

# Air Force Materiel Command

*War-Winning Capabilities ... On Time, On Cost*



## Future Infrastructure Requirements - AFMC perspective

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15 November 2006

*Integrity ~ Service ~ Excellence*



## Overview

- **Depot Maintenance Strategy**
- **Investment Portfolio**
- **Portfolio Tracking**
- **Partnering & Joint**
- **Overcoming key obstacles and risks**



## A4 Mission, Vision, and Goals



### **Mission**

“Shape the workforce and infrastructure to provide logistics and sustainment support for...Acquisition logistics, Supply management, Depot maintenance and Base-level logistics operations...resulting in war-winning expeditionary capabilities”

### **Vision**

To exceed our customer expectations, providing the most cost effective, timely and flexible logistics products and services into the 21st century

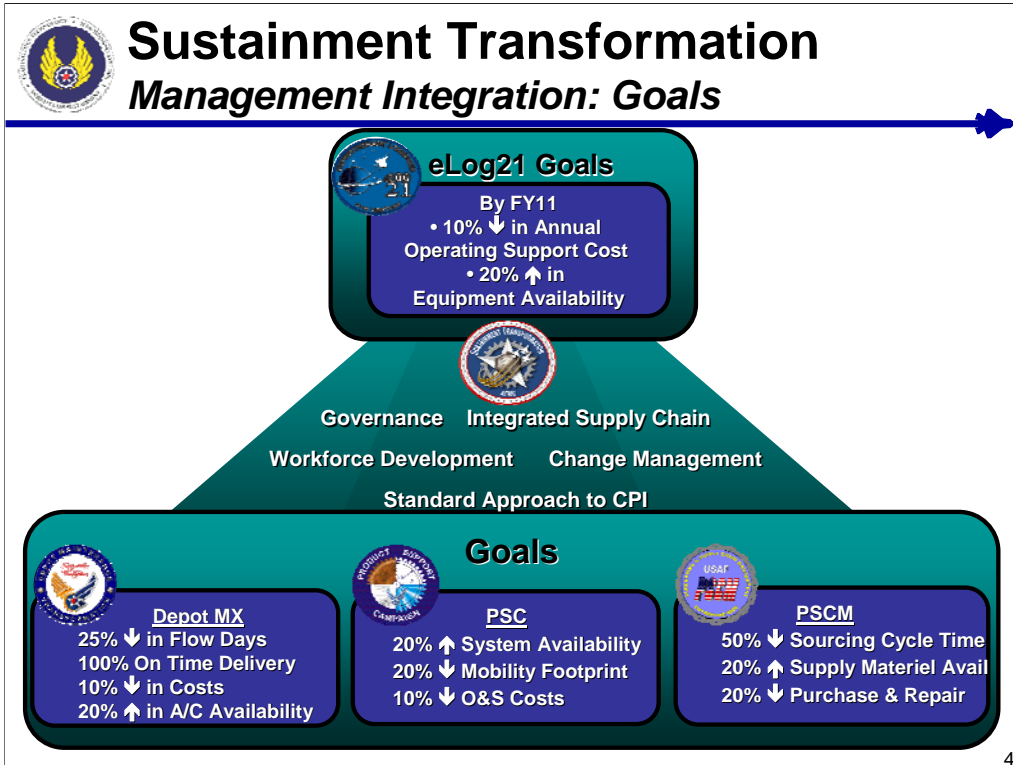
### **Goals**

*Support the Warfighter*

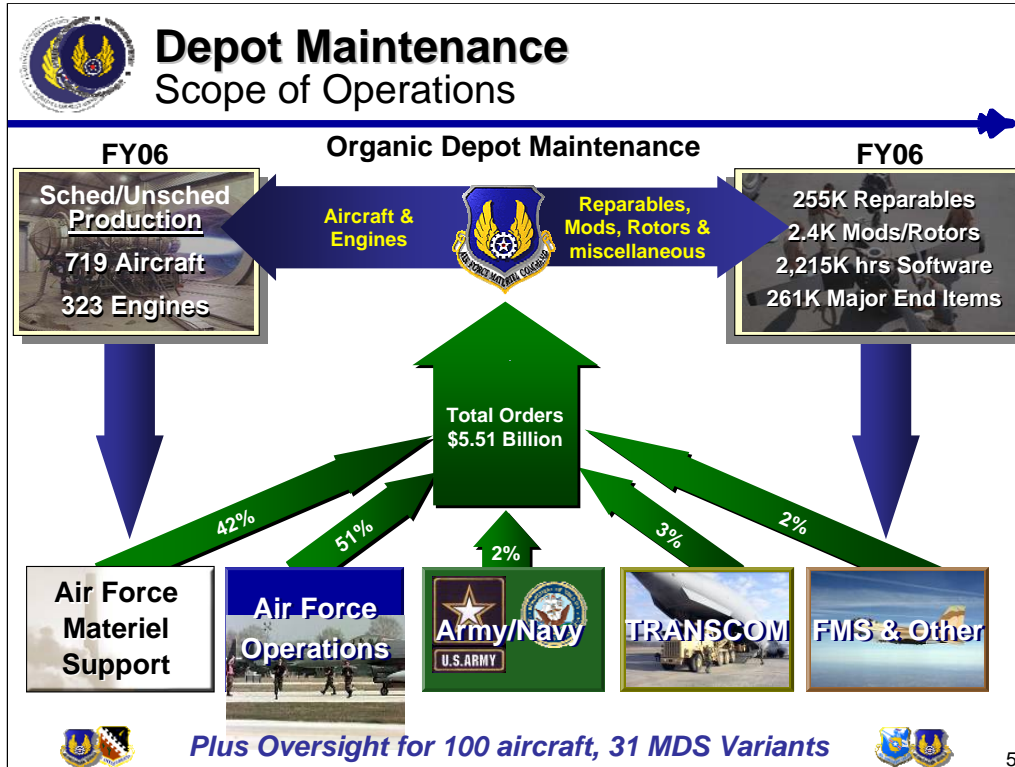
*Develop our People*

*Provide Actionable Guidance*

