



JOINT STRIKE FIGHTER

Enabling Technologies Supporting the Warfighter

Unique Identification (UID)

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VISION

BE THE MODEL ACQUISITION PROGRAM FOR JOINT SERVICE AND INTERNATIONAL COOPERATION

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



JSF Family of Aircraft

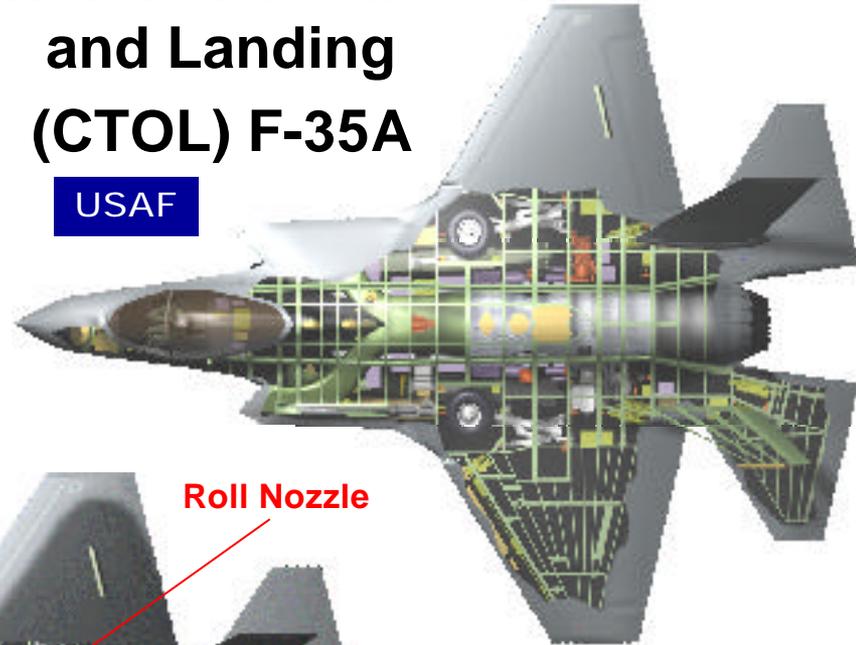
**Carrier Variant
(CV) F-35C**

USN



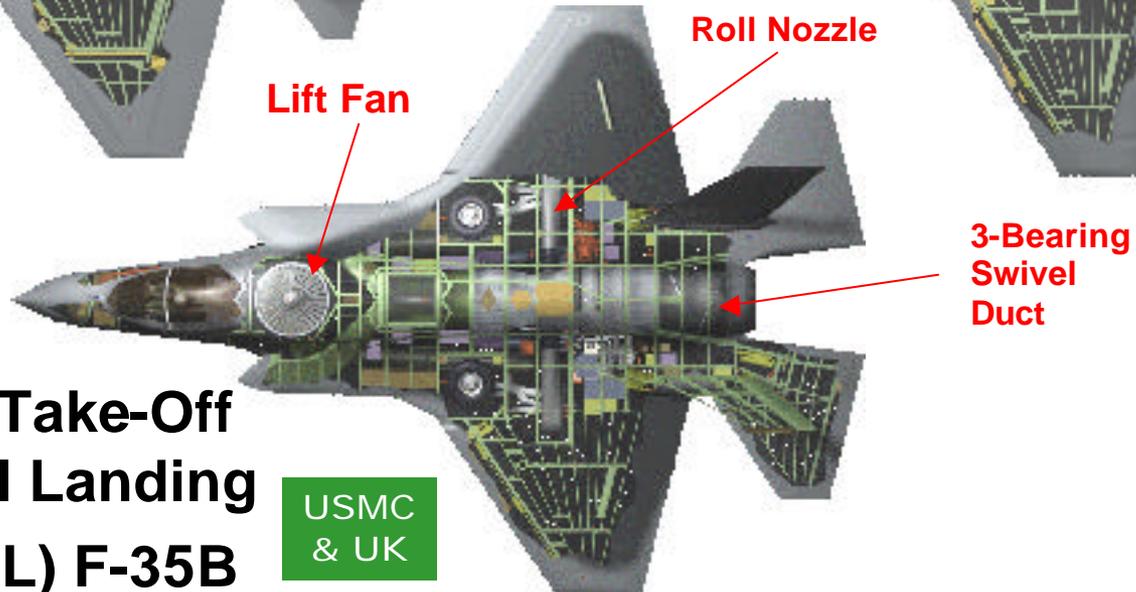
**Conventional Take-Off
and Landing
(CTOL) F-35A**

USAF



