; Electromagnetic Environmental Effects; Quality Engineering; Information Security Engineering; and Hazardous Materials Management/Environmental Engineering.

Initiatives

- Ongoing sponsorship of a System Engineering Graduate Certificate Program, provided through one of the country's premier systems engineering graduate programs.
- Worked with the International Council on Systems Engineering (INCOSE) to develop an internationally recognized certification program for the System Engineering community and maintain an ongoing partnership, including support for FAA system engineers to achieve INCOSE certification.
- Developed a competency model for three key disciplines: System Engineering, System Integration, and Software Engineering; and identified key activities within each that are critical to NextGen success.
- Developed a Human-System Integration Infrastructure Roadmap as an integral component of the NAS Enterprise Architecture.
- Partnerships with universities, segments of private industry, and many federal government laboratories to advance research and engineering as well as outreach and recruitment for new talent (for example, supporting student research projects and co-op program).

Membership

In FY 2010 there are approximately 350 acquisition employees in the FAA performing Research and Engineering. Many more individuals support the FAA in these roles who are not part of the core acquisition workforce due to the nature of their work. However, these individuals represent the broader workforce from which talent may be developed or acquired to meet future needs.

Engineering/System Engineering. In the FAA there is a clear distinction between those who practice Engineering and those who are System Engineers. System Engineering roles may evolve from Engineer through Senior Engineer, System Engineer, Senior System Engineer, and Chief System Engineer as an individual's capability, expertise, and experience advance.

Human Factors Engineering. The community of FAA Human Factors practitioners is strategically dispersed on integrated product teams to support acquisition programs and other offices that provide specialized skills. In addition, Human Factors resources at the FAA's William J. Hughes Technical Center leverage laboratory facility and technical expertise during system development and evaluation.

Applied Research. The development of the nation's Aviation Research capability has evolved over the past several decades into a broad community of Researchers addressing challenges critical to the advancement of aviation. This community includes universities, segments of private industry, and many federal government laboratories. Research and Engineering intersect through the application of the disciplines and methods that facilitate making choices and distinguishing among various alternatives.

Typical Job Roles

- Chief System Engineer
- System Engineer
- Software Engineer
- Human Factors Engineer/Specialist
- System Architect
- Operations Research Analyst

Typical Job Series

- 800 series - Engineering and Architecture Group
- 1550 - Computer Scientist
- 180 - Psychologist
- 1300 series - Physical Science Group
- 1500 series - Mathematics and Statistics Group

Years of Service and Retirement Eligibility

As shown in Exhibit 19, the FAA's acquisition Research and Engineering Community has an average age very similar to that of the overall acquisition workforce (48.5) and has slightly fewer years of federal service (17.5).

Exhibit 19: Average Years of Service and Age: Research and Engineering Discipline

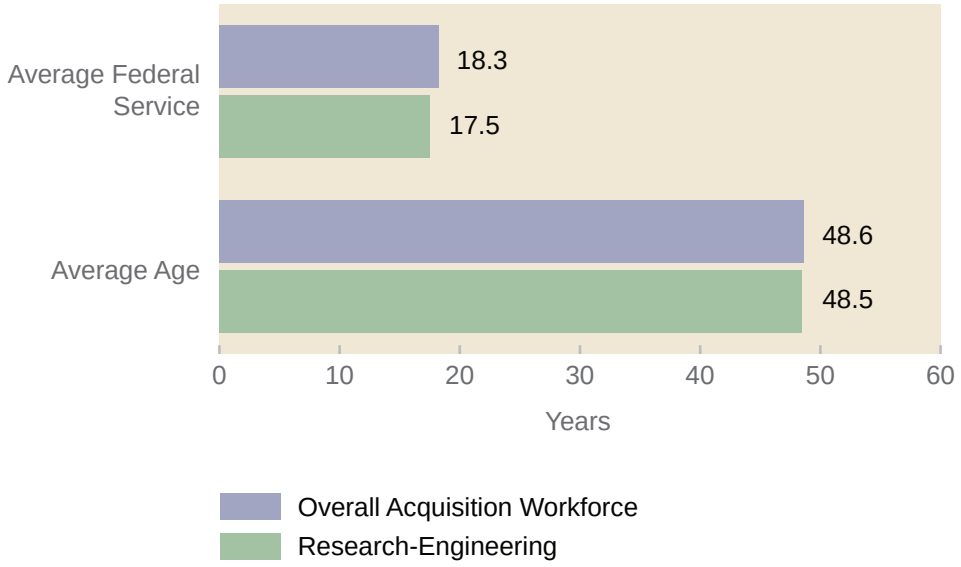
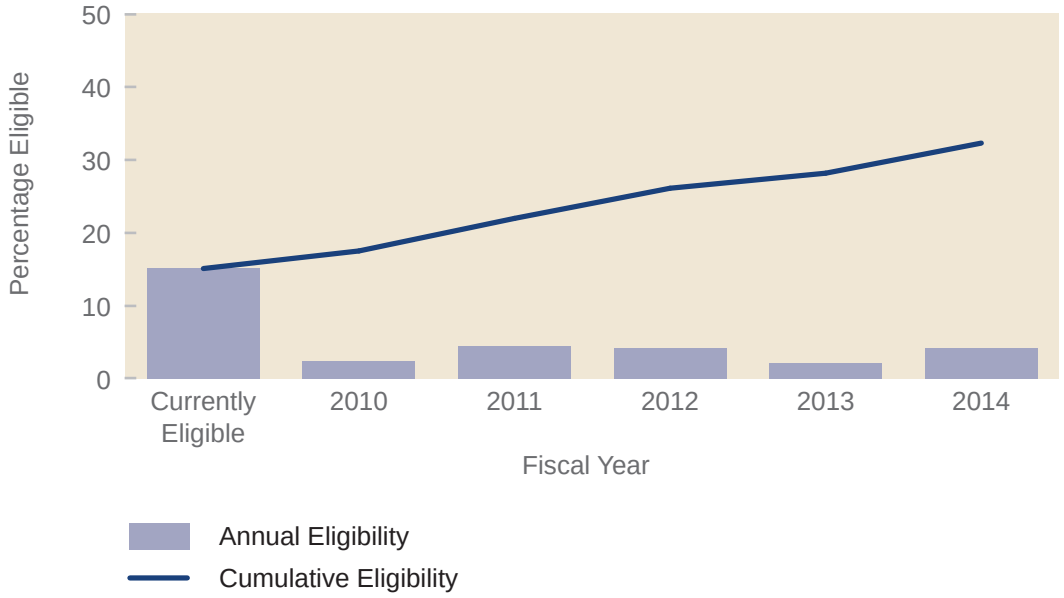


Exhibit 20 shows the retirement eligibility through the end of FY 2014 for the FAA's acquisition-related Research and Engineering discipline. At the present time, 15 percent of the members of this community are eligible to retire. This percentage will grow to nearly 33 percent by the end of FY 2014.

Exhibit 20: Retirement Eligibility for the Research and Engineering Discipline



Overview of Critical Competencies

The Acquisition Workforce Council considers the competencies listed in bold as the most critical.

Research and Engineering/System Engineering	
System Concepts	System Design for: – System Robustness – Human Factors Engineering
"System of System" Capability Issues	**Integration and Verification**
Enterprise and Technology Environment	Validation
Stakeholder Management	Transition to Operation
System Design for: – Architectural Design – Concept Generation – Functional Analysis – Interface Management – Maintaining Design Integrity – Modeling and Simulation **– Solution Selection** – Trade Off Analysis	Concurrent Engineering
	Enterprise Integration
	Integration of Fields of Specialization
	Life Cycle Process Definition
	Planning, Monitoring and Controlling
	Risk Assessment

Certification/Curriculum

Competency development in System Engineering occurs in three specific areas: through education to develop System Engineering knowledge; through training to develop System Engineering knowledge and skills in context and apply them on the job; and through formal measurement of education, experience, and knowledge by a qualified certifying organization that assesses capabilities against recognized standards.