*Transform for the Future*



As you are aware, the eLog21 goals have been parsed out to the three initiatives for DMx, PSC and PSCM. One of the key areas we are standardizing is Standard Approach to CPI.



FY06 Data:

Organic engine production was 323 (334 in FY05)

Contract engine production was 293 (Not tracked in FY05)

Total engine production for FY06 including organic and contractor was 616

Organic scheduled aircraft production was 634 (681 in FY05)

Organic unscheduled aircraft production was 85 (66 in FY05)

Total organic aircraft production was 719

(Note: Tracking of Contract aircraft production started in Jan 05)

Contract scheduled aircraft production was 509 (232 in FY05)

Contract unscheduled aircraft production was 123 (173 in FY05)

Total contract aircraft production was 632

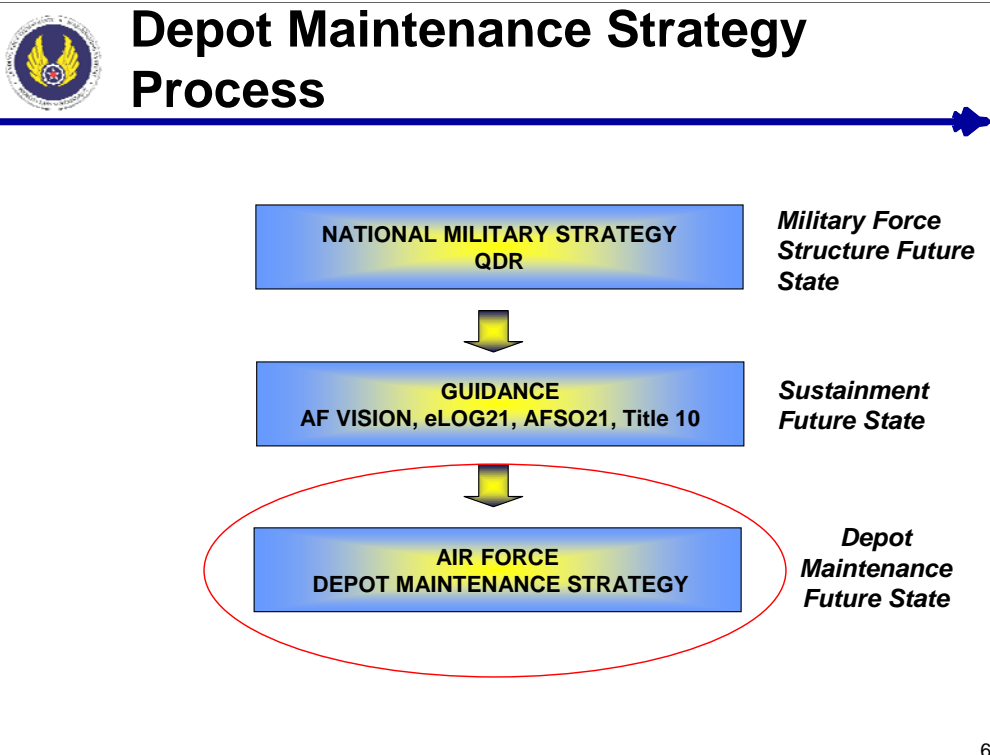
Total aircraft production for FY06 including organic and contractor was 1351 (scheduled/unscheduled) and of those, 1317 aircraft were completed on-time (17 late organic & 17 late contract)

