

**Aircraft Procurement Plan  
Fiscal Years (FY) 2012-2041**

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## **Table of Contents**

### **Part I. Executive Summary**

**Introduction**

**Summary of the Aircraft Procurement Plan**

### **Part II. FY 2012 Report**

**Force Structure Requirements**

**Investment Objectives**

**Aircraft Procurement Plan**

**Procurement Plans by Aircraft Category**

**Budget Certification**

**Sufficiency of Forces Assessment**

### **Part III. Appendix**

**Aircraft Procurement Displays**

# Aircraft Procurement Plan

## Part I – Executive Summary

### I. Introduction

Chapter 9, Section 231a of Title 10 United States Code requires the Secretary of Defense to submit an annual long-term plan for the procurement of fixed-wing aircraft with the defense budget. This report responds to that requirement.

The report is the Department's second submission of a long-range fixed-wing aviation procurement plan. Guided by the *2010 Quadrennial Defense Review (QDR)*, the plan represents the Department's commitment to a balanced force: one that is able to meet the unique demands of current conflicts, while providing the flexibility to respond to a broad spectrum of future challenges.

The FY 2012-2016 Future Years Defense Program (FYDP) and the long-term aviation force structure and investment plans presented in this document are shaped by four strategic priorities defined in the *2010 QDR*:

- Prevailing in today's wars;
- Preventing and deterring conflict;
- Preparing to defeat adversaries and succeed in a wide range of contingencies; and
- Preserving and enhancing the all-volunteer force.

To accomplish these objectives, the Department's future fixed-wing aviation force must be able to carry out or contribute to the following six key joint missions:

- Defend the United States and support civil authorities at home;
- Conduct counterinsurgency, stability, and counterterrorism operations;
- Build the capacity of partner states;
- Deter and defeat aggression in anti-access environments;
- Prevent the proliferation of and counter weapons of mass destruction; and
- Operate effectively in cyberspace.

### II. Summary of the Aircraft Investment Plan

In keeping with the Department's desire to provide a flexible and balanced force, the aviation plan provides the diverse mix of aircraft needed to carry out the six joint missions identified above. The very nature of modern warfare makes categorizing aircraft into bins of like capability more and more difficult. When considering aviation investment plans, the Department must increasingly consider the potential complementary capabilities resident in the cyber and space domains, as well as across other aircraft types.

The capabilities provided by aircraft identified in this plan translate into four principal investment objectives that were reflected in the FY 2011 budget and are carried forward in the FY 2012 budget request and the FY 2012-2041 aviation plan:

- **Meet the demand for persistent, unmanned, multirole intelligence, surveillance, and reconnaissance (ISR) capabilities.** The number of platforms in this category—R/MQ-4 Global Hawk-class, MQ-9 Reaper, and MQ-1 Predator-class unmanned aircraft systems (UAS)— will grow from approximately 340 in FY 2012 to approximately 650 in FY 2021 (see Chart 4, page 11). This 90 percent capacity increase will be effectively multiplied by capability improvements afforded by the acquisition of vastly improved sensors and the replacement of Air Force MQ-1s with more capable MQ-9s. This capacity increase of Air Force MQ-1B and MQ-9 platforms will enable the establishment of 65 orbits by the end of FY 2013. In addition to funding the MQ-4C Broad Area Maritime Surveillance (BAMS) aircraft, the Navy is in the early stages of developing an Unmanned Carrier Launch Airborne Surveillance and Strike (UCLASS) system to provide persistent ISR and precision strike. Though omitted from the procurement and inventory statistics in this report, the Army will buy 78 MQ-1C Gray Eagle UASs between FY 2012 and FY 2016. Procurement plans of a subset of these aircraft – MQ-9, USMC Group 4 UAS, UCLASS, and a possible follow-on UAS – are less specific after FY 2016 to allow flexibility to continue growth as required (see Chart 10, page 18).
- **Provide sufficient enabler capability and capacity.** Our airlift inventory is robust and stable. Both the Air Force and Navy are recapitalizing their intratheater lift inventories. The Air Force continues to modernize its strategic lift inventory, which is projected to remain viable through the years covered by this plan. The Air Force has begun recapitalizing the tanker fleet with plans to develop and procure 124 KC-46A tankers by FY 2021. The KC-46A fleet will reach 179 aircraft in 2027. Simultaneously, the USAF is sustaining its fleet of airborne early warning aircraft. The Navy is recapitalizing its fleet of airborne early warning aircraft with the E-2D Advanced Hawkeye aircraft carrying new radars. The Navy is also recapitalizing its aged fleet of maritime patrol aircraft with the P-8 Poseidon. Finally, the Navy will recapitalize its electronic warfare capabilities, resulting in a total of 14 EA-18G Growler squadrons. See Chart 5, page 12, for a summary of enabler procurement.
- **Acquire fifth-generation fighter/attack aircraft while maintaining sufficient inventory capacity.** To address anti-access threats, the Department’s fifth-generation assets will grow from about 7 percent of the current force of manned fighter/attack aircraft to about 33 percent by FY 2021 (see Chart 6, page 13). The Joint Strike Fighter (JSF) will account for the bulk of DoD’s fifth-generation inventory. This aviation plan reflects the restructured JSF program and incorporates the Department’s latest estimates of schedule and cost performance. The Air Force continues to modernize its fleet of F-22 aircraft, with robust investment through FY 2016. To address the DoN inventory shortfall the Navy will buy FA-18E/F Super Hornet aircraft and extend the service lives of selected FA-18A-D Hornet aircraft. The Air Force will mitigate its shortfall until the 2020s by investments in the F-16C/D Fighting Falcon force. By FY 2041, almost all of today’s “legacy” force will have retired and the Department will have begun recapitalization of its fifth-generation force. These far-term recapitalization plans cannot be defined with any degree of precision today, making investment projections

difficult beyond the evolving procurement plans for the JSF. The Department is continuing to evaluate projected threats and the alternative means for defeating those threats. It is anticipated that a family of systems—mixes of manned and unmanned aircraft, with varying stealth characteristics and advanced standoff weapons—will shape the future fighter/attack inventory. These tradeoffs are being examined now, and subsequent aviation plans will reflect the resulting acquisition decisions.

- **Modernize long-range strike (LRS) capabilities.** The enduring need for long-range attack capabilities will be met by a combination of current and future aircraft and weapons systems. The current fleet of Air Force bombers continues to be modernized so that it can retain long range strike capabilities through the 2030s. To deter and defeat anti-access threats, DoD is creating an LRS family of systems with a new penetrating, nuclear capable bomber program as the centerpiece. The new bomber will be designed to accommodate manned or unmanned operations.

The FY 2012-2041 aviation plan is consistent with the tenets of the *2010 QDR* and meets the national security requirements of the United States. The Department's FY 2012 budget request and the associated FY 2012-2016 FYDP provide the requisite funding to implement the aviation investment plan through FY 2016 for all programs of record except the recently awarded KC-46A aerial refueling tanker. In the case of the KC-46A the FYDP includes sufficient funding; however, the funding is not aligned correctly by fiscal year. This misalignment was not known until the successful offeror was selected and it will be corrected in the 2013-2017 FYDP. Because of the misalignment, the certification required at § 231a(a)(2) cannot be made; however, the USAF has committed to correct the misalignment before procurement, therefore, this misalignment will not introduce risk associated with the force structure of aircraft.

For the years beyond the FYDP, the funding projections presented in the plan assume annual investments constrained by zero real growth. The funding profiles for individual programs were derived from independent cost estimates, where possible, or from historical data.

# Aircraft Procurement Plan

## Part II – FY 2012 Report

Chapter 9, Section 231a of Title 10 United States Code requires the Secretary of Defense to submit an annual long-term plan for the procurement of fixed-wing aircraft with the defense budget. This report responds to that requirement.

The report presents:

- A description of the aviation force structure needed to meet the national security requirements detailed in the *2010 QDR*.
- A detailed plan for Departments of Air Force and Navy investments in fighter/attack, bomber, strategic and intra-theater lift, ISR, and tanker airframes.
- Estimates of the annual expenditures necessary to carry out the plan.
- A discussion on certification by the Secretary of Defense related to the FY 2012 budget request and the associated FYDP.
- An assessment by the Secretary of Defense of the extent to which the combined aviation forces of the Departments of the Air Force and Navy meet the national security requirements of the United States.