The FAA relies on external certification programs such as the International Council on Systems Engineering (INCOSE) to certify System Engineering Professionals. INCOSE has established certification standards at three levels:

- Entry (Associate Systems Engineering Professional, or ASEP)
- Foundation (Certified Systems Engineering Professional, or CSEP)
- Advanced (Expert Systems Engineering Professional, or ESEP)[8]

Certification at the foundation level, or CSEP, is most relevant to FAA acquisition workforce needs. This level is targeted toward individuals with five or more years of System Engineering work experience. The certification process includes knowledge, experience, and testing components. Certification must be renewed every three years through continuing education. Specific requirements at each certification level may be obtained from the INCOSE website at http://www.incose.org/educationcareers/certification/.

Formal certification is different from a "certificate" that documents the successful completion of a training or education program, such as the Stevens Institute Systems Engineering Graduate Certificate Programs.

In the Human Factors area, external certification programs may also be used. Candidates may be fully qualified for certification according to the requirements of the Board of Certification in Professional Ergonomics (BCPE) or the Oxford Research Institute. Professional certification programs include certification for Human Factors Research and Engineering skills in a variety of technical and specialty areas.

FAA System Engineering Training Curriculum

- Key Ingredients of System Engineering
- Integrated Technical Planning
- Requirements Analysis and Development Workshop
- Dimensions of Functional Analysis
- Introduction to Interface Management
- Interface Management Workshop
- Introduction to FAA Risk Management
- Human Factors Awareness Course (online)

[8] Defense Acquisition University (DAU) recognizes INCOSE ASEP-Acquisition and CSEP-Acquisition certifications as meeting or exceeding desired outcome, content, and evaluation techniques of DAU courses SYS 101 and SYS 202.

Stevens Institute System Engineering Certificate Programs

- System Engineering and Architecting Certificate
  - Fundamentals of System Engineering
  - System Architecture and Design
  - Project Management of Complex Systems
  - System Integration
- System and Supportability Engineering Certificate
  - Fundamentals of System Engineering
  - System Architecture and Design
  - Design for System Reliability, Maintainability and Supportability
  - System Supportability and Logistics

FAA Research

Given the varying technical developmental needs of Researchers, standard training courses are inappropriate to maintain technical currency. However, attending courses in universities associated with a Researcher's expertise is encouraged because it allows an individual to maintain awareness of advances in his or her profession and gain competency in their application. Standard courses that address the Aviation System, Communications, and Program Management are also useful for development. Researchers must maintain membership in professional associations and attend conferences and specialty courses to keep abreast of developments in their field of expertise. Researchers must work with sponsors to ensure that a critical mass of in-house Research capability is maintained in the scientific and technical areas vital to achieving agency goals. The opportunity to attend university courses, participate in professional associations, and attend conferences in one's area of technical expertise is beneficial to each Engineering discipline as well.

Test and Evaluation Acquisition Community Profile

Definition

Test and Evaluation (T&E) is the process associated with testing, analyzing, and evaluating in order to verify and validate that products meet specifications, satisfy requirements, and are operationally suitable and effective. T&E personnel require the knowledge of efficient and cost-effective methods for planning, monitoring, conducting and evaluating tests of prototype equipment of materiel. T&E personnel also need a thorough strategy to verify system or service performance through measurable methods and validate that the system or service will fulfill its intended purpose when placed in its intended environment. Developmental testing verifies that all specified technical and performance requirements have been met and that the system is fully integrated and stable, and that it has no adverse effect on the rest of the NAS. Operational testing validates that a new or modified system or service is operationally effective and suitable for use in the NAS and the NAS infrastructure is ready to accept the system.

Systematic and comprehensive T&E promotes the development of quality products by continuously checking for oversights, defects, and deviations. T&E plays a critical role in all acquisition phases. T&E Planning and Support activities support the development of concepts, requirements, acquisition strategies, contract items, and design and development. Quality T&E practices and reporting provides effective risk management and decision support for acquisition planning and milestones. The T&E Developmental Test and Operational Test phases are active during component/system development, component integration, system integration, operational validation, and system/service implementation.

Issues

- Future systems will require more integrated testing to provide shared data for all stakeholders and to gain resource efficiencies.
- Maintaining an adequate workforce with the right expertise and skill mix while responding to the future retirement bubble.
- Need to implement certification of T&E personnel for three levels of knowledge, skills, and experience.
- T&E guidance is needed on T&E process tailoring, T&E roles and relationships with System Engineering and other T&E cross-matrix organizations, and initiating and integrating test programs.
- Additional training is needed on the T&E Handbook, Critical Operational Issues (COI) and requirements decomposition, NextGen, and personnel certification.

Initiatives

- Developed a detailed task and skills analysis that addresses all aspects of performing quality T&E along with a comprehensive list of knowledge and skills that may be required for various T&E professionals. This work will be used as inputs to T&E competency and certification program development.

- Developed and delivered a new course for T&E professionals titled "AMS and Test and Evaluation Fundamentals." The three-day, instructor-led course focuses on the role of T&E throughout the acquisition life cycle. The objective is to educate T&E professionals regarding their role in life cycle acquisition management, when their services are required, and the impact T&E has on program planning, budgeting, execution, and in-service management.

- Held the fifth annual "Verification and Validation Summit" in Atlantic City. More than 100 people attended the 2009 summit, triple the number at the first one, which organizers say indicates a growing interest in V&V within the FAA. The conference was facilitated by the William J. Hughes Technical Center and included representatives from NASA, the Department of Defense, and the European organization Eurocontrol. V&V promotes the development of quality products by continuously checking for oversights, defects, and deviations. At multiple points during NextGen's development, the V&V process will verify that requirements are being met and will validate that products can fulfill their intended use in the NAS.

Membership

Individuals who work in the T&E career field are predominantly degree-holding technical professionals who plan, perform, and manage T&E tasks and team activities in support of acquisition programs. In FY 2010 there are approximately 139 acquisition employees in the FAA who have primary responsibility for T&E. The majority of these employees are at the FAA's Technical Center in Atlantic City. Test and Evaluation is the Technical Center's primary mission and the Center is committed to providing a world-class laboratory dedicated to the T&E of critical NextGen systems to maximize the quality of products and services, promote effective T&E planning, reduce program risks, decrease program costs, and reduce latent defects.

Typical Job Roles

- Test Team Manager
- Test Director
- Test Lead
- Test Engineer
- Operations Research Analyst
- Statistical Analyst
- Experimental Designer
- Flight Test Engineer

Typical Job Series

- 800 series - Engineering and Architecture Group
- 334 - Computer Specialist
- 1300 series - Physical Science Group
- 1500 series - Mathematics and Statistics Group
- 1550 - Computer Scientist
- Various others

Years of Service and Retirement Eligibility

As shown in Exhibit 21, the FAA's Test and Evaluation Community is slightly younger (47.8) than the overall acquisition workforce but has nearly a year more of federal service (19.2).