Repairable production was 255,319 (307,478 in FY05)

Modules/ Rotors production was 2,421 (3,080 in FY05)

Software was 2,215,000 hours and is shown as DPEH (2,552,000 in FY05)

Major End Items was 261,436 and is shown in DPEH (269,000 in FY05)



Begins with AF Vision to meet:

**National Military Strategy**

Review of Force Structure Plan 20 years out

**Weapon system attrition/activations**

**Core Determination (assess capability gaps)**

**Core plus requirements**

**Sizes depot maintenance enterprise**

**Implemented through Planning, Programming, Budgeting, and Execution System**

**Progress measured by metrics**

**May drive legislative changes**

Strategy development starts with formation of a team to:

**Establish Purpose**

**Establish Overarching objective**

**Establish Goals**

**Determine strategy elements/relationships**

**Identify Strategy Inputs and Process Owners**

**Review top level guidance**

**AF vision, National Military Strategy, policy and Title 10 requirements**

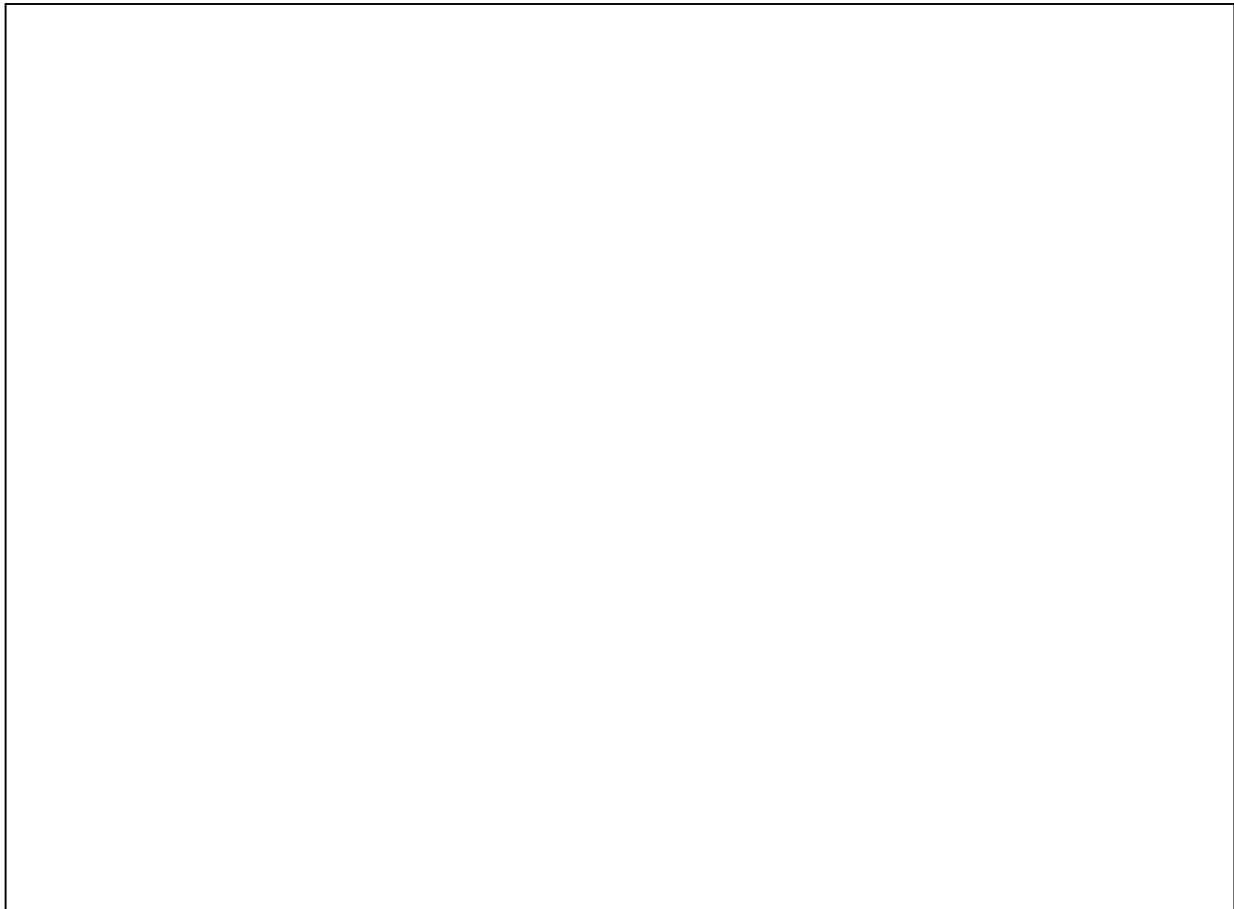
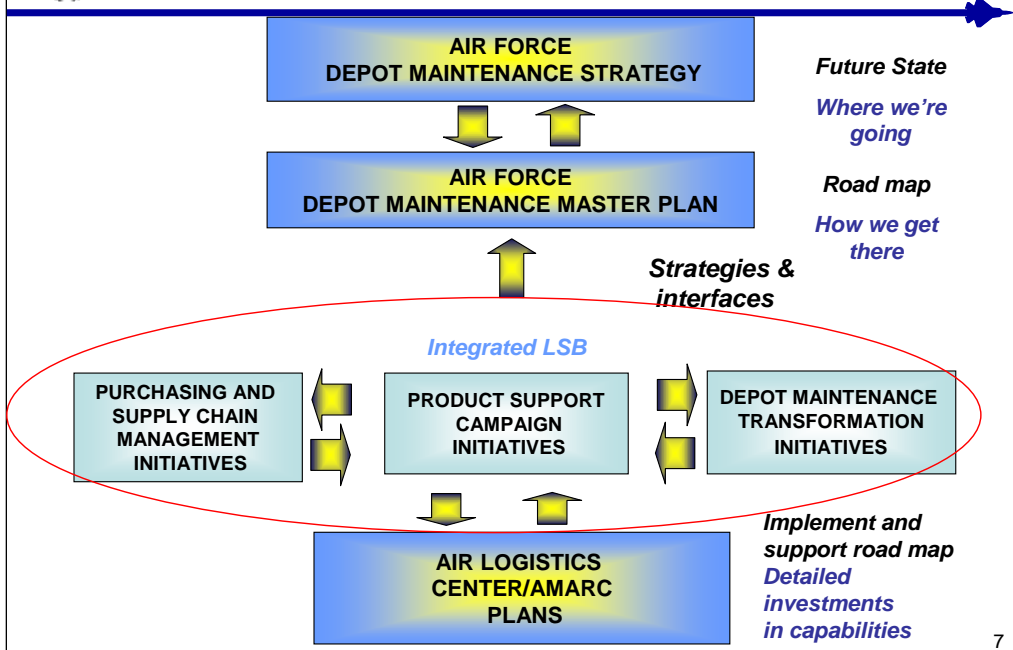
**Review force structure plan**