The majority of modern platforms have the ability to perform across many traditional mission sets (e.g. the surveillance and light-strike capability of the MQ-9 in uncontested environments, and the cargo and aerial refueling capability of the KC-130J Super Hercules). The multirole nature of our assets makes them adaptive, fostering mission flexibility for the joint force. For the purposes of this report, the aviation plan groups aircraft into seven categories according to their primary mission: fighter/attack; unmanned multirole surveillance and light-strike; ISR/command and control (C2); intra-theater lift; strategic lift; aerial refueling tankers; and bombers. Rotary wing, tilt-rotor, special operations, special mission, and trainer aircraft are not included.

The aircraft included in each mission category are shown in Chart 1 below.

**Chart 1. Aviation Procurement Plan Taxonomy**

|      | Fighter/Attack  | Unmanned Multirole Surveillance & Light-Strike | ISR/C2   | Intratheater Lift  | Strategic Lift | Aerial-Refueling Tanker | Bomber                            |
|------|---|--|--|--|----------------|-------------------------|-----------------------------------|
| USAF | A-10, F-15C/D, F-15E, F-16, F-22, F-35A                                     | MQ-9, F/O UAS <sup>1</sup>                     | MQ-1, RQ-4, U-2, E-3, E-4, E-8, EC-130, EC-130 Recap, RC-26, RC-135, MC-12, WC-135 | C-130E/H, C-130J, C-27, WC-130J/H  | C-5, C-17      | KC-10, KC-46A, KC-135   | B-1, B-2, B-52, LRPB <sup>2</sup> |
| DoN  | AV-8B, EA-6B, EA-18G, F/A-18A-D, F/A-18E/F, F-35B, F-35C, NGAD <sup>3</sup> | UCLASS, USMC Grp 4 <sup>4</sup> , F/O UAS      | MQ-4C, E-2C, E-2D, E-6, P-3, EP-3, P-8   | AR/LSB <sup>5</sup> , C-130J, C-2, C-9, C-12, C-12 Recap, C-20, C-26, C-37, C-40 |                | KC-130J, KC-130T        |                                   |

<sup>1</sup>Follow-on UAS.  
<sup>2</sup>Long-Range Penetrating Bomber.  
<sup>3</sup>Next Generation Air Dominance.  
<sup>4</sup>USMC Group 4 Unmanned Aerial System.  
<sup>5</sup>Airborne Resupply/Logistics for the Sea-Base.

**Force Structure Requirements**

The Department’s FY 2012-2041 aviation investment plan provides the mix of forces and capabilities to meet the broad array of security challenges the nation faces. The plan represents the Department’s ongoing commitment to support the joint force wherever it might be deployed and in whatever missions it is called on to perform, from the current operations in Iraq and Afghanistan and humanitarian relief efforts in Pakistan to preparations for potential new regional conflicts. Accordingly, the aviation plan provides the aircraft needed to cover the full complement of operations that U.S. military forces could undertake in the decades ahead, and it will evolve as security needs change. As Secretary Gates has stated, “What is needed is a portfolio of military capabilities with maximum versatility across the widest possible spectrum of conflict.”<sup>1</sup>

Consistent with this vision, the FY 2012-2041 aviation plan provides the capabilities needed to meet current and projected national security objectives, while prudently balancing security risks over time and against fiscal realities. The FY 2012-2016 FYDP and the long-term aviation force structure and investment plans presented in this document are shaped by four strategic priorities defined in the *2010 QDR*:

- Prevailing in today’s wars;
- Preventing and deterring conflict;
- Preparing to defeat adversaries and succeed in a wide range of contingencies; and
- Preserving and enhancing the all-volunteer force.

<sup>1</sup> Defense Secretary Robert Gates, speech to the Economic Club of Chicago, July 16, 2009, <http://www.defenselink.mil/speeches/speech.aspx?special=1369>.

To accomplish these objectives, the future fixed-wing aviation force must be able to carry out or contribute to the following six joint missions:

- Defend the United States and support civil authorities at home;
- Conduct counterinsurgency, stability, and counterterrorism operations;
- Build the capacity of partner states;
- Deter and defeat aggression in anti-access environments;
- Prevent the proliferation of and counter weapons of mass destruction; and
- Operate effectively in cyberspace.

In balancing near and longer-term risks, the aviation plan first and foremost provides the capabilities needed to prevail in today's conflicts. The nature of the wars in Afghanistan and Iraq—with enemies hiding among populations, manipulating the information environment, and employing a mix of tactics and technology—provides a glimpse into the operational demands of potential future conflicts.

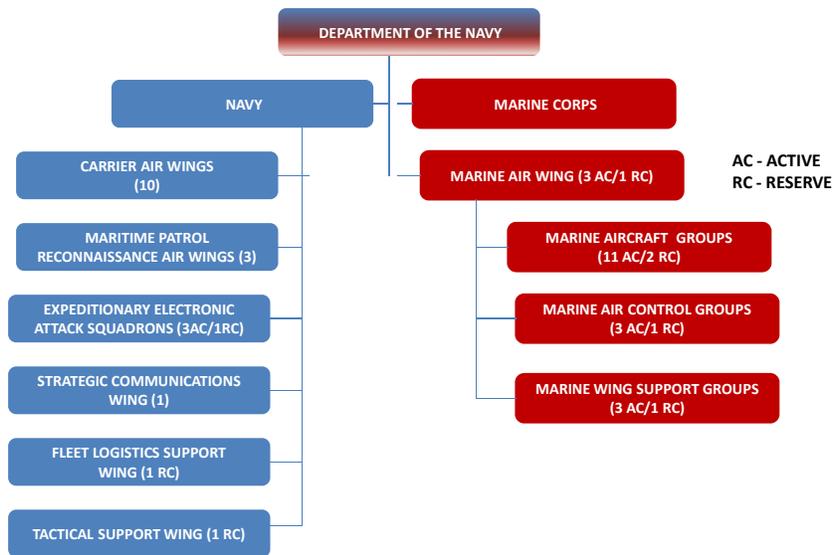
The aviation plan also procures the right aircraft at the right time to manage risk against future anti-access threats. Beyond the challenges U.S. forces confront today, potential adversaries are acquiring a wide range of sophisticated weapons and supporting capabilities that, in combination, could impede the deployment of U.S. forces to a conflict and blunt the operations of those forces that do deploy forward. In planning for an uncertain future, the key consideration is ensuring that the United States possesses the aviation capability and capacity to deter conflict and, should deterrence fail, win wars.

DoD's planned FY 2012 aviation force structure satisfies the demands of the national security strategy and emerging needs identified in the *2010 QDR*. The combined aviation forces of the Departments of the Navy and Air Force will provide the requisite capabilities and capacity to carry out the broad range of missions they could be required to conduct in the decades ahead. As demands on the force evolve, the size and mix of aviation forces will change as well.

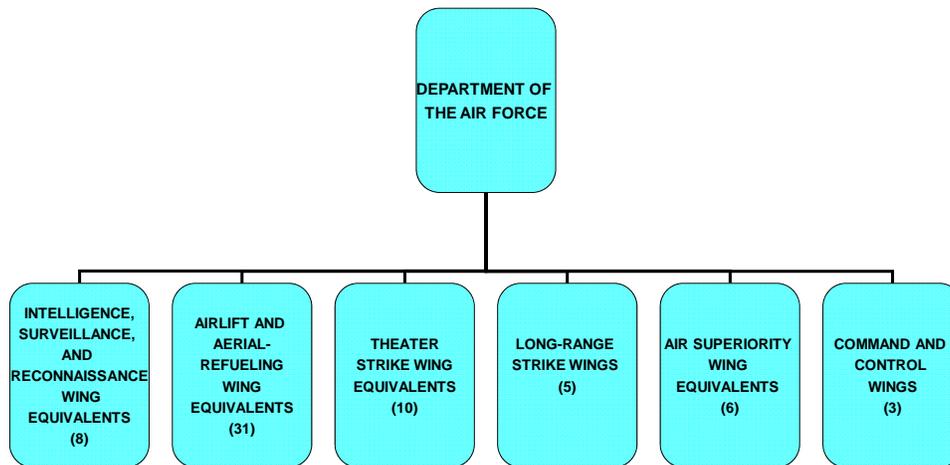
In addition to the combat aviation structure, the DoD maintains a large and diverse array of support elements that facilitate the combat readiness of aviation forces. These elements perform acquisition, engineering, test, evaluation, life-cycle management, and sustainment functions. The operating forces could not conduct their missions without this support.