Exhibit 21: Average Years of Service and Age: Test and Evaluation Discipline

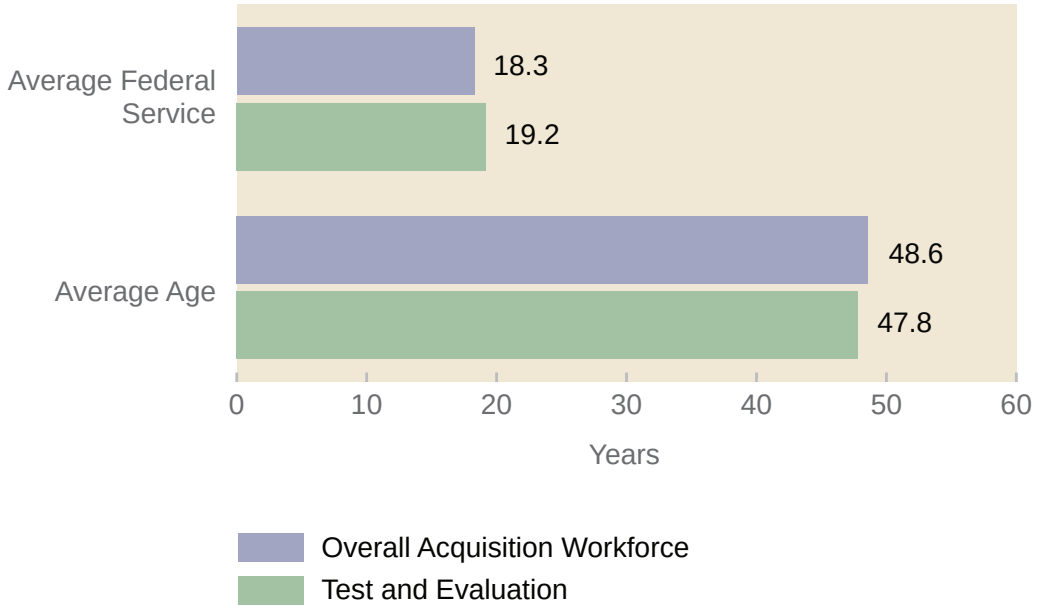
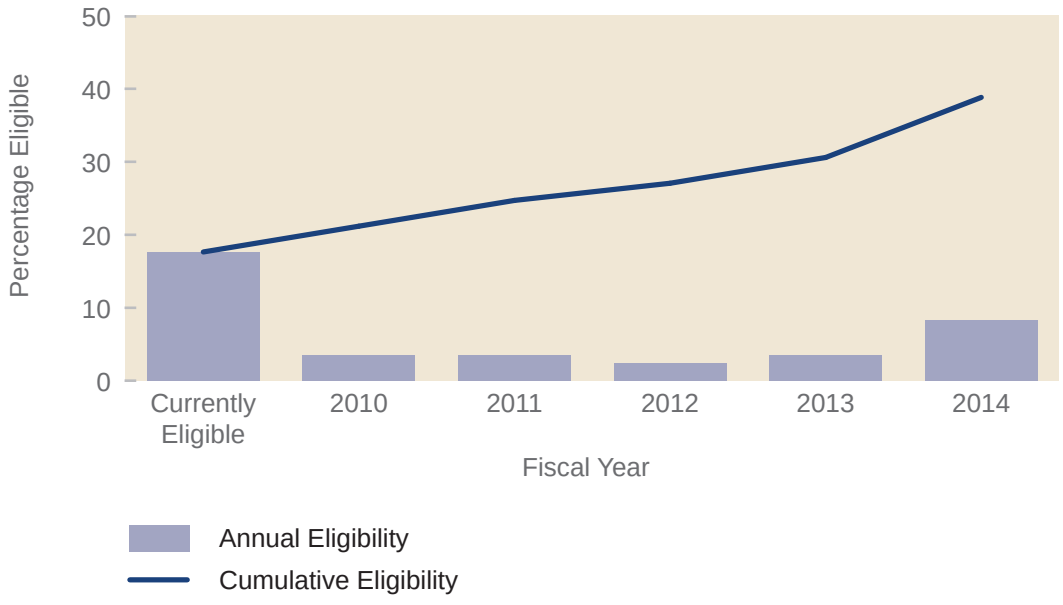


Exhibit 22 shows the retirement eligibility through the end of FY 2014 for the FAA's personnel who perform Test and Evaluation functions. At the present time, over 17 percent of the members of this community are eligible to retire. This percentage will grow to 39 percent by the end of FY 2014.

Exhibit 22: Retirement Eligibility for the Test and Evaluation Discipline



Overview of Critical Competencies

A FAA competency framework for T&E is in the planning stages. The FAA recognizes the following capabilities as important and expects these to be integrated into a future competency model:

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

Certification/Curriculum

Test and Evaluation ***certificate*** programs exist through various post-secondary learning institutions. In addition, many online courses are available for refresher/continuous learning and training through Defense Acquisition University (DAU). A FAA certification program for T&E will be designed after the development and validation of a FAA competency framework for Test and Evaluation.

Knowledge and skills assessments based on duties and tasks will be developed for personnel who:

- Support test program activities
- Support operational and specification requirements development
- Support development of acquisition strategies
- Develop master plan and cost estimates a T&E program
- Support contract development and maintenance
- Perform development tests
    - Develop detailed and approve DT plans
    - Prepared for, conduct, and witness DT
    - Report on, assess, and approve DT results
- Perform operational tests
    - Develop detailed OT plans
    - Develop OT procedures, test tools, and required test environments
    - Prepared for, manage and conduct OT
    - Analyze, assess, and report on OT results

A detailed task and skills analysis that addresses all aspects of performing quality T&E has been developed along with a comprehensive list of knowledge and skills that may be required for various T&E professionals.

Business and Financial Management Acquisition Community Profile

Definition

Employees in this job family use their knowledge of financial systems and business processes to develop, coordinate, and integrate performance-based budgets; write informative justifications for budget requests; develop metrics; plan, manage, track, reconcile, and report financial transactions; develop cost projections; develop recommendations to mitigate financial risks; and provide financial and investment analysis, including return on investment (ROI). Business and Financial Management includes individuals who prepare or approve independent cost estimates submitted for contract packages requiring Chief Financial Officer (CFO) approval.

Issues

- Complexity of acquisition programs
- Cost estimation at the portfolio level
- Current and estimated budget constraints
- Need for standardization of business processes across the agency
- Planning funding cash flows including contingencies

Initiatives

- Cost Estimating Certification policy is being developed in 2010 and includes an extensive Cost Estimator competency model with behavioral indicators at three performance levels (entry, intermediate, and advanced).
- Efforts are underway to standardize business processes in Business and Financial Management through the implementation of standard operating procedures and supporting training.
- The need for more emphasis on Business and Financial Management certifications is being explored parallel to competency and certification program development for Cost Estimators.

Membership

In FY 2010 there are approximately 134 acquisition employees in the FAA performing Business and Financial Management duties. The majority of these employees are in the ATO Finance organization.

Typical Job Roles

- Cost Analyst/Estimator
- Business Manager
- Financial Analyst
- Benefits Analyst
- Operations Research Analyst

Typical Job Series

- 300 series - General Administrative, Clerical, and Office Services Group
- 500 series - Accounting and Budget Group
- 1500 series - Mathematics and Statistics Group

Years of Service and Retirement Eligibility

As shown in Exhibit 23, the Business and Financial Management Community tends to be somewhat younger (average age 47.5) and have fewer years of federal service (16.9) than the overall FAA acquisition community.

Exhibit 23: Average Years of Service and Age: Business-Financial Management Discipline