**Review and define infrastructure requirements**

**Capacity & capability**



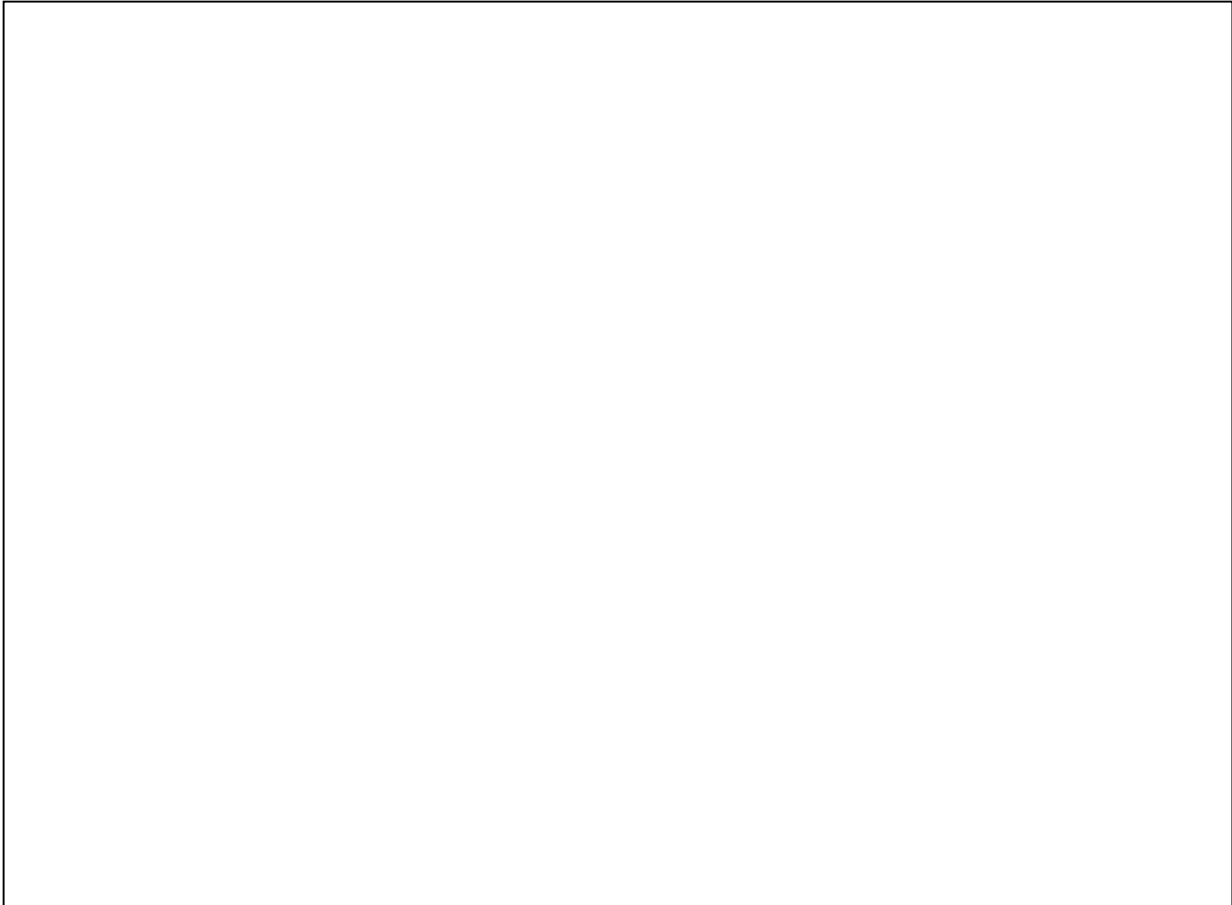
# Depot Maintenance Strategy Process





# AF DM Strategic Plan

- **Purpose**
  - Roadmap to support three modern, capable and affordable organic depot facilities for the next 20 years
- **Overarching objective**
  - Ensure weapons systems are safe and ready to operate across the whole spectrum of operations
- **Goals**
  - Posture depots to support new weapon system technology as well as aging systems
  - Integrate Product Support and Performance Based Logistics approach through Enterprise Mgmt
  - Integrate and improve processes
  - Comply with Title 10 (core and 50/50)
  - Tie decisions to PPBS





## Depot Maintenance Strategy Business Rules

- **Comply with Title 10 requirements:**
  - 10 USC 2460 (Depot Maintenance Defined)
  - 10 USC 2464 (Core)
  - 10 USC 2466 (50/50)