The FY 2012 aviation force elements of the Departments of the Navy and Air Force are shown in Charts 2 and 3 below.

**Chart 2. Department of Navy Force Structure, FY 2012**



**Chart 3. Department of Air Force Force Elements, FY 2012**



### Investment Objectives

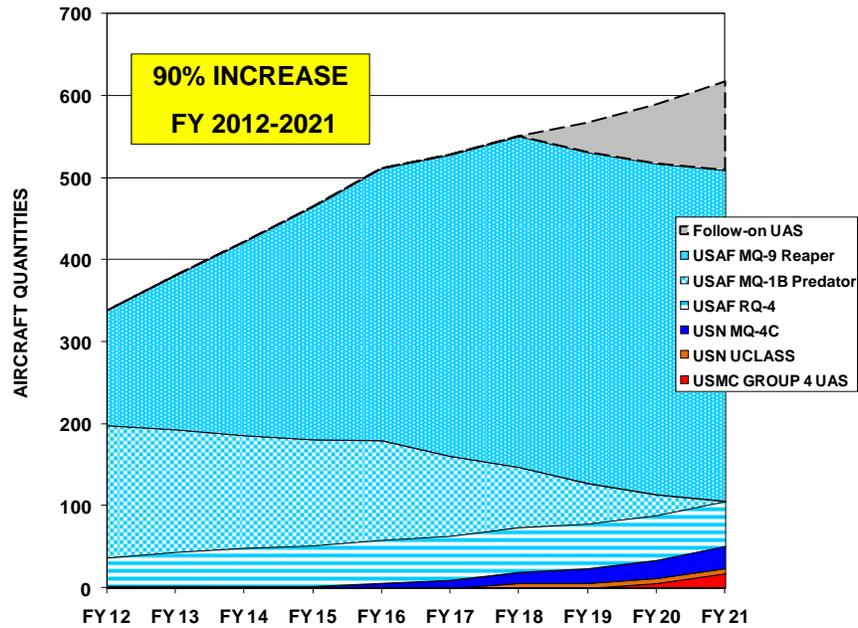
In keeping with the Department's desire to provide a flexible and balanced force, the aviation plan provides the diverse mix of aircraft needed to carry out the six joint missions identified in the previous section. The capabilities provided by these aircraft correspond with four principal investment objectives that were implemented in the FY 2011 budget and are carried forward in the FY 2012 budget request and the FY 2012-2041 aircraft procurement plan:

- Meet the demand for persistent, unmanned, multirole ISR capabilities;
- Provide sufficient enabler capability and capacity;
- Acquire fifth-generation fighter/attack aircraft while maintaining sufficient inventory capacity; and
- Modernize long-range strike capabilities.

These objectives are discussed in more detail in the sections below.

- **Meet the demand for persistent, unmanned, multirole ISR capabilities.** The aviation plan's emphasis on long-endurance, unmanned ISR assets—many with light-strike capabilities—is a direct reflection of recent operational experience and combatant commander (COCOM) demand. The number of platforms in this category—R/MQ-4, MQ-9, and MQ-1 class systems—will grow from approximately 340 in FY 2012 to approximately 650 in FY 2021 (see Chart 4). This 90 percent capacity increase is effectively multiplied by capability improvements afforded by the acquisition of vastly improved sensors and the replacement of Air Force MQ-1s with more capable MQ-9s. This plan calls for growth in Air Force MQ-1B and MQ-9 platforms to enable 65 orbits by the end of FY 2013. In addition to funding the MQ-4C, the Navy is in the early stages of developing the UCLASS to provide persistent ISR and precision strike. The growth in ISR capacity also encompasses the Marine Corps' planned procurement of an expeditionary unmanned system capable of being operated and maintained from austere locations. Though omitted from the procurement and inventory statistics in this report, the Army will buy 78 MQ-1Cs between FY 2012 and FY 2016. Procurement plans of a subset of these aircraft – MQ-9, USMC Group 4 UAS, UCLASS, and a possible follow-on UAS – are less specific after FY 2016 to allow flexibility to continue growth as required (see Chart 10, page 18).

**Chart 4. Unmanned, Multirole, ISR Aircraft Inventory, FY 2012-2021**



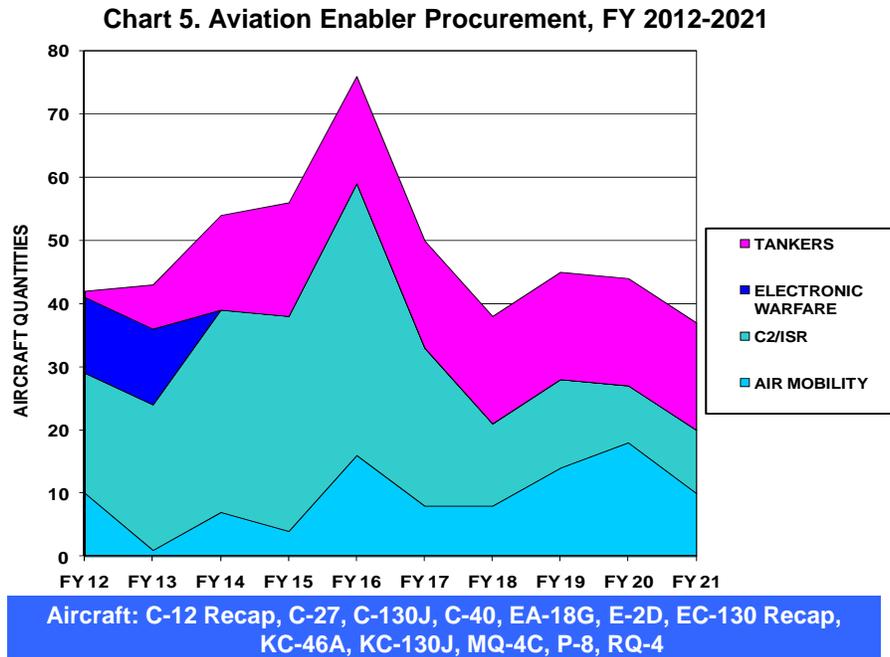
The substantial growth in ISR platforms represented above does not portray the full scope of the expansion of ISR capabilities that will occur in the near-term, as the surveillance platforms discussed here only include Groups 4 and 5. These two groups, which typically have longer endurance, higher speeds, and larger payloads, do not include the myriad of smaller systems procured or being procured by the services.<sup>2</sup>

**Provide sufficient enabler capability and capacity.** A second key priority involves investing in aviation enablers, including air mobility assets (aircraft performing airlift or aerial-refueling missions, or both), electronic warfare platforms, and airborne early warning aircraft. Air mobility provides the nation the agility to deploy, employ, and sustain military power anywhere in the world, at a speed and tempo that adversaries cannot match. Electronic warfare aircraft deny situational awareness to opponents by jamming their radars and communications. Airborne early warning aircraft provide advance warning of approaching opponents, vector aircraft to attack opposing forces, and conduct area surveillance, intercept, search and rescue, communications relay, and strike control missions.

The airlift inventory is robust and stable. Both the Air Force and Navy are recapitalizing their intratheater lift inventories, and the Air Force continues to modernize the strategic lift inventory, which is projected to remain viable through the years covered by this plan. The Air Force is proceeding with KC-46A aerial refueling tanker development and procurement to recapitalize the Eisenhower vintage KC-135 Stratotanker. Simultaneously, the Air Force is modernizing its fleet of E-3 Sentry airborne early warning aircraft. The Navy is recapitalizing its airborne early warning fleet with E-2D aircraft carrying new radars. The Navy is also recapitalizing its aged

<sup>2</sup> Group 4 UAS typically operate below 18,000 feet Mean Sea Level and do not exceed 1,320 lbs. Group 5 UAS typically operate above 18,000 feet Mean Sea Level and exceed 1,320 lbs.

fleet of maritime patrol aircraft with the P-8, a modern commercial aircraft and sensor suite. The P-8 will be complemented in the maritime and littoral roles by the MQ-4C. The Navy plans on using an ISR "family of systems" approach to ensure the capabilities of the EP-3 Aries II and special projects aircraft are retained during the transition out of those platforms around the 2019 timeframe. The Navy will continue EA-18G procurement to recapitalize expeditionary capabilities, and provide initial funding for a new jamming system for use on the EA-18G. The Navy will continue procuring KC-130J aircraft to fulfill airlift requirements in the reserves. Chart 5 shows the trends in enabler aircraft procurement through FY 2021.