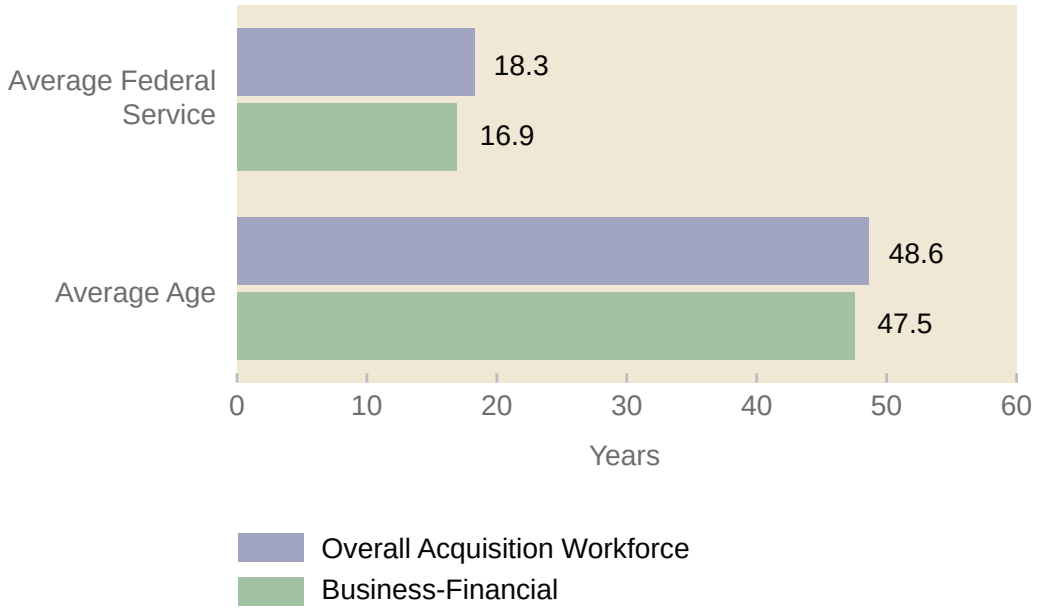
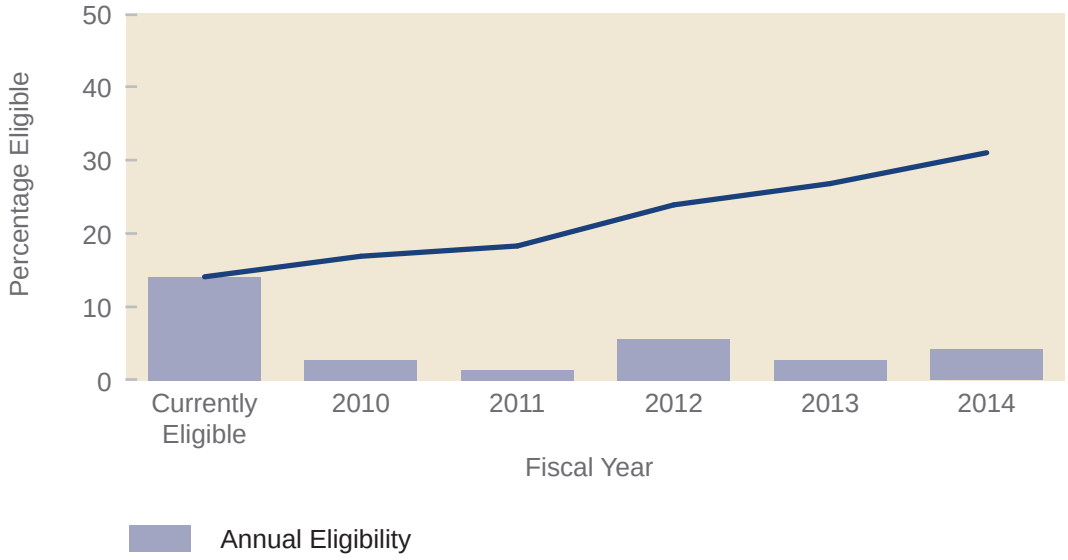


Exhibit 24 shows the retirement eligibility through the end of FY 2014 for FAA Business and Financial Managers. At the present time, almost 15 percent of the members of this community are eligible to retire. This percentage will grow to 31 percent by the end of FY 2014.

Exhibit 24: Retirement Eligibility for the Business-Financial Management Discipline



Overview of Critical Competencies

The Acquisition Workforce Council considers the competencies listed in bold as the most critical.

Business and Financial Management	
Basic Budgeting and Accounting	Strategic Planning
Financial Budget and Data Analysis	Organizational Forecasting
Financial Management	**Risk Analysis and Internal Management Control Concepts and Principles**
Project Management	**Program Evaluation**
Performance Management/Cost Accounting	**Reconciliation and Financial Reporting**
Accounting	Productivity Improvement Systems and Business Reengineering Process
Cost Estimating	
Federal Budgeting	Agency Budgeting

As part of the process for continuous improvement of the acquisition workforce, an in-depth competency model for Cost Estimators was developed during the second quarter of FY10. This model will become the standard for future competency work and contains the following components: competency dictionary, behavioral indicators at three levels, ratings of competency criticality and importance, and competency mapping to certification levels. The cost estimator competencies identified in bold are critical competencies and are required upon entry into the job.

Cost Estimation	
Data Collection and Analysis	FAA Organizational Policies and Procedures
Financial Analysis	Financial Management
Program and Portfolio Investment Analysis	Investment Analysis Project Management
Acquisition and Contracts	System Evaluation

Certification/Curriculum

Certification policy is under development for the Cost Estimator role and will be posted within the AMS. Relevant courses will be mapped to certification levels during this process. A federal Certified Government Financial Manager (CGFM) certification is also available and is a standard by which government financial management professionals are measured.

Listed below are existing FAA courses available to the Business and Financial Management community:

- Introduction to Cost Estimating
- Benefits Estimating
- Assessing Project Schedule and Risk
- Basics of Software Cost Estimating
- Business Case Analysis
- Delivering Excellent Staff Work
- Intermediate Cost Estimating
- Cost Estimating Workshop for Project Managers
- Economic Analysis
- Appropriations Law Seminar
- Fund Certification in the ATO
- Managing and Approving Financial Transactions in the ATO
- Using the Purchase Card in FAA

Business and Financial Management professionals also should attend the FAA's Introduction to the Acquisition Management System course and receive training in some generic topics, to include:

- Basic Accounting
- Writing a Strong Budget Justification
- Building Spreadsheets
- Managing Projects
- Fundamentals of Contracting
- COR/COTR Basic Training or equivalent

In addition, many online courses are available for refresher/continuous learning and training through DAU.

Contracting Acquisition Community Profile

Definition

Contracting Specialists are responsible for all processes and procedures involved in establishing and maintaining contractual relationships. This includes understanding the technical requirements, assisting with the development of the acquisition strategy, developing a procurement strategy plan, reviewing statements of work, evaluating cost estimates, determining Contractor responsibility, performing administration by determining Contractor compliance, negotiating cost or price or technical changes, monitoring Contractor performance, and approving payments. The Contracting Officer has the specific authority to bind the government by executing awards, exercising options or terminating contracts.

Issues

- Staffing of 1102 positions has become difficult due to high demand across all of federal government.
- Need to retain skilled Contracting professionals to mentor entry level Contracting Specialists and perform complex work while managing the retirement wave.
- The complexity of acquisitions requires results oriented, highly skilled Contracting professionals.
- Need to support NextGen programs and technologies through improved management of cost reimbursable contracts by increasing use of Defense Contract Audit Agency audits and continued use and expansion of performance-based contracts.
- Continue to improve business processes and systems that facilitate award and administration for NextGen and other agency programs.

Initiatives

- Sponsored a procurement conference for new and experienced Contracting professionals, which 365 participants attended. This year's theme was AMS: The Gateway to Strengthening and Streamlining Acquisition Management. The conference was an opportunity for Acquisition and Contracting professionals to complete annual ethics training, to participate in question and answers sessions covering a broad selection of contracting topics, and to build relationships across the FAA. Participants earned 20 Continuous Learning Points (CLPs) for attending the conference and three CLPs for ethics training.
- Published Contracting Certification Policy on line within AMS Policy Section 5.0 at http://fast.faa.gov/acquisitioncareer/index.htm
- Developed and delivered hands-on training in Cost/Price Analysis techniques for contracting professionals. The course guides participants through the steps in reviewing cost proposals and developing a pre-negotiation position.

Membership

In FY 2010, there are approximately 294 acquisition employees in the FAA performing Contracting duties on acquisition programs (282 Contracting Officers). This occupational group includes employees who are primarily responsible for awarding and administering contracts. FAA Contracting Specialists are located at Headquarters, the Technical Center, and in ARC. Fifty-eight Contracting Specialists support acquisition programs at Category 1 and 2, the highest categories. Forty-six Contracting Specialists hold Level I Certification, while 94 hold Level II Certification, and 88 hold Level III Certification, the highest level.

Typical Job Roles

- Contracting Officer
- Contracting Specialist
- Realty Specialist
- Cost Price Analyst

Typical Job Series

- 1102 - Contract Specialist
- 1170 - Realty Specialist

Years of Service and Retirement Eligibility

As shown in Exhibit 25, the FAA's Contracting Officers tend to be somewhat younger (average age 46.7) and have fewer years of federal service (15.4) than the overall FAA acquisition community.