  - 10 USC 2474 (Partnerships/direct sales)
- **Ensure viable depot maintenance capability through 2025:**
  - **SORAP**
    - Inserts new technology/capability into depots

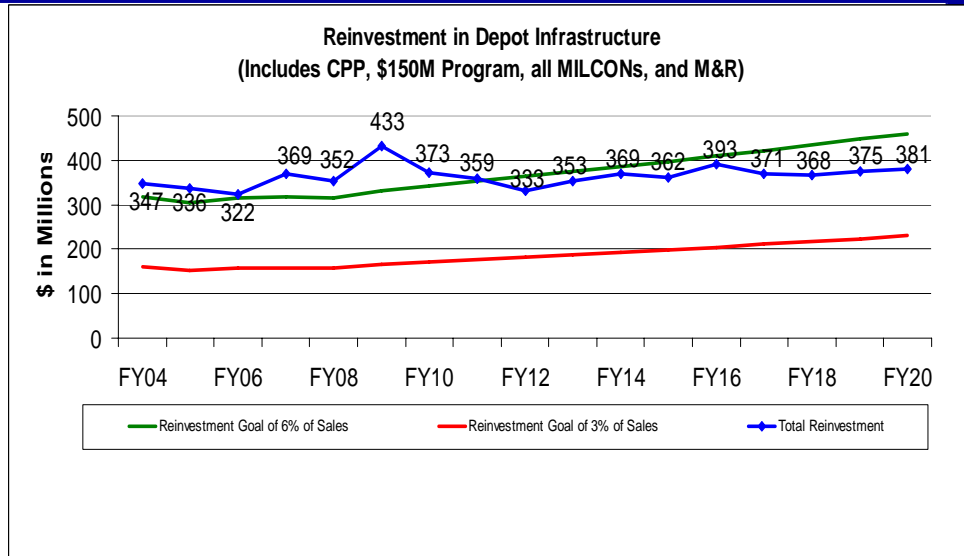


## Measures to meet strategy

- **50/50 Report**
  - How well SORAP process works
- **Infrastructure funding (6% reinvestment)**
  - Comparable to private sector providers
- **Process improvements**
  - Reduced maintenance cost
  - On time delivery
- **Workforce**
  - Occupational series development plans completed
  - Currency of training



## 6% Goal Status





## Investment Portfolio

- **Depot Maintenance Strategy**
  - Strategic Planning Process & Integration Summary
- **Depot Integrated Investment Master Plan**
  - \$150M Plus-up Program
  - Capital Purchase Program
  - Military Construction
  - Depot Technology Modernization Program
  - Maintenance and Repair
  - Integrated Financial Review