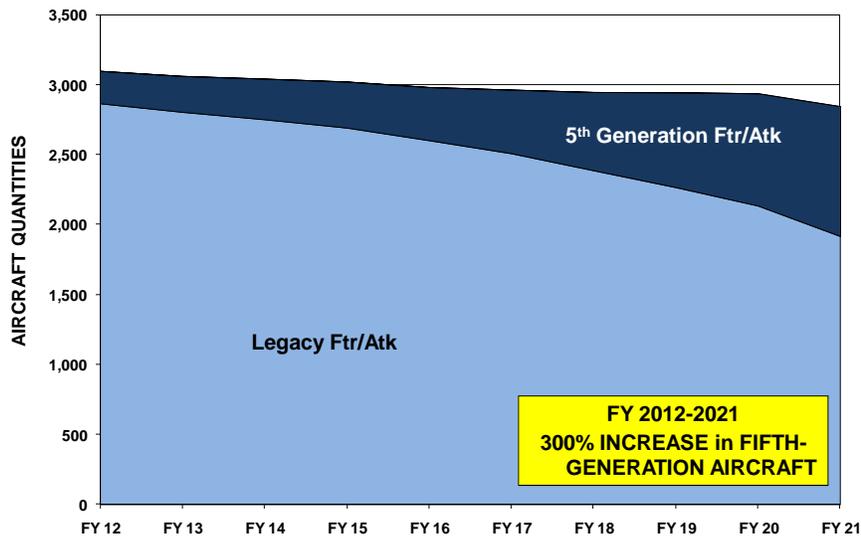


**Acquire fifth-generation fighter/attack aircraft while maintaining sufficient inventory capacity.** Legacy fighter/attack aircraft are important today, as evidenced by their involvement in the current operations in Iraq and Afghanistan. However, the age and capability limitations of manned legacy aircraft make them less valuable in the future, hence the Department’s emphasis on fifth-generation and unmanned aircraft. DoD has completed procurement of the F-22 Raptor aircraft and is developing and procuring 2,443 of the the even more advanced F-35 Lighting II, which will replace most of the legacy fighter/attack aircraft in the Air Force, Navy and Marine Corps. The Department’s fifth-generation assets will grow from about 7 percent of the current force of manned fighter/attack aircraft to about 33 percent by FY 2021, as shown in Chart 6. The chart also shows a slight overall capacity reduction but this decrease is offset by the significant capability increase that fifth-generation fighters bring.

The Department has restructured the F-35 program to fund the additional system development and demonstration needed to complete design and testing as well as reduce the risk of procuring aircraft too early in their design. The Marine Corps has made a mix decision to procure F-35Cs to support their commitment to integrate Marine squadrons on Navy aircraft carriers. This mix decision involves a redistribution of F-35C procurement between the Navy and the Marine Corps and offers numerous advantages in areas such as inventory management. To address the DoN

inventory shortfall, the Navy will buy 67 F/A-18E/F aircraft over FY 2012 to FY 2014 and extend the service life of selected F/A-18A-D aircraft. The Air Force will mitigate its shortfall until the 2020s via investments in the F-16 force.

**Chart 6. Fighter/Attack Aircraft Inventory, FY 2012-2021**



The aviation plan ensures the F-22 will continue to be the world’s preeminent air-to-air fighter, with robust investment that leverages radar and electronic protection improvements from the JSF, plus upgrades such as AIM-9X Sidewinder and GBU-39 Small Diameter Bomb carriage. To provide sufficient fighter/attack capacity in the near and medium term, the Air Force will sustain and modernize its legacy fighter fleet. The A-10C Thunderbolt II recently completed a major upgrade as a step towards keeping the aircraft viable through the 2030s. The F-15C/D Eagle and F-15E Strike Eagle will benefit from improved radars coupled with regular software upgrades. Late block F-16s will be modernized with improved radars, avionics, and electronic countermeasures, and will remain in the inventory through the 2030s.

By FY 2041, almost all of today’s legacy force will have retired and the Department will have begun recapitalization of the fifth-generation force. Far-term recapitalization plans cannot be defined with any degree of precision today, making projections of the fleet difficult beyond the procurement plans for the JSF. The Department is continuing evaluations of projected threats and alternative means for defeating those threats. It is anticipated that a family of systems—mixes of manned and unmanned aircraft with varying stealth characteristics and advanced standoff weapons—will shape the future fighter/attack inventory. These tradeoffs are being examined now, and subsequent aviation plans will reflect the resulting acquisition decisions.

**Modernize LRS capabilities.** The enduring need for long-range attack capabilities will be met by a combination of current and future aircraft and weapons systems. The current fleet of Air Force bombers continues to be modernized so that it can retain long range strike capabilities through the 2030s. To deter and defeat anti-access threats, DoD is creating a LRS family of

systems with a new penetrating, nuclear capable bomber program as the centerpiece. The new bomber will be designed to accommodate manned or unmanned operations.

### Aircraft Investment Plan

**Force-Wide Perspective.** The Department’s aviation inventory, broken out by category, is shown for each fiscal year through FY 2021 in Table 1. Total aviation force levels will slightly decrease across the period, peaking at 5,626 in FY 2016, and decreasing to 5,467 in FY 2021. The fighter inventory will decline slightly (a roughly 10 percent decrease), during the ten-year period, while aircraft in the multirole unmanned aircraft system category will more than triple. These inventory trends are subject to change in response to operational needs, industrial base considerations, and fiscal constraints.

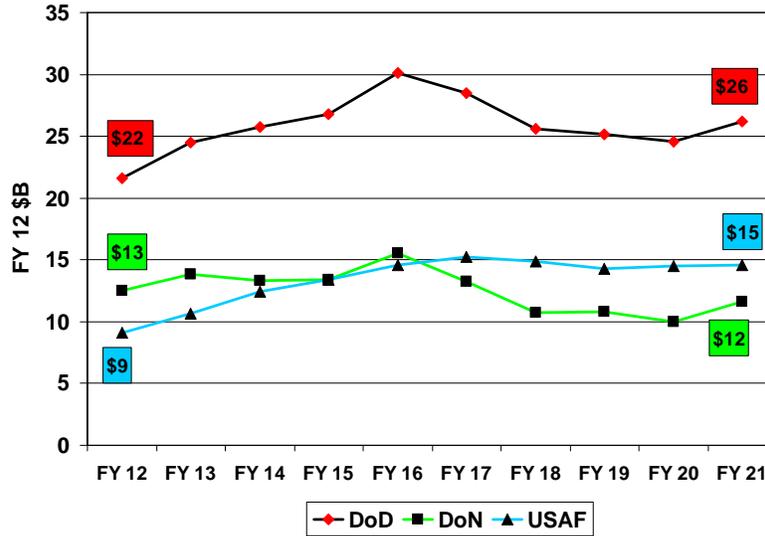
**Table 1. Aviation Force Inventory, FY 2012-2021**

| INVENTORY      | FY12         | FY13         | FY14         | FY15         | FY16         | FY17         | FY18         | FY19         | FY20         | FY21         |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| FTR/ATK        | 3,256        | 3,220        | 3,196        | 3,174        | 3,129        | 3,102        | 3,074        | 3,060        | 3,034        | 2,941        |
| ISR/C2         | 595          | 599          | 602          | 571          | 556          | 524          | 518          | 494          | 464          | 449          |
| MULTI-ROLE UAS | 140          | 188          | 236          | 284          | 332          | 368          | 410          | 446          | 488          | 536          |
| TANKERS        | 551          | 551          | 552          | 556          | 574          | 542          | 536          | 536          | 539          | 542          |
| INTRALIFT      | 546          | 554          | 560          | 565          | 578          | 548          | 540          | 542          | 541          | 543          |
| STRAT LIFT     | 311          | 306          | 301          | 301          | 301          | 301          | 301          | 301          | 301          | 301          |
| BOMBERS        | 156          | 156          | 156          | 156          | 156          | 156          | 156          | 156          | 156          | 155          |
|                |              |              |              |              |              |              |              |              |              |              |
| <b>TOTAL</b>   | <b>5,555</b> | <b>5,574</b> | <b>5,603</b> | <b>5,607</b> | <b>5,626</b> | <b>5,541</b> | <b>5,536</b> | <b>5,535</b> | <b>5,523</b> | <b>5,467</b> |

The aviation plan is fiscally prudent and assumes zero annual real growth over the FY 2017-2021 period. Total aviation investments will amount to \$259 billion across the period. In terms of annual funding levels, expenditures will peak at \$30 billion in FY 2016 (see Chart 7). All investment is expressed in FY 2012 constant dollars. The investment projections encompass engineering and manufacturing development and procurement funding for new platforms.<sup>3</sup> They do not include the considerable procurement funding devoted to upgrades of legacy systems.