Exhibit 25: Average Years of Service and Age: Contracting Officer Discipline

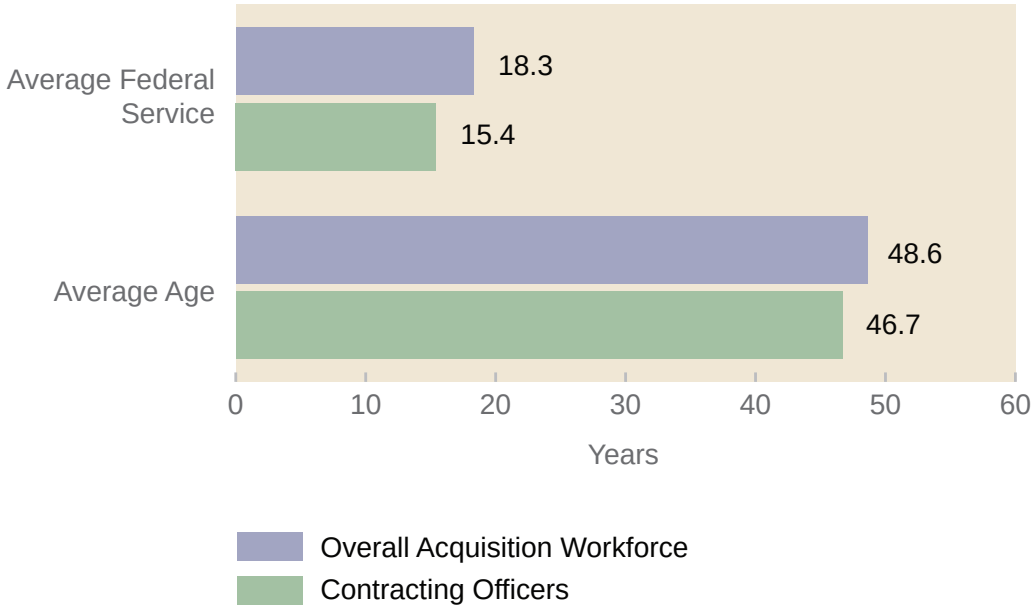
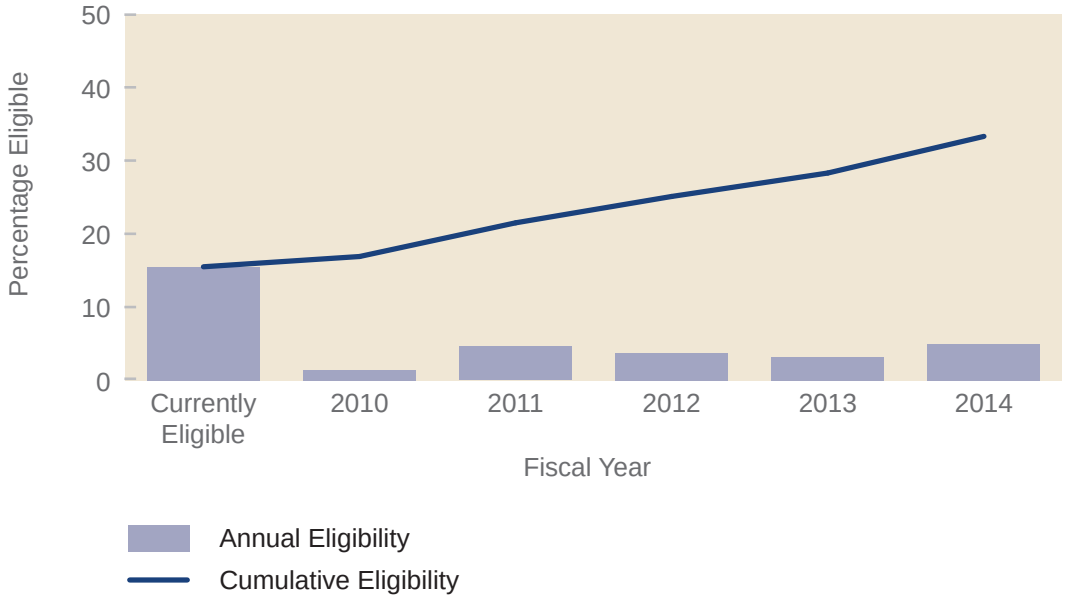


Exhibit 26 shows the retirement eligibility through the end of FY 2014 for FAA Contracting Officers. At the present time, 15 percent of the members of this community are eligible to retire. This percentage will grow to nearly 34 percent by the end of FY 2014.

Exhibit 26: Retirement Eligibility for the Contacting Officer Discipline



Overview of Critical Competencies

The Acquisition Workforce Council considers the competencies listed in bold as the most critical.

Contracting	
Acquisition Strategy Development	Negotiation
Award Resolution	**Performance-Based Acquisition**
Defining Contractual/Business Relationships	Performance Management
Defining Government Requirements in Commercial/ Non-Commercial Terms	Procurement Planning
Defining Requirements	Proposal Analysis and Evaluation
Detailed Bid Evaluation Skills	**Requirement/Contract Management**
Financial Management	Resolution of Contract Termination and/or Closeout
Managing Competition	Small Business and Preference Program
Market Research	Participation
	Solicitation of Offers

Certification/Curriculum

FAA acquisition certification programs closely align with federal acquisition certification programs, meeting or exceeding federal-wide requirements. Certification requires experience and documented competency proficiency in addition to training; continuing professional development is required to maintain certification. Individuals seeking to increase their knowledge and capabilities may also take online courses that are available for refresher/continuous learning. These include FAI and DAU courses.

Level I Certification

Experience: At least one year of current (within the last three years) purchasing and contracting experience with progressively broader work assignments.

Core Training:

- CON 100 - Shaping Smart Business Arrangements
- CON 110 - Mission Support Planning
- CON 111 - Mission Strategy Execution
- CON 112 - Mission Performance Assessment
- CON 120 - Mission Focused Contracting
- FAA04202 - Introduction to the Acquisition Management System
- FAA60004257 - Acquisition Management System Procurement
- Elective (As agreed to by the employee and supervisor, electives may be any training course related to the employee's job, those necessary for career development, or those used for cross-training. Electives may include no-cost distance learning, assignment-specific courses, or other training opportunities.)

Level II Certification (in addition to Level I requirements)

Experience: At least two years of current (within the last five years) contracting experience with progressively broader work assignments.

Core Training:

- CON 214 - Business Decisions for Contracting
- CON 215 - Intermediate Contracting for Mission Support
- CON 216 - Legal Considerations in Contracting
- CON 217 - Cost Analysis and Negotiation Techniques
- CON 218 - Advanced Contracting for Mission Support
- FAA04203 - Fundamentals of Acquisition Management System (FAMS)
- One Elective (As agreed to by the employee and supervisor, electives may be any training course related to the employee's job, those necessary for career development, or those used for cross-training. Electives may include no-cost distance learning, assignment-specific courses, or other training opportunities.)

Level III Certification (in addition to Level I and Level II requirements)

Experience: At least four years of current (within the last ten years) contracting experience with progressively broader work assignments.

Core Training:

- CON 353 - Advanced Business Solutions for Mission Support (or equivalent/ predecessor)
- FAA04203 FAMS*
- One Elective (As agreed to by the employee and supervisor, electives may be any training course related to the employee's job, those necessary for career development, or those used for cross-training. Electives may include no-cost distance learning, assignment-specific courses, or other training opportunities.)

* IF FAMS was taken at Level II, two Electives are required.

Contracting Officer Technical Representative (COTR) Acquisition Community Profile

Definition

A person with COTR responsibility helps resolve technical issues, gives technical direction to the Contractor and interprets technical processes and procedures for the Contracting Officer. The functions include interpreting technical requirements, assisting with the acquisition strategy, assisting in the development of the statement of work, generating government cost estimates, assisting in the negotiation of costs or price of technical requirements, monitoring Contractor performance, reviewing and accepting services, supplies and equipment, invoice reconciliation and recommending payments.

Issues

- Complexity of acquisitions on ACAT programs requires skilled, experienced COTRs.
- COTRs need a better understanding of Contracting to ensure successful administration of contracts (including bounds of authority and accountability).
- Because COTR is a collateral role, identifying COTRs and tracking compliance with training requirements can be challenging. COTR lists must be revalidated on a continual basis for accuracy.