**Strategic capital investment - Accelerated transformation - Robust repair capability**

-DIIMP: Command document linking depot maintenance key program guidance, ALC investments and strategy into a single command roadmap

-DTMP: Command program that generates and prioritizes short and long term depot maintenance technology requirements and feeds into the AFMC Applied Technology Council to determine command priorities for AFRL to work

-MILCON: Command program that generates and prioritizes Depot Maintenance Military Construction requirements to modernize and sustain Depot Maintenance Infrastructure and feeds Depot Maintenance requirements into the AFMC MILCON program

-CPP: Capital Purchase Program

-\$150M Program



## Investment Criteria

- **What is the project?**
  - Does it support core capabilities?
- **How / Why is this project transformational?**
  - Explanation of how this will fundamentally change the way you do business
- **How much does it cost?**
  - What is the ROI (tangible & intangible)?
- **How long will the project take?**
  - Estimate completion date, including funding and activation time.
- **What does the AF get by investing in this project?**
  - Explain the outcome. Replace obsolete equipment? Obtain addition capacity?
- **When can the AF see results from the project?**
  - Explain the results and time frame they are expected.
- **What are the success measures?**
  - Quantify success measures and how they will be captured.

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Ten projects exempt:

C-17 Depot Activation

Advanced Planning and Scheduling (APS)

Six DMRT initiatives

Air Staff ok'd exemption in xx Oct 06 e-mail to A4BE



## AFMC Capitalization

- **\$150M plus-up program; infuses \$900M FY04-09**
  - Catalyst to implement AF Depot Maintenance Strategy
  - Doubles previous capital investment level (3% to 6%)
- **Reverses post cold war reduction in repair capability; transforms depot operations**

**Capture and report realized savings to justify continued reinvestment rate at 6%**

AF plans to increase their investment by \$150M a year throughout the Future Years Defense Program (FY04-FY09) to implement the AF Depot Maintenance Strategy and Master Plan. The funds will improve the depot maintenance infrastructure, implement re-engineering initiatives, and transformation depot processes into “world-class operations”.

The AF is committed to maintain a ready and responsive “world class” organic infrastructure with technologically advanced facilities and equipment, and a qualified workforce.

The \$150M plus-up raises the AF investment in infrastructure from approximately 3% of sales (\$140M) to a level commensurate with private industry benchmark of roughly 6-7% of revenue per year.

The \$150M plus-up/transformation program provides AFMC the ability to make investments that lay the foundation for future transformation in the AF depots and fund project initiatives that will help the centers meet long-term strategic plans.

Management and re-engineering initiatives such as workforce training, process improvements and information system technologies.

Infrastructure investments will transform facilities and processes and/or fill capability needs/gaps to include military construction, shop redesign, new technology and equipment.

The AF assigned budget appropriations 3400 (Operations & Maintenance), 3010 (Equipment), and 3300 (Military Construction) for investment and recapitalization efforts at the depots for the AF Depot Strategy to include \$150M Plus-up/transformation initiatives.



## Capital Purchase Program

- **Replaces worn-out obsolete equipment/programs**
  - New asset greater than \$100K; two years or more useful life
- **Minor Construction**
  - Less than \$750K
- **Examples:**
  - **Equipment**
    - **Industrial Plant, Auto-Test, Initial Outfitting Automated Data Processing Equipment**
    - **Computer hardware**
  - **Software and Management Systems**
    - **Legacy System Refresh**
    - **Expeditionary Combat Support System (ECSS)**

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The CPP allows Depot Maintenance Activity Groups (DMAGs) to include capital depreciation in customer sales rates as a means of financing the replacement of capital assets. This program covers investments at or above the CPP threshold of \$100,000 with a useful life of two years or more made in support of DMAG activities for the four capital investment categories.

- Capital Equipment includes new and replacement equipment purchases, rehabilitation of existing equipment, and modification of existing equipment.
- Automated Data Processing Equipment (ADPE) and Telecommunications Equipment consists of computer hardware, operating system software, and telecommunications equipment.
- Software Development includes the development and acquisition of the information system but does not include software developed for a customer for use in a weapon system.
- Minor Construction (MC) includes new facility construction or alteration of existing facility up to \$750,000 meeting the definition of MC in AFI 32-1032.
- HQ AFMC/LGP and FMR tasked the Centers 8 Apr 05 to submit FY07 capital investment requirements through the FY07 Program Budget Review (PBR) process. The PBR entails identification, validation, prioritization, consolidation, review and approval of DMAG CPP budget requirements. HQ AFMC/LGPE is the focal point for the Command and the Centers are described as OC-ALC, OO-ALC, WR-ALC, AMARC, HQ AFMC/TRIM, and DFSG/EC.
- CPP requirements may now be defined and described in terms of Capabilities-Based Projects. This initiative allows grouping of the capital equipment projects into sub-categories defined as Weapon System Sustainment and Test, and will allow greater execution year reprogramming flexibility within the category total if the capability based budget is approved by the Office of the Secretary of Defense (OSD). The MA ESG still requires line item visibility in order to evaluate projects against Command strategic depot maintenance objectives.



