NDIA Logistics Symposium

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DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.
2011 >> Sustainment

- Continuation of Technical Baseline Review with Sustainment O&S Focus
- Driving R&M Improvements via Business Processes
- Building Global Sustainment Baseline to Support Future Cost and Performance Trades
- Maturing Governance Processes to Ensure O&S Cost Accountability and Transparency
- Refining Supply Chain Strategy
  - SCM BCA and System Engineering and Logistics Technical Review
- Completing ALIS / Legacy Systems Comparative Analysis
- Corporately Maturing Strategy via Wargames with Services, Partners, OSD, Industry and Congressional Participants
F-35 Sustainment Strategy

• Achieve Best Value Solution for US Services and International Partners
• Design, Develop, Deliver and Sustain a Single, Integrated, Global System of Sustainment Products, Processes, and Business Practices
• Leverage Global Resource Base to Take Advantage of Stakeholder Capabilities, Human Capital and Best Practices
• Drive Life Cycle Focus With Emphasis on Reduction of Costs
• Create Mutually - Beneficial Enterprise That - With Relevant Metrics and Incentives - Operates, Manages, and Supports The Global System
  – Meet user-defined and PSM-supported readiness and cost objectives

Targeted Improvements Will Drive Down LCC/O&S Costs
Key Performance Parameters for Sustainment

**Sortie Generation Rate KPP**
- F-35A
- F-35C
- F-35B USMC

**Mission Reliability KPP**
- F-35A
- F-35C
- F-35B USMC

**Logistics Footprint KPP — Weight**
- F-35C
- F-35B USMC

**Logistics Footprint KPP — Volume**
- F-35C
- F-35B USMC

**Logistics Footprint KPP — C-17 Loads**
- F-35A
- F-35B USMC

KPPs Drive Performance & Reduced Support Costs

*Legacy refers to a legacy support strategy vice PBL

**Legend:**
- > ORD
- = ORD
- / - ORD

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F-35 Sustainment Performance-Based Process

Results / Feedback

Warfighter

Services / Partners

JPO (PSM)

Rqts (PBA)/ Funding

OSD

Policy / Direction

Capabilities

GFE/ GFX

PSM Oversight

Ktr Teams / Gov’t Partners

Subcontracts / IAs

OEM (PSI)

Contract

Depots

DLA

Others

Collaboration & Partnership
JSF Agile Logistics Infrastructure

**Main Operating Bases**

**USAF / USN / USMC / International**

- Maintenance/Logistics Enhancements
  - Reduced Manpower
  - 2 + Level Maintenance
  - Reduced Footprint
  - Increased R&M
  - Direct Access to Contractor Support
  - Engineering, Tech Data & Training
  - Technological Enablers
    - PMA
    - PHM
    - ALIS

**Forward Operating Locations/Ships**

**USAF / USN / USMC / International**

- Replacement Spares to MOB
- Moves Replacement Spares onto FOL/Ship

**Partnering**

- Customer Support
  - Program Management Activities
  - Depot Partnering
  - Performance Based Contract
  - Sustaining Engineering
  - Configuration Management
  - Total Asset Visibility
  - System Security

**Best Value Repair Source**

- Joint Depot Level Maintenance
  - Best Value Source of Repair (Gov/OEM)
  - Statutory Compliant
  - No Scheduled Depot Maintenance
  - Direct access to Sustaining Engineering, Tech Data & Training via ALIS
  - Total Asset Visibility

**Commercial Transportation**

- Shipping
  - Commercial
  - Government
  - Network Communication
  - Contractor
  - Government

**Regional Warehousing**

**Striking Best Value Solution Using Industry & Organic Equities**
US Core Depot Source of Repair Assignments

Majority of Repair Work Going into Organic Depots

- Airframe - 2012
  - Landing Gear
  - S&RES
  - AME
  - Gun
  - SMS
  - Canopy Actuator
  - HMDS
  - PCD
  - SFDS
  - INS - under review

- RIO - 2012
  - VMC - 2012
  - Cockpit Equip.
  - Lighting
  - CNI
  - GPS
  - Common Comp.
  - AMS
  - EO DAS
  - ICP
  - TNS - under review
  - EWCM