Initiatives

- COTR Certification Policy has been developed and is available in AMS Policy Section 5.0 at http://fast.faa.gov/acquisitioncareer/index.htm
- The agency is exploring multiple levels of certification consistent with the complexity of COTR responsibilities.

Membership

In FY 2010, there are approximately 98 FAA employees performing COTR duties on acquisition programs. Over a thousand COTRs provide support for other types of procurements. FAA tracks and ensures training is completed for the full COTR population. Across FAA the numbers are not a constant and change as existing contracts end and new contracts begin. COTRs perform critical acquisition and technical functions, and Contracting Officers rely on them to ensure that contracts are managed properly to meet mission needs. COTRs are designated and authorized in writing by the Contracting Officer (CO) to perform prescribed administrative and/or technical functions on a contract.

Typical Job Roles

- Contracting Officer Technical Representative (COTR)
- Contracting Officer Representative (COR)
- Technical Officer Representative (TOR)

Typical Job Series

There is no typical job series for COTRs. The job series depends on the nature of the work being performed under the contract and varies across contracts.

Years of Service and Retirement Eligibility

As a group, the COTRs in the FAA tend to be slightly older (48.7) and have more years of federal service (19.1) than does the overall acquisition workforce as shown in Exhibit 27.

Exhibit 27: Average Years of Service and Age: COTR Discipline

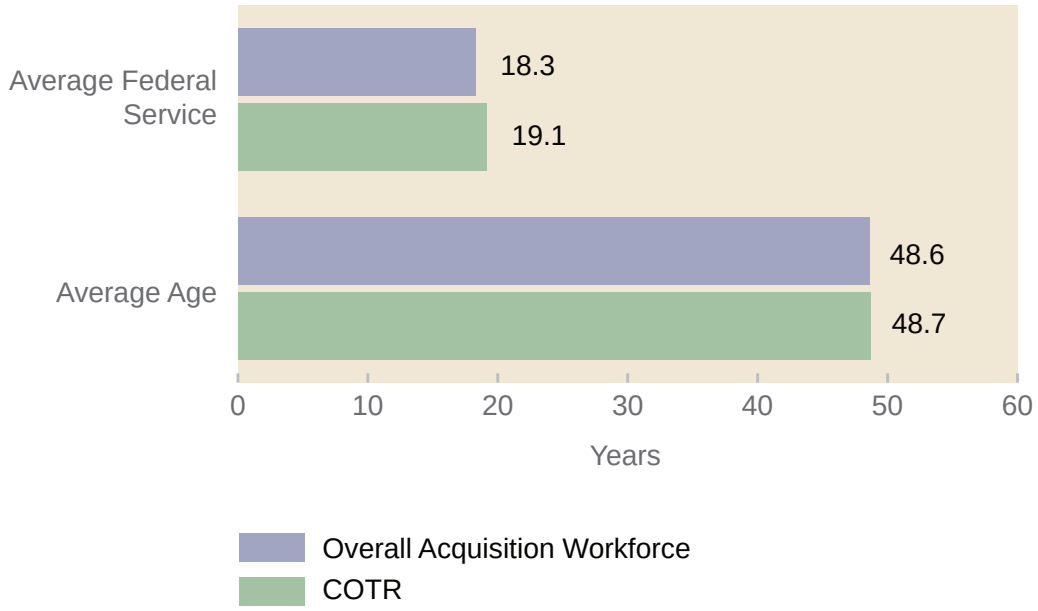
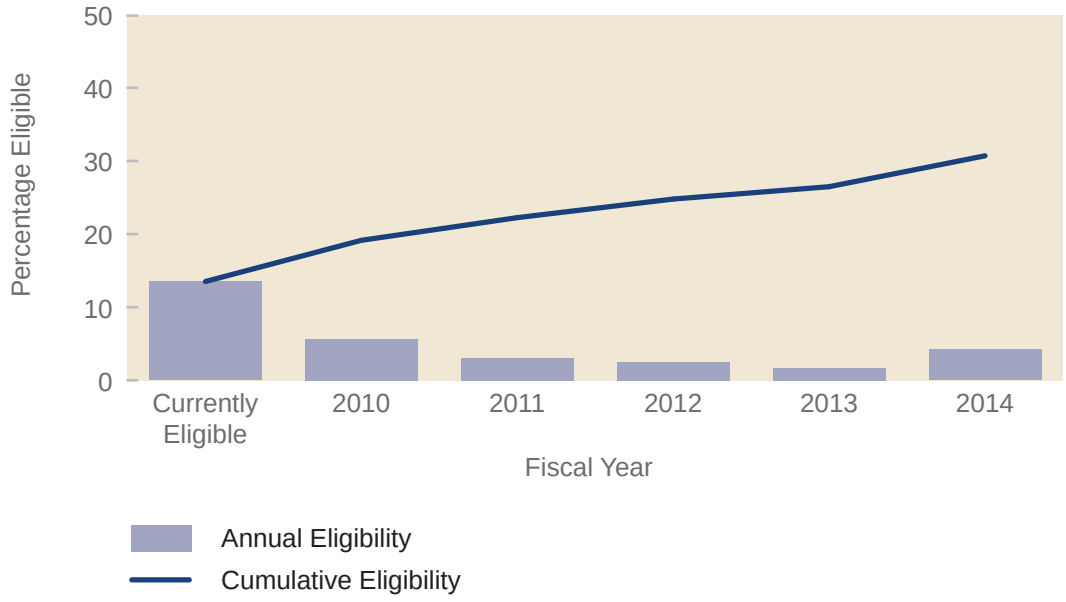


Exhibit 28 shows the retirement eligibility through the end of FY 2014 for FAA Contracting Officer Technical Representatives. At the present time, 13 percent of the members of this community are eligible to retire. This percentage will grow to nearly 31 percent by the end of FY 2014.

Exhibit 28: Retirement Eligibility for the COTR Discipline



Overview of Critical Competencies

The Acquisition Workforce Council considers the competencies listed in bold as the most critical.

Contracting Officer Technical Representative	
Acquisition Planning	Market Research (Understanding the Marketplace)
Defining Government Requirements in Commercial/Non-Commercial Terms	Negotiation
Effective Contract Management	**Performance Management**
Effective Pre-Award Communication	**Technical Analysis of Proposals**

Certification/Curriculum

FAA acquisition certification programs closely align with federal acquisition certification programs, meeting or exceeding federal-wide requirements. Certification requires experience and documented competency proficiency in addition to training; continuing professional development is required to maintain certification. The following courses are available:

- FAA04200 - COR/COTR Basic Training or Equivalent
- FAA30200338 - PRISM Acceptance Training (Online Course)

In addition, 12 classroom and online courses are available for refresher/continuous learning, including FAI and DAU courses.

Acquisition Law Community Profile

Definition

Acquisition Attorneys provide legal advice on all aspects of contract formation and administration, including intellectual property, antitrust, bankruptcy, debarment, conflict of interest, real estate, mergers, security, export control, procurement integrity, property disposal, fiscal, and socio-economic laws affecting acquisitions. Acquisition Attorneys represent agency acquisition teams in the agency's internal dispute resolution process and also represent the FAA with the Department of Justice in federal court litigation.

Issues

- Complexity of acquisitions requires highly skilled Acquisition Attorneys.
- FAA's unique Acquisition Management System requires a learning curve for seasoned attorneys recruited from other agencies unaccustomed to acquisition flexibility.
- By 2014 approximately 40 percent of the FAA's Acquisition Attorneys will have retired or will be eligible to retire.

Initiatives

- Conducted an external benchmarking study to examine recruitment, hiring, promotion, and retention issues for Acquisition Attorneys.

Membership

In FY 2010, there are 45 Acquisition Attorneys in this community. At FAA headquarters, the work is dedicated. In the Service Centers and most regions, at least one person is recognized as a Acquisition Attorney, although he or she may perform additional duties. The Technical Center and the Aeronautical Center also have dedicated Acquisition Attorneys.

Acquisition Attorneys are distributed proportionately across the nine regions and Technical and Aeronautical Centers; one-third of them are located at headquarters. A quarter of Acquisition Attorneys are supervisors or managers.