# Military Construction Program

- **Formal process to identify, prioritize and fund major construction projects over \$750K**
  - **Modernized facilities critical to achieving AF Long Term Depot Strategy objective**
  - **Example: \$19M OC-ALC Bldg 3001 Renovation, phase I**
  - **Utility upgrade, roof repair, improved lighting etc.**
  - **Critical for transformation success**
  - **Impacts engine and aircraft business units**

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## AFMC MILCON Program

### Current Mission

### \$150M Plus-up

- |   |  |  |  |                        |
|---|--|--|--|------------------------|
| <ul style="list-style-type: none"> <li>• FY05<br/>Transforming functional test</li> </ul> | <p><b>Robins</b> – Aircraft Ramp, \$15M<br/>process facility (\$7.9 M) (Congressional insert))</p>   | <p>process ramp (\$16M)</p>  | <p><b>Robins</b> - Transforming functional test</p>  | <p><b>Robins</b> -</p> |
| <ul style="list-style-type: none"> <li>• FY06</li> </ul>                                  | <p><b>Hill</b> – F/A-22 Aircraft Battle Damage Repair Training/Storage, \$4.6M<br/><b>Tinker</b> – Upgrade Bldg 3001 Infrastructure</p>  |  | <p><b>Hill</b> – Addition to Software Support Facility, \$19.5M</p>  |                        |
| <ul style="list-style-type: none"> <li>• FY07</li> </ul>                                  | <p><b>Hill</b> – F/A-22 T10 Engine Test Cell, \$2.2M<br/><b>Hill</b> – F/A-22 Fueled Composite Aircraft Overhaul/Testing Facility, \$26M<br/><b>Robins</b> – Software Support Facility, \$21.5M</p>  | <p><b>Hill</b> – Armament Overhaul Facility, \$3.7M<br/><b>Hill</b> – Addition to Software Support Facility Ph2, \$20M<br/><b>Robins</b> – Depot Maintenance Support Hangar, \$8.6M<br/><b>Robins</b> – Advanced Metal Finishing Facility, \$30M</p> |  |                        |
| <ul style="list-style-type: none"> <li>• FY08</li> </ul>                                  | <p><b>AMARC</b> – AMARC Hangar, \$17M<br/><b>Tinker</b> – Build 3001, Revitalization, Ph 3, \$25M<br/><b>Robins</b> – logistics Facility, Depot Operations</p>   |  | <p><b>Tinker</b> – Consolidated Fuel Overhaul, Repair &amp; Test Facility, MILCON \$35M (IOE \$9.9M)<br/><b>Hill</b> – Hydraulics Flight Control Lean Redesign, MILCON \$5.4M (IOE \$5M)<br/><b>Hill</b> – Power Systems Component Repair Facility, MILCON \$7.5M (IOE \$4.5M)<br/><b>Robins</b> – Lean Aircraft Component Repair Process, MICON \$13.86M (IOE \$1M)</p> |                        |
| <ul style="list-style-type: none"> <li>• FY09</li> </ul>                                  | <p><b>Hill</b> – Fighter Aircraft T-10 Engine Test Cell<br/><b>Hill</b> – Electronics Repair Facility, Ph 1<br/><b>Hill</b> – Consolidated OO-ALC Warehouse \$22.5M<br/><b>Robins</b> – Renovate/Upgrade Build 300, east wing<br/><b>Tinker</b> – Sheet Metal Facility, Ph 1</p> |  | <p><b>Tinker</b> – 3-Bay Multi Aircraft Hangar, MILCON \$49M<br/><b>Robins</b> – Transforming Cargo Aircraft Maintenance, MILCON</p>   |                        |



## Maintenance and Repair

- **Maintenance**: “Work to preserve real property and real property systems or components and prevent premature failure or wearing out of the same.”
- **Repair**: “Restore real property and real property systems or components to such conditions that they may effectively be used for their designated functional purpose.”
- **Examples**: Repair air handlers, install evaporative cooling, provide lightning protection



-M&R data same as what was given during Depot Day; carried to only 2 decimal places.

-Examples of projects include a leaky roof, chipped paint, inadequate or faulty ventilation ducts.