<sup>3</sup> At the time this report was prepared, updated Selected Acquisition Report (SAR) data were not available. Thus, there could be discrepancies between the funding figures presented in this report and those provided in the SARs issued in April 2011.

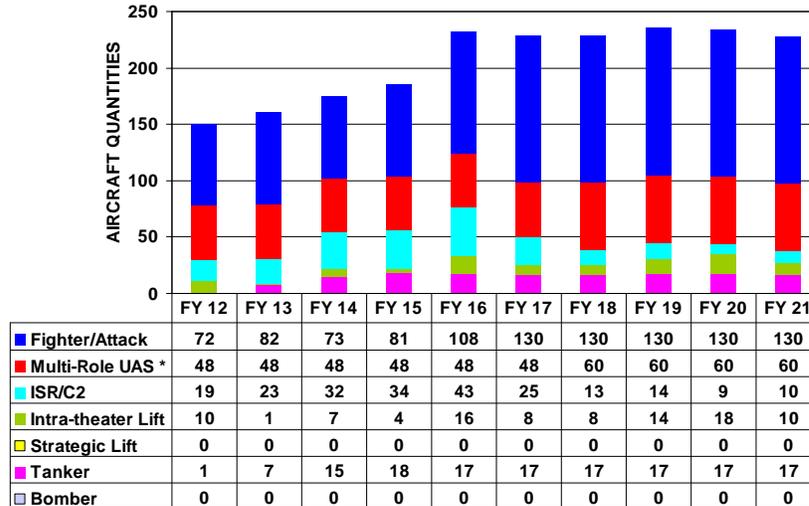
Chart 7. Total New Aircraft Investments, FY 2012-2021



Aircraft: All

Chart 8 shows annual aircraft procurement quantities for the FY 2012-2021 period. Annual procurement levels will grow steadily through the mid-teens, fueled in particular by fighter/attack, ISR/C2 platform, and tanker purchases. Although the Department is spending considerable sums on modernizing legacy strategic lift and long range strike platforms, there will be no new procurement of aircraft in these categories during FY 2012-2021. The picture will change in the 2020s, when the priority will likely shift to buying long-range strike and strategic lift aircraft.

Chart 8. Total Aircraft Procurement Quantities, FY 2012-2021



Aircraft: All

\*Includes Follow-on UAS after FY2016

### Procurement Plans by Aircraft Category

This section describes the planned investments by the Departments of the Air Force and Navy in each of the seven categories of fixed-wing aircraft.

#### *Fighter/Attack Aircraft*

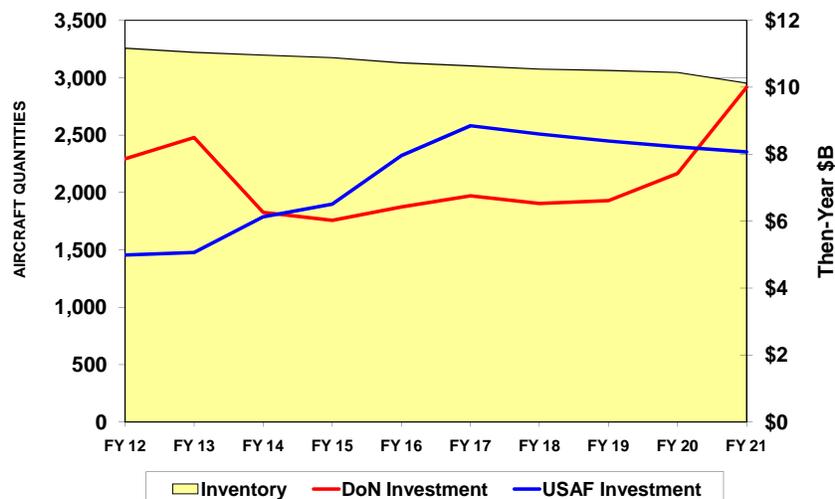
*Department of the Air Force.* Over the next ten years, the Air Force will ensure that the F-22 remains the premier air-to-air fighter aircraft by spending \$4.5 billion on modernization. Procurement dollars will be focused on the JSF, which provides the advanced sensor capabilities and stealth features needed for the future. The Air Force will procure 603 JSF from FY 2012 to FY 2021. Future research and development efforts beyond the FYDP will focus on follow-on capabilities to the F-22.

*Department of the Navy.* The DoN will procure 372 fifth-generation JSF aircraft from FY 2012 to FY 2021 and 67 current-generation F/A-18E/Fs from FY 2012 through FY 2014. Procurement of the EA-18G will end in FY 2013, when the inventory objective is reached. Though it is an electronic warfare platform, the EA-18G has parts and manufacturing commonality with the F/A-18E/F, so it is included in the fighter/attack category. In the far term, the Navy will need to replace its F/A-18E/F fleet, with analysis ongoing to define the Next Generation Air Dominance (NGAD) aircraft. Options include replacing the F/A-18E/F with F-35 aircraft or developing a new manned or unmanned platform or a combination of both.

Chart 9 depicts annual Navy and Air Force fighter/attack aircraft investment funding and inventory levels during FY 2012-2021. In the aggregate, the fighter/attack inventory will decline by about ten percent over that period, while becoming considerably more modern. That trend reflects ongoing and planned efforts to retire legacy fighter/attack aircraft in order to achieve the critical capabilities provided by fifth-generation fighters and unmanned multirole ISR platforms.

The Department of the Navy's investments in fighters will decline between FY 2013 and FY 2015 as it transitions from funding the F/A-18E/F/G and JSF to solely buying the JSF. The Department of the Navy's allocation of F-35B/C production capacity is currently capped at 50 per year; that will be re-visited over the coming year. Air Force JSF procurement will ramp up during this same period, as a procurement rate of 70 aircraft per year is achieved in FY 2016 with an ultimate goal of 80 aircraft thereafter. The rise in Department of the Navy investment after FY 2019 reflects increased research and development for NGAD.

**Chart 9. Fighter/Attack Inventories and Investments, FY 2012-2021**



**Aircraft: A-10, AV-8, EA-6B, EA-18G, F-15, F-16, F-18, F-22, F-35, NGAD**

\*In all subsequent inventory and investment charts, the investment dollars are for new weapon systems only. Inventory quantities contain both new and legacy platforms specific to each category.

### ***Mitigating Fighter/Attack Shortfalls***

Service assessments of fighter/attack shortfalls are constantly ongoing, and are affected by engineering analyses, airframe attrition, and service life extension programs. As a result, these numbers change periodically.

*Department of the Air Force Fighter Force Structure Shortfalls.* The F-35 restructure reduced the near term procurement of F-35s and the Air Force is taking prudent steps to manage its inventory. Recent engineering data indicate the fighter shortfall will be lower than originally projected. Revised airframe durability and sustainment costs for early block F-16s and research and development scheduled for FY 2012 should keep some late block F-16s and potentially other airframes viable into the 2030s as the F-35 is fielded. These measures result in a manageable fighter aircraft shortfall of approximately 2-5% of total aircraft inventory within the FYDP.