Over half of the Acquisition Attorneys have been with the FAA for over 16 years. Acquisition Attorneys tend to stay with programs and work a portfolio, which may change somewhat over time. On FAA acquisition programs, the relationship with the program office is very important. The Chief Counsel's Office has identified Practices Principles that guide operating behaviors. These include a commitment to excellence, holistic leadership, and dedication to public service.

Typical Job Roles

- Acquisition Attorney

Typical Job Series

- 0905 - General Attorney

Years of Service and Retirement Eligibility

As shown in Exhibit 29, the FAA's Acquisition Attorneys are very close to the average of the acquisition workforce in terms of age (48.7) and years of federal service (18.9).

Exhibit 29: Average Years of Service and Age: Acquisition Attorney Discipline

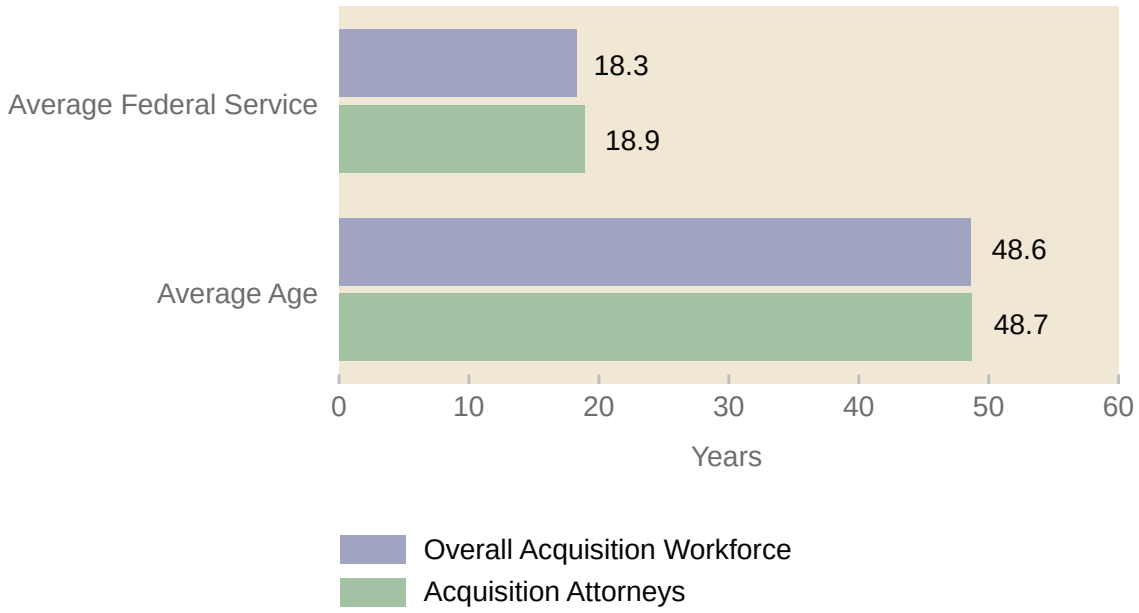
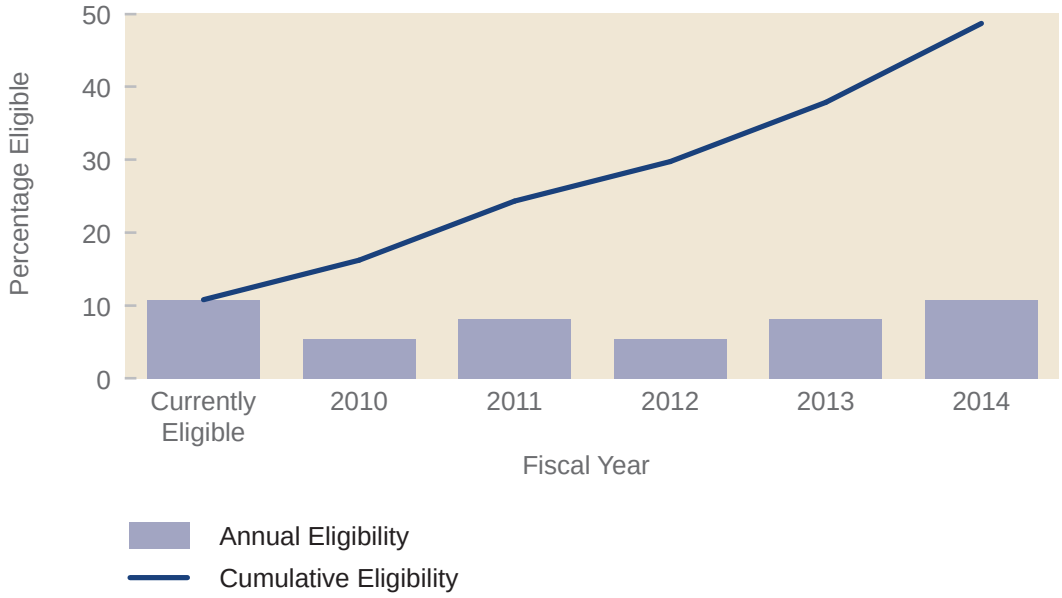


Exhibit 30 shows the retirement eligibility through the end of FY 2014 for the FAA's Acquisition Attorneys. At the present time, 10 percent of the members of this community are eligible to retire. This percentage will grow to nearly 50 percent by the end of FY 2014.

Exhibit 30: Retirement Eligibility for the Acquisition Attorney Discipline



Overview of Critical Competencies

The Acquisition Attorney role is new to this Acquisition Workforce Plan in 2010. Critical competencies and general competencies have not yet been identified. A benchmarking study was conducted in the second quarter of 2010 to examine recruitment, hiring, promotion, and retention issues prior to beginning any competency work. For the external government organizations from which data were collected, no organization was using a formal competency model developed for the Acquisition Attorney role.

Certification/Curriculum

Acquisition Attorneys in the agency do not attend a formal, lockstep training program. However, there are a series of courses that have been identified as valuable for new Acquisition Attorneys. These include a mix of in-agency and out-of-agency training:

- Acquisition Management System (AMS)
- New Attorney Training Course (offered yearly through the Chief Counsel's Office at the FAA's Center for Management and Executive Leadership)
- Judge Advocate General's School Government Contracting Course
- Appropriations Law

Additional employee development may occur through internships, mentoring, and conference attendance. Some Acquisition Attorneys accept formal details on an acquisition program to gain additional experience from an agency perspective. Through the course of their careers, Acquisition Attorneys will be asked to teach classes to peers in their areas of expertise.

Integrated Logistics Support Acquisition Community Profile

Definition

Integrated Logistics Support (ILS) is the critical functional discipline that plans, establishes, and maintains an ILS system for the life cycle of FAA products and services. ILS works by planning for and managing the interdependencies among the nine Logistics elements: Maintenance Planning; Supply Support; Training, Training Support, and Personnel Skills; Computer Resources Support; Maintenance Support Facilities; Packaging, Handling, Storage, and Transportation; Technical Data; Direct Work Maintenance Staffing; and Support Equipment.

Issues

- Expanding focus on ILS during the initial phases of the AMS life cycle to reduce the total cost of ownership.
- Expanding focus on cost savings measures for sustaining existing FAA facilities.
- Managing costs and risks associated with obsolescence (planned and unplanned).

Initiatives

- Certification policy for Integrated Logistics Support and for Delegation of Procurement Authority has been developed and is available in AMS Policy Section 5.0 at http://fast.faa.gov/acquisitioncareer/index.htm

Membership

The Integrated Logistics community captured in this plan is a subset of the entire Logistics population. The focus and the numbers represented in this plan are for staff providing ILS support to acquisition programs. The certification program, however, supports all Logistics Specialists.

In FY 2010 approximately 20 employees in the FAA have primary responsibility for Integrated Logistics Support on acquisition programs. The majority of these employees are in the ARC organization. These individuals are responsible for supporting and advising Acquisition Program Managers or Service Team Leaders to ensure the successful integration of all Logistics Support elements throughout the AMS life cycle. Some of these individuals may have a Delegation of Procurement Authority (DPA) which carries additional training requirements set forth in the AMS. These individuals are also responsible for working with requiring offices to develop contract specifications for projects to improve, expand, and extend the service life of existing programs.