## Portfolio Return on Investment

- **Developed command methodology to retain and invest savings**
  - Fund continuous process improvement initiatives
  - Reduce and/or stabilize rates for customers
- **Develop process to track and report on ROI**
- **Baseline information for all projects (FY04 - FY09)**
  - **Actual information for projects implemented for six months**
  - **One database/source of data**
    - Funds
    - Justification & EA
    - Visibility from contract award to operational capability
    - Tracking of initiative to completing Follow-on Cost Benefit Analysis (CBA)
    - Recurring updates to streamline reporting to Air Staff

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## Purpose of Partnering

← More Commercial → More Organic →

<b>TSPR</b>	<b>Organic Support</b>	<b>Organic</b>
Contractor responsible for support	Contractor Support <b>MIX</b> Public/Private Partnering Opportunities	Traditional organic support environment

- **Partnering leverages the best capabilities of both the public and private sectors**
- **Benefits of Partnering**
  - Maximizes the utilization of the depots
  - Reduces depot overhead costs
  - Infuses new technology into the depots
  - Enables private investment to improve depot infrastructure

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Traditionally, weapon system support was separated into two distinct categories Organic or Contactor Logistics Support (CLS). Based on 50/50 requirements, the pendulum would swing from one side to the other. Studies have proven that the correct answer is a mix of both. Partnering enables that mix to occur.

### **Partnering benefits:**

- Underutilized space now filled
- Reduces costs of W/S repair due to lower overhead costs
- Brings new technology into the depots
- Improvements to depot infrastructure



## Air Force Depot Partnering Overview

- **Since the inception of partnering for depot maintenance, the Air Force has entered into 46 partnerships with industry, resulting in over \$2.06B in revenue and 14.3M direct labor hours**
- **All three Air Logistics Centers participate in depot maintenance partnering**
  - Examples:
    - OO-ALC - F-22 Advanced Composites with Alliant Tech Systems anticipated revenue over \$500M for the depot
    - OC-ALC – Kelly Aviation Performance Based Agreement (F100, T-56 & T39 engines) anticipated revenue over \$4.1B for the depot
    - WR-ALC – JSTARS workshare with Northrop Grumman anticipated revenue over \$213M for the depot
- **Partnerships for depot maintenance for joint workloads in the form of Depot Maintenance Interservice Agreements (DMISA)**
  - LANTRIN Phase II partnership - Lockheed Martin, Warner Robins ALC and the Navy. SRU repair of 155 components of the LANTRIN system to support DOD & FMS customers

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46 Air Force partnerships created to date, resulting in over \$2.06 billion dollars of revenue earned at the depots. Over 14.3 million direct labor hours generated at the depots in support of partnerships.

Partnerships are growing every year and industry has embraced the concept, as it benefits them as well.

Partnerships foster long-term relationships which appeal to contractors.



## Private Investments

- **Partnering has enabled private entities to invest in the depots by bringing their equipment into government facilities**
  - Examples
    - OC-ALC & Pratt and Whitney F-119 Engine Partnership
      - Facility modifications, tooling, industrial plant equipment and computer information systems to support the F119 engine assembly/disassembly workload
    - OO-ALC & Northrop Grumman B-2 Composite Partnership
      - Support equipment used for the B-2 radomes and flight control surfaces now used to support F-22, F16 & A10 workloads
    - WR-ALC & Lockheed Martin ATP Sniper Pod Partnership
      - Test equipment, maintenance & calibration in support of the Advanced Targeting Pod

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Partnerships have enabled private industry to investment capital into our depots. Historically, depots were wrench turning facilities used for aircraft repair, and the high tech capability was reserved for contractor facilities. More and more depots are transitioning into technical complexes.



## Partnering obstacles and risks

- **Obstacles**
  - Current Air Force accounting systems unable to account for material given to depots in support of a Direct Sales Agreement
    - Distorts 50/50 reporting
    - Contractors not obligated to report material costs
- **Risks**
  - Contractors often unwilling to partner with depots due to lack of reprisal for poor performance
  - Core numbers not counted if work is accomplished on contractor owned equipment (even if located on government facility using organic workers)

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Partnerships have not been totally trouble free.

Our archaic accounting system does not allow us to fully account for material and other costs of production when we are engaged in a direct sales partnership usually associated with a PBL contract. This lack of accountability obscures the 50/50 numbers

Contractors are somewhat reluctant (especially in a PBL contract) to partner with a depot for fear that they will be penalized for poor depot performance with no recourse to the penalize the depots (who act as their subcontractor)

Core numbers are only counted if Government Personnel, working on a Government owned facility, on Government owned equipment.



## Summary

- **Ensure requirements align with capabilities**
- **Analyze interservice workload**
- **Exchanging technology information**
- **Partnership with industry is key**
- **Continuous improvement enhances the depot's capability to accept more workload**
- **Opportunity for institutionalizing the most effective business DM practices**
  
- **Become pre-eminent provider of choice**
  - World class infrastructure, equipment, processes, and workforce