*Department of the Navy Fighter Force Structure Shortfalls.* The restructuring of the F-35 program increased the magnitude of the fighter/attack shortfall, so additional measures were needed to ensure continued fighter/attack capacity and capability for the operational fleet. The Department of the Navy is addressing the shortfall with several management and investment measures: Life Extension Programs (SLEP) of approximately 150 aircraft, reducing Unit Deployment squadrons from twelve to ten aircraft per squadron (when required), accelerating the

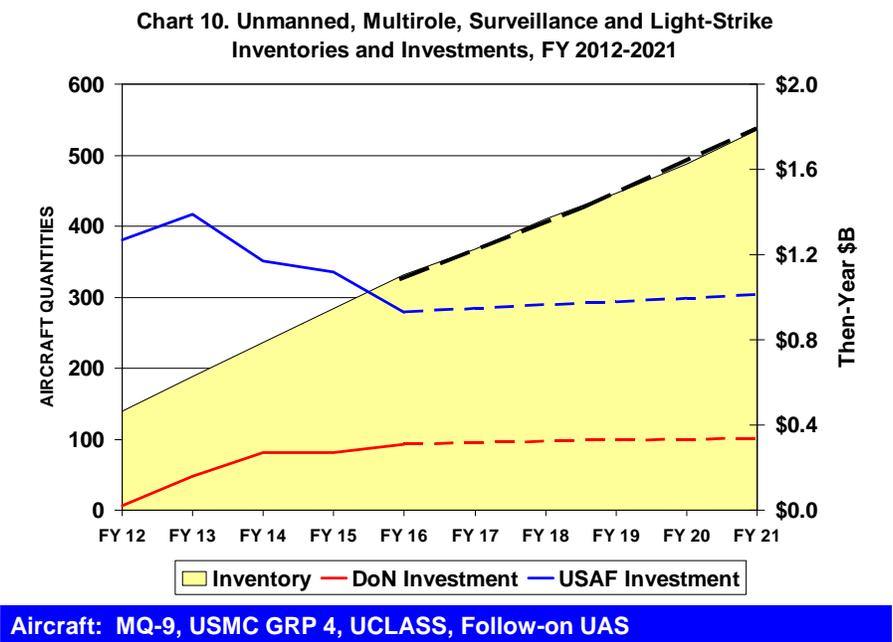
transition of ten legacy Navy F/A-18C squadrons to F/A-18E/Fs using peacetime attrition aircraft and the procurement of aircraft added in the PB 2012 budget request. Also, the Department of the Navy will procure 67 F/A-18E/F aircraft over FY 2012 to 2014. In combination, these measures reduce the peak fighter/attack shortfall to a manageable 65 aircraft in FY 2018.

**Unmanned Multirole, Surveillance and Light-Strike Aircraft**

*Department of the Air Force.* In the near term, the Air Force will continue to procure MQ-9 Reapers. The number of MQ-1 and MQ-9 orbits increases to 65 by the end of FY 2013. The far term will see the Air Force examining potential follow-on platforms to the MQ-9. Analyses are ongoing to determine the capabilities and quantities needed for a successor system.

*Department of the Navy.* Over the next ten years the Navy will invest in the development of a carrier based unmanned aircraft and is currently conducting analysis to determine the key capabilities needed. Additionally, the Marine Corps plans to increase existing UAS capabilities by fielding a multirole, Group 4 UAS in the FY 2018 timeframe. This expeditionary platform will provide Marine Air Ground Task Forces with enhanced surveillance and strike capabilities.

Chart 10 depicts the sharp growth in the unmanned multirole surveillance and light-strike inventories, along with the investments planned in this area during FY 2012-2021. Follow-on UAS programs and associated funding levels after FY 2016 are under review.



**ISR/C2 Aircraft**

*Department of the Air Force.* In the near term, the Air Force will procure 11 RQ-4 Block 30 Global Hawks through FY 2016. Full operational deployment of the Block 30 RQ-4 will allow retirement of the U-2 fleet. The Air Force is modernizing its legacy C2 fleet but is currently assessing alternatives with regard to procuring any new platforms in the future. Far-term efforts will include the potential recapitalization of the Air Force’s ISR and C2 fleets. This year’s

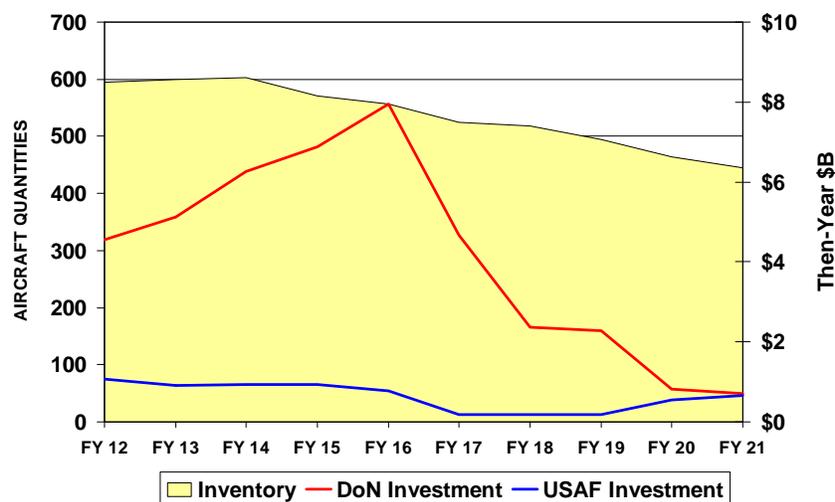
aviation plan reflects some EC-130 Compass Call recapitalization investment outside the FYDP. Furthermore, the E-3 Airborne Warning and Control System (AWACS) and RC-135 Rivet Joint ISR aircraft will reach the end of their service lives prior to FY 2041. It is possible that advances in UAS designs will allow unmanned systems to replace those aircraft.

*Department of the Navy.* Leveraging Global Hawk technology, the Navy will procure the MQ-4C aircraft. The P-8 will replace the P-3C maritime patrol aircraft. The E-2D will replace the E-2C, incorporating advanced radar and other enhanced systems. The Navy plans on using an ISR "family of systems" approach to ensure the capabilities of the EP-3 and special projects aircraft are retained during the transition out of those platforms around the FY 2019 timeframe.

Options include manned and unmanned capabilities as well as sensor upgrades for existing aircraft. Over the long-term, the Navy will examine alternatives for recapitalizing the E-2D, P-8, and MQ-4C fleets.

Chart 11 shows annual ISR/C2 investments and inventories through FY 2021. Procurement of the P-8 drives the increase in Department of the Navy funding, peaking in FY 2016.

**Chart 11. ISR/C2 Inventories and Investments, FY 2012-2021**



**Aircraft: E-2, E-3, E-4, E-6, E-8, EC-130, EC-130 Recap, EP-3, MC-12, MQ-1, MQ-4C, P-3, P-8, RC/WC-135, RC-26, RQ-4, U-2**

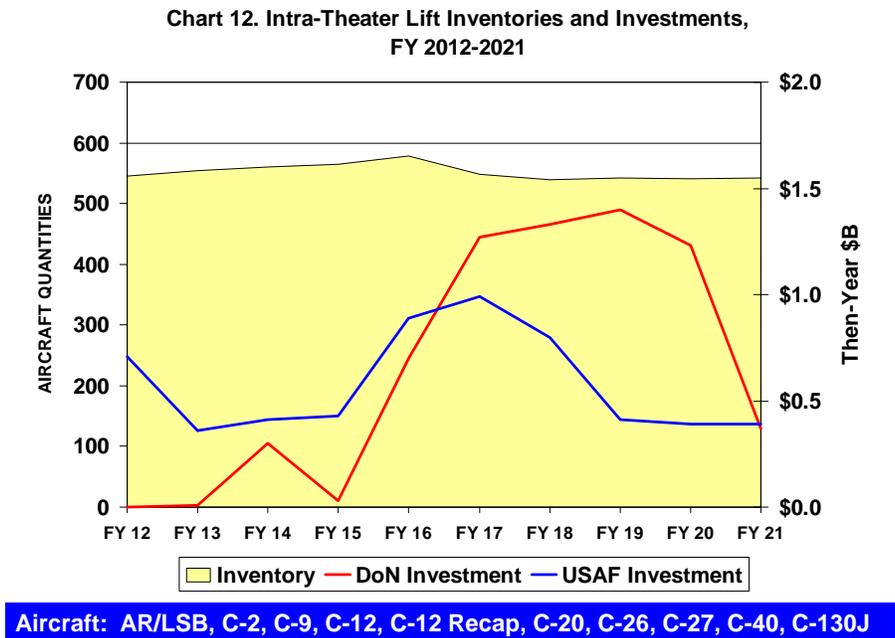
### ***Intra-theater Lift Aircraft***

*Department of the Air Force.* In the near term, the Air Force will continue procurement of the C-130J Hercules. An extremely versatile aircraft, the C-130J is capable of performing intra-theater lift missions in austere locations, as it is doing today in Afghanistan and Iraq. Complementing the C-130J, the C-27 Spartan is a light transport aircraft that will be used to deliver cargo and passengers near or in battle zones.