Typical Job Roles

- Logistics Element Specialist/Manager
- Integrated Logistics Support Specialist/Manager
- Logistics Management Specialist

Typical Job Series

- 346 - Logistics Management Specialist
- Various series

Years of Service and Retirement Eligibility

As shown in Exhibit 31, the Logistics Community is perhaps the smallest of the acquisition disciplines but tends to be older (51.4) than the overall average age and has considerably more federal tenure (25.4 years) than their acquisition counterparts.

Exhibit 31: Average Years of Service and Age: Logistics Discipline

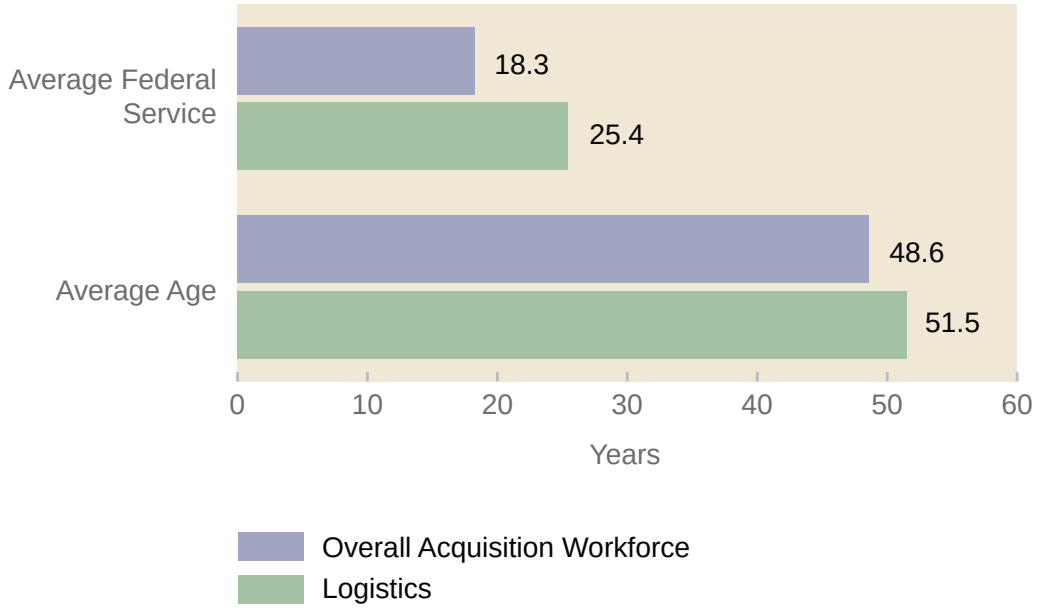
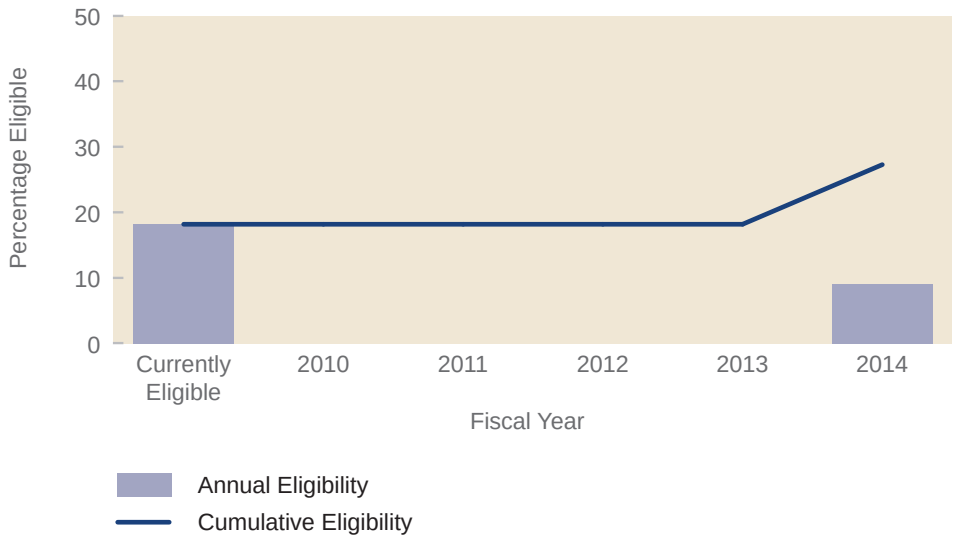


Exhibit 32 shows the retirement eligibility through the end of FY 2014 for the FAA's acquisition-related Logistics discipline. At the present time, 18 percent of the members of this community are eligible to retire. This percentage will grow to nearly 28 percent by the end of FY 2014. Annual eligibility for the years 2010 through 2013 is zero.

Exhibit 32: Retirement Eligibility for the Logistics Discipline



Overview of Critical Competencies

Level I Certification

- ILS Planning
- Product Support and Sustainment

Level II Certification

- Design for Supportability
- ILS Planning
- Contracting and Acquisition
- Project Management
- Product Support and Sustainment

Level III Certification

- Design for Supportability
- ILS Planning
- Contracting and Acquisition
- Program Management
- Product Support and Sustainment

Certification/Curriculum

Level I Certification

Experience: Minimum requirement for entry into level: At least two years of current (within the last three years) work experience providing direct support in the implementation, maintenance, and monitoring of an ILS element (e.g., Maintenance Planning; Supply Support; Training, Training Support and Personnel Skills; Computer Resources Support; Maintenance Support Facilities; Packaging, Handling, Storage and Transportation; Technical Data; Direct Work Maintenance Staffing; and Support Equipment).

Core Training:
Prerequisite:
- (FAA44518001) Introduction to Integrated Logistics Support (Online Course)

Required Courses:
- FAA ILS Element Course(s)

Note: Applicant must complete at least the ILS element course of his/her specialty area at work, e.g., (1) Maintenance Planning; (2) Supply Support; (3) Training, Training Support, and Personnel Skills; (4) Computer Resources Support; (5) Maintenance Support Facilities; (6) Packaging, Handling, Storage, and Transportation; (7) Technical Data; (8) Direct Work Maintenance Staffing; and (9) Support Equipment.

Level II Certification

Level I requirements plus:

Experience: Minimum requirement for entry into level: At least three years of current (within the last five years) work experience in planning, executing, and managing an ILS element and support elements.

Core Training:

- FAA 04203 - Fundamentals of Acquisition Management System (FAMS)
- Nine FAA ILS Element Courses: Maintenance Planning; Supply Support; Training, Training Support and Personnel Skills; Computer Resources Support; Maintenance Support Facility; Packaging, Handling, Storage and Transportation; Technical Data; Direct Work Maintenance Staffing; and Support Equipment.
- DAU ACQ 101 - Fundamentals of Systems Acquisition Management
- DAU LOG 101 - Acquisition Logistics Fundamentals
- DAU LOG 102 - Systems Sustainment Management
- DAU ACQ 201 - Intermediate Systems Acquisition Management
- DAU LOG 200 - Intermediate Acquisition Logistics
- DAU LOG 201 - Intermediate Acquisition Logistics (five-day classroom course)
- DAU LOG 235 - Performance-Based Logistics
- DAU LOG 236 - Performance-Based Logistics (five-day classroom course)

Level III Certification

Level II requirements plus:

Experience: Minimum requirement for entry into level: At least five years of current (within the last 10 years) work experience in planning, executing, and managing the integration of all ILS support elements.

Core Training:

- DAU LOG 350 - Enterprise Life Cycle Logistics Management
- Program Management

For additional information about FAA's Acquisition Workforce Plan, programs, and initiatives, please contact:

Acquisition Career Management Group
Office of Acquisition and Business Services

Email: 9-AJA-AWFP@FAA.gov

Web: https://employees.faa.gov/org/linebusiness/ato/acquisition_business/acquisition_policy/career_mgmt/

Notes

Notes

U.S. Department of Transportation

Federal Aviation Administration

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