- Engine – 2012
  - Life Support System
  - Fuel

- Airframe - 2012
  - Lift Fan - 2014
  - ADS
  - Rudder Pedal
  - HUA
  - Ice Detection
  - Ejection Seat
  - PTMS

- Engine – 2014
  - AIS
  - CSMU
  - Radar
  - EOTS
  - Fuel

- EHAS
  - LEFAS
  - EPG&C
  - EPMS
  - WFAS
  - WBDDS
  - Arresting Gear

- FRC-SW
- FRC-E
- FRC-SE
- FRC-E
- FRC-SE

U.S. Core Depot Source of Repair Assignments

- Majority of Repair Work Going into Organic Depots

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Foundation of Life Cycle Costs

\[ \text{Service Requirements} \times \text{Cost of Product} = \text{Cost of Inventory ($M)} \]

* Driven by Beddown Plans / CONUSE / CONOPS / PBA

Form the Foundation for O&S Costs

Total O&S Costs (to Repair and Sustain)

Cost Drivers: DLR (28%), Personnel (17%), POL (12%), Sustaining Support (14%)

Life Cycle Cost Estimate

Cost of Inventory ($M)

- Production ALS
- Aircraft

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Initial PBA Metrics
- Air Vehicle Availability (AVA)
- Mission Effectiveness (ME)
- Maint. Man Hours/Flt. Hr. (MMHPFH)

Sustainment PBL Vision

LRIP 4-5
Performance Incentive CLINs
- Spares & Consumables
- Support Equipment
- ALIS
- Training Devices
- Depot Capability CONUS

Sustainment Metrics (Data Collection Only)

LRIP 6
Performance Incentive CLINs
- Depots & Consumables
- Support Equipment
- ALIS
- Training Devices
- Depot Capability CONUS

Element Output Performance Incentives
- Depot Capability CONUS
- Depot Capability OCONUS

LRIP 7
Performance Incentive CLINs
- Spares & Consumables
- Support Equipment
- ALIS
- Training Devices
- Depot Capability CONUS

Element Output Performance Incentives (PIF)
- Supply Chain Management (SCM) CONUS
- CONUS Warehouse
- ITC Performance
- PTC Performance
- CONUS ALGS OPS Center
- OCONUS Site Activations
- LST Expansion Partners/FMS
- Fleet Management – US/Partner Services

LRIP 8
Performance Incentive CLINs
- Depot Standup – OCONUS

Element Output Performance Incentives (PIF)
- SCM OCONUS
- O-CONUS Warehouse
- OCONUS Training Sites
- Global ALGS OPS Center
- OCONUS Site Activations
- LST Expansion Partners/FMS
- Fleet Management – US/Partner Services

LRIP 9
Performance Incentive CLINs
- Depot Standup – OCONUS

Finalize Warfighter PBA Metric Incentives
- Warfighter PBA Metrics (US/Partner Services)
- Incorporate revised performance incentives
  - From LRIP 8
  - $/FH Cost Model v1 validation

Cost Type
- Initial Reliability Mgmt.
- Warfighter PBA Metrics (US/Partner Services)

Cost Type/Fixed Price Mix
- Warfighter PBA Metrics (US/Partner Services)

Fixed Price
- $/FH Cost Model development

PBL Expansion (Contracting for Performance Outcomes Continuum)

Limited Element Output Incentives
- SRR Completion
- ITC Activation
- Demo. PBL Plan

Full PBL 2017
- FHs
- Metric Values
- Variant
- Geographical location
- Training or Deployed
- Number of Aircraft

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Targeted Life Cycle Cost Reduction Efforts

- Implement Affordability Initiatives
  - Incentivize R&M improvements & cost reductions in target areas (ie. SE, spares)

- Reduce the Cost of Sustainment Products
  - Price Improvement Curves, multiyear contracts, competition

- Capture Emergent Service Requirement Changes and Leverage Opportunities As Part of a Joint/Partner Solution

- Sustainment Technical Baseline “Deep-Dives” into Support Equipment, Spares, and Manpower
  - Focused effort to identify efficiencies and resulting savings

- Incorporate **PBL Efficiencies** into The Annual Life Cycle Cost Estimate

- Update Life Cycle BCA: Compare Strategy and Alternative Concepts

Reducing LCC Projections Top Priority of F-35 Stakeholders
Questions?