For the far term, the Air Force is investigating options for meeting future intra-theater lift needs, including potentially the acquisition of a family of airlift systems that would provide complementary capabilities with respect to maneuverability and sustainability.

*Department of the Navy.* In the near term, the Navy will procure C-130J and C-40 Clipper aircraft. In the far term, the C-2A Greyhound fleet, which provides long-range logistical support to carrier strike groups, will reach the end of its service life and will have to be replaced. Ongoing studies will determine the best option to recapitalize capabilities provided by the C-2 in a program currently referred to as Airborne Resupply/Logistics for the Sea Base (AR/LSB). C-40 aircraft, being procured in the near term, will begin reaching the end of their service lives prior to FY 2041 and will need to be replaced.

Chart 12 shows annual intra-theater lift investments and inventories through FY 2021.



### *Strategic Lift Aircraft*

*Department of the Air Force.* In combination with commercial aircraft that can be made available for airlift missions and sealift forces, the Air Force’s strategic airlift aircraft—the C-17 Globemaster III and C-5 Galaxy—form the foundation of the nation’s strategic mobility and global sustainment capabilities. To maintain their operational capability and transport capacity, all C-5s will receive an avionics upgrade. Additionally, 52 C-5 aircraft will undergo engine upgrades, further extending their service lives.

The C-5 and C-17 fleets will continue to form the core of the military’s strategic airlift capabilities in the far term. Continued investments in upgrades for these fleets remain the most cost-effective means of sustaining these capabilities through FY 2041. Additionally, the Department will examine future strategic airlifter options to recapitalize the C-5 as it approaches the end of its service life.

## Aerial-Refueling Tanker Aircraft

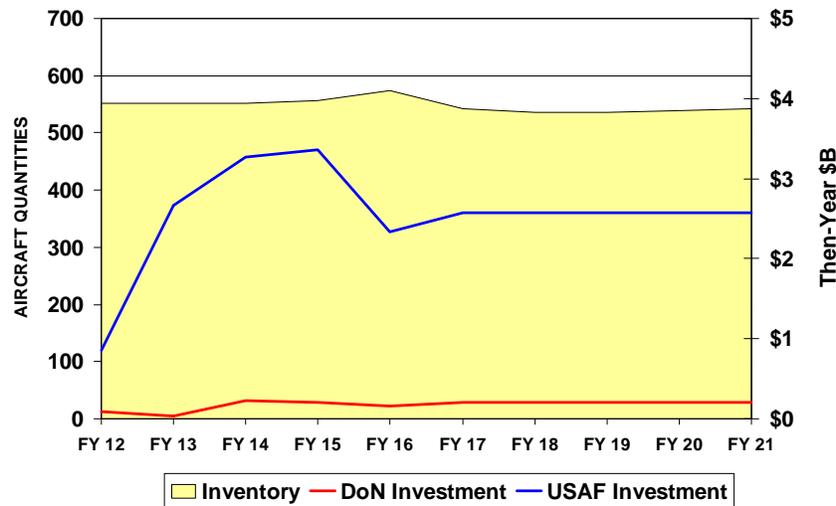
*Department of the Air Force.* As the Air Force’s fleet of tanker aircraft ages, new tankers will be needed to provide in-flight refueling support. The Air Force has begun recapitalizing the tanker fleet with plans to develop and procure 124 KC-46A tankers by 2021. The KC-46A fleet will reach 179 aircraft in 2027. The KC-46A will be able to refuel aircraft in flight and can be air refueled by other aircraft to allow continuous overhead fuel management across the battlespace. Additionally, the capability to transfer fuel to either receptacle or probe-equipped receivers without reconfiguration will enhance the capability and flexibility of the tanker fleet.

*Department of the Navy.* The Marine Corps will continue procuring the KC-130J in the near term, expanding its inventory of this aircraft, which has proven its combat effectiveness and reliability in both Iraq and Afghanistan. Capable of employment in intra-theater lift, assault support, persistent ISR, and aerial refueling missions, the KC-130J will replace aging KC-130Ts.

The Navy will incorporate aerial refueling capability requirements into future aircraft studies to include recapitalization studies of C-2A and existing fighter/attack aircraft.

Chart 13 shows annual tanker investments and inventories through FY 2021. The KC-46A program accounts for the steep increase in investments during FY 2012-2014. As more information becomes known about the KC-46A, decisions will be made on the needed capacity.

**Chart 13. Aerial-Refueling Tanker Inventories and Investments, FY 2012-2021**



**Aircraft: KC-10, KC-46A, KC-130J, KC-135**

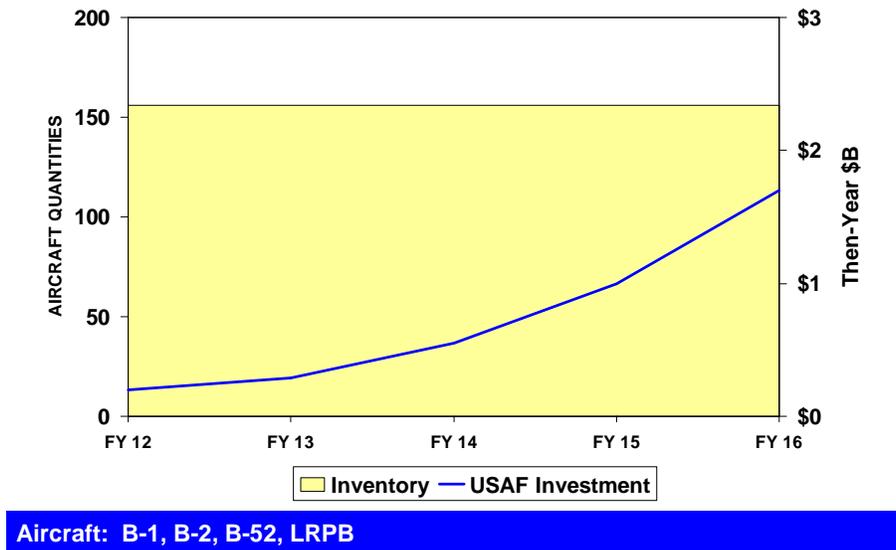
## Bomber Aircraft

*Department of the Air Force.* PB 2012 initiates development of a long-range penetrating bomber (LRPB) as a centerpiece of the LRS family of systems. The aircraft will be designed to accommodate manned or unmanned operations, be nuclear capable, and have an average

procurement unit cost goal of approximately \$550 million. Fielding 80 to 100 of the new bombers will allow recapitalization of the Air Force’s fleet with capabilities required to operate in an anti-access, area denial environment and ensure a sustainable inventory over the long term. Meanwhile, the Department will invest in upgrades to the B-2 bomber to enhance its effectiveness and survivability. Within the FYDP, the Air Force will divest 6 B-1 aircraft from its bomber fleet to fund capability upgrades for the remaining B-1 fleet.

Chart 14 shows annual bomber investments and inventories through FY 2016.

**Chart 14. Bomber Inventories and Investments, FY 2012-2016**



**Budget Certification**

The Department’s FY 2012 budget request and the associated FY 2012-2016 FYDP provide the requisite funding to implement the aviation investment plan through FY 2016 for all programs of record except the recently awarded KC-46A aerial refueling tanker. In the case of the KC-46A the FYDP includes sufficient funding; however, the funding is not aligned correctly by fiscal year. This misalignment was not known until the successful offeror was selected and it will be corrected in the 2013-2017 FYDP. Because of the misalignment, the certification required at § 231a(a)(2) cannot be made; however, the USAF has committed to correct the misalignment before procurement, therefore, this misalignment will not introduce risk associated with the force structure of aircraft.

