VISION

BE THE MODEL ACQUISITION PROGRAM FOR JOINT SERVICE & INTERNATIONAL COOPERATION

DEVELOP & PRODUCE AN AFFORDABLE NEXT GENERATION STRIKE FIGHTER WEAPON SYSTEM & SUSTAIN IT WORLDWIDE

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.
F-35 PROGRAM
SERVICE & INTERNATIONAL NEEDS

- USAF: Multi-role (primary air-to-ground) fighter to replace F-16 & A-10 & to complement F/A-22
- USMC: Multi-role, short takeoff, vertical landing strike fighter to replace AV-8B & F/A-18C/D
- USN: Multi-role strike fighter to complement the F/A-18E/F
- UK (RN & RAF): Supersonic replacement for Sea Harrier & GR-7

**2,593 US/UK JSFs > 2,000 International JSFs**
The traditional approach for buying an aircraft does not suffice when buying air system capability that is built on an integrated foundation of …

Buying & Providing An Affordable Multi-Mission Strike Capability To Warfighters For The Next Half A Century
## CAPABILITIES DRIVE DESIGN

<table>
<thead>
<tr>
<th>KPP</th>
<th>USMC</th>
<th>USAF</th>
<th>USN</th>
<th>UK</th>
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<tbody>
<tr>
<td>Sortie Generation</td>
<td>4 Surg / 3 Sust</td>
<td>3 Surg / 2 Sust</td>
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<tr>
<td>Logistics Footprint</td>
<td>&lt; 8 C-17 equivalent loads (20 PAA)</td>
<td>&lt; 8 C-17 equivalent loads (24 PAA)</td>
<td>&lt; 46,000 cu ft 243 ST</td>
<td>&lt; 21,000 cu ft 102 ST</td>
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<tr>
<td>Mission Reliability</td>
<td>95%</td>
<td>93%</td>
<td>95%</td>
<td>95%</td>
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MAINTENANCE BOX

20Hx43Wx63L
Air System Design & Concept of Operations Evolve Concurrently
SYSTEM’S DESIGN ITERATIONS
FOR MAINTAINABILITY

FORWARD EQUIPMENT BAY
SYSTEM’S DESIGN ITERATIONS FOR MAINTAINABILITY

OLD

NEW

WEAPONS BAY
SUMMARY

• Rigorous Requirements Process

• Continuous Integration Across the Air System

• Balanced Design
WORKING TO AFFORDABLY MEET THE REQUIREMENTS OF THE WARFIGHTER
**SUPPORTABILITY FEATURES**

**Reliability**
- Liquid-Cooled Avionics
- More-Electric Secondary Power
- Durable Seals & Coatings
- Requirements Allocated to Suppliers

**Self-Sufficiency**
- Non-Pyro Weapons Release
- Onboard Ground Power/Cooling
- Onboard Maintenance Panel
- Integrated Combat Turnaround Without Aircraft Support Equipment

**Integrated PHM**
- Architecture Incorporated in AS Master Model
- Equipment Functionality Defined – Suppliers Incorporating in System Design

**Maintainability**
- Quick-Access Doors/Panels
- Maintenance Access Without LO Restoration
- Ground-Level Maintenance
- 1-Tier Weapons Bay Equipment Access
- Conduction-Cooled Modules (Liquid in Rack Only)
- Tail-Over-Water Servicing/Weapons Loading

*Bottom View Showing Doors & Access Panels*
JCS Requirements Flow Tier 0 - 3

Tier 0

Tier 1

Tier 2

Tier 3

MS
AF
VS

TS
ALIS
SS

JCS
AS

XX
X

XX
X

XX
X

XX
X

X

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SUPPORTABILITY IMPROVEMENTS
LOW OBSERVABLES

Design for Access

Zero Restoration for Frequent Access Panels & Doors

Effects Of Defects Database

Ease of Repair

Materials Durability & Reliability

Robust LO Designs