**Sufficiency of Forces Assessment**

The FY 2012-2041 aviation plan is consistent with the tenets of the 2010 QDR and meets the national security requirements of the United States.

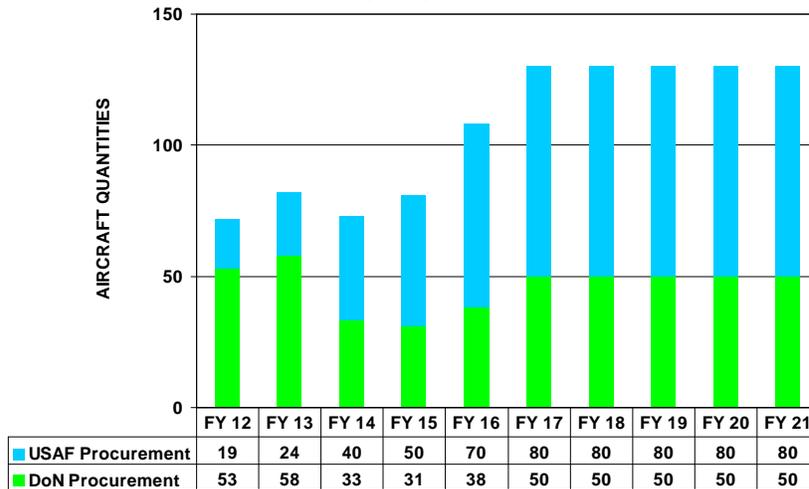
# Plan for Aircraft Procurement for FY 2012

## Part III –Appendix

### Aircraft Procurement Displays

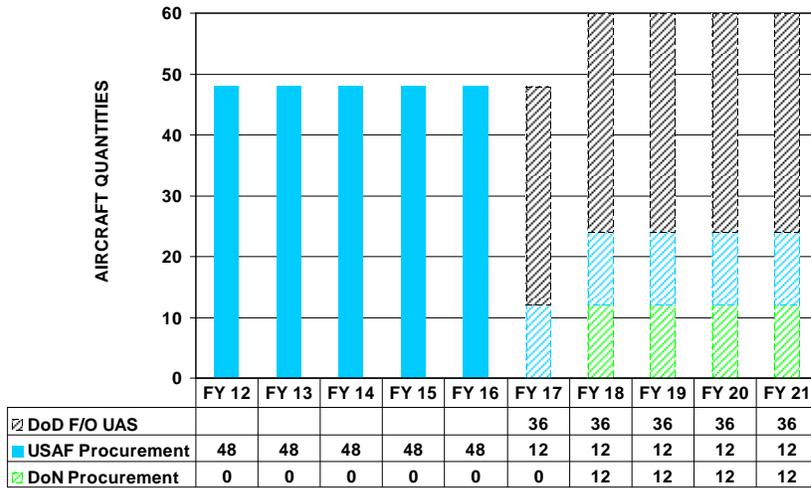
Charts showing annual procurement levels for Department of Air Force and Navy aircraft are provided below. As with the companion displays in the body of the report, the charts presented here cover the period FY 2012-2021. Charts are provided only for those mission categories for which aircraft will be procured during the FY 2012-2021 period. Accordingly, displays are not presented for categories in which investments will focus exclusively on research and development activities.

**Appendix Chart 1. Fighter/Attack Procurement Quantities, FY 2012-2021**



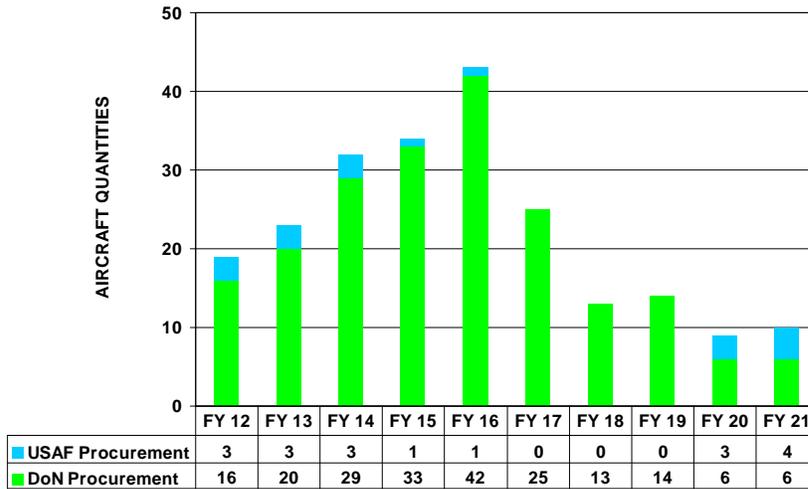
**Aircraft: F/A-18E/F, EA-18G, F-35A/B/C**

**Appendix Chart 2. Unmanned, Multirole, Surveillance and Light-Strike Procurement Quantities, FY 2012-2021**



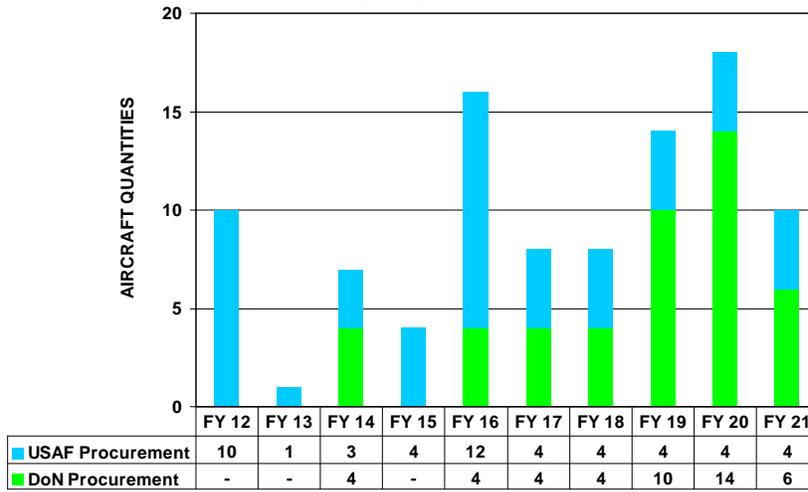
**Aircraft: MQ-9, USMC Group 4 UAS, UCLASS, Follow-on UAS**

**Appendix Chart 3. ISR/C2 Procurement Quantities, FY 2012-2021**



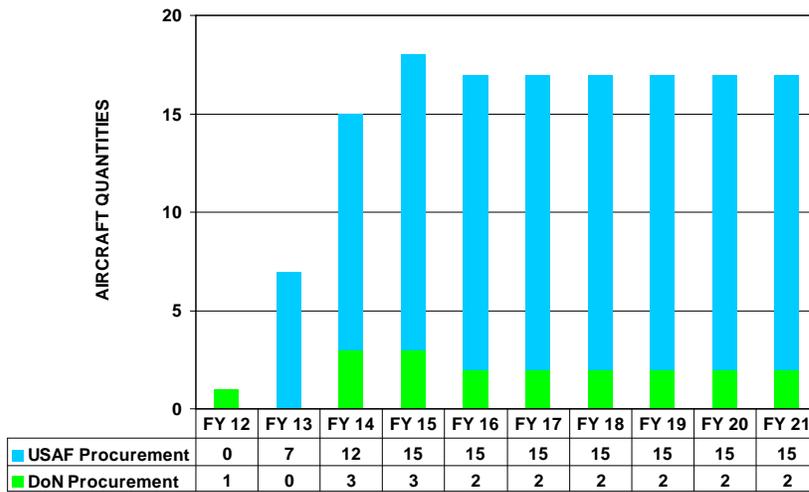
**Aircraft: E-2D, MQ-4C, P-8, RQ-4, EC-130 Recap**

**Appendix Chart 4. Intratheater Lift Procurement Quantities, FY 2012-2021**



**Aircraft: C-12 Recap, C-27, C-40, C-130J**

**Appendix Chart 5. Tanker Procurement Quantities, FY 2012-2021**



**Aircraft: KC-46A, KC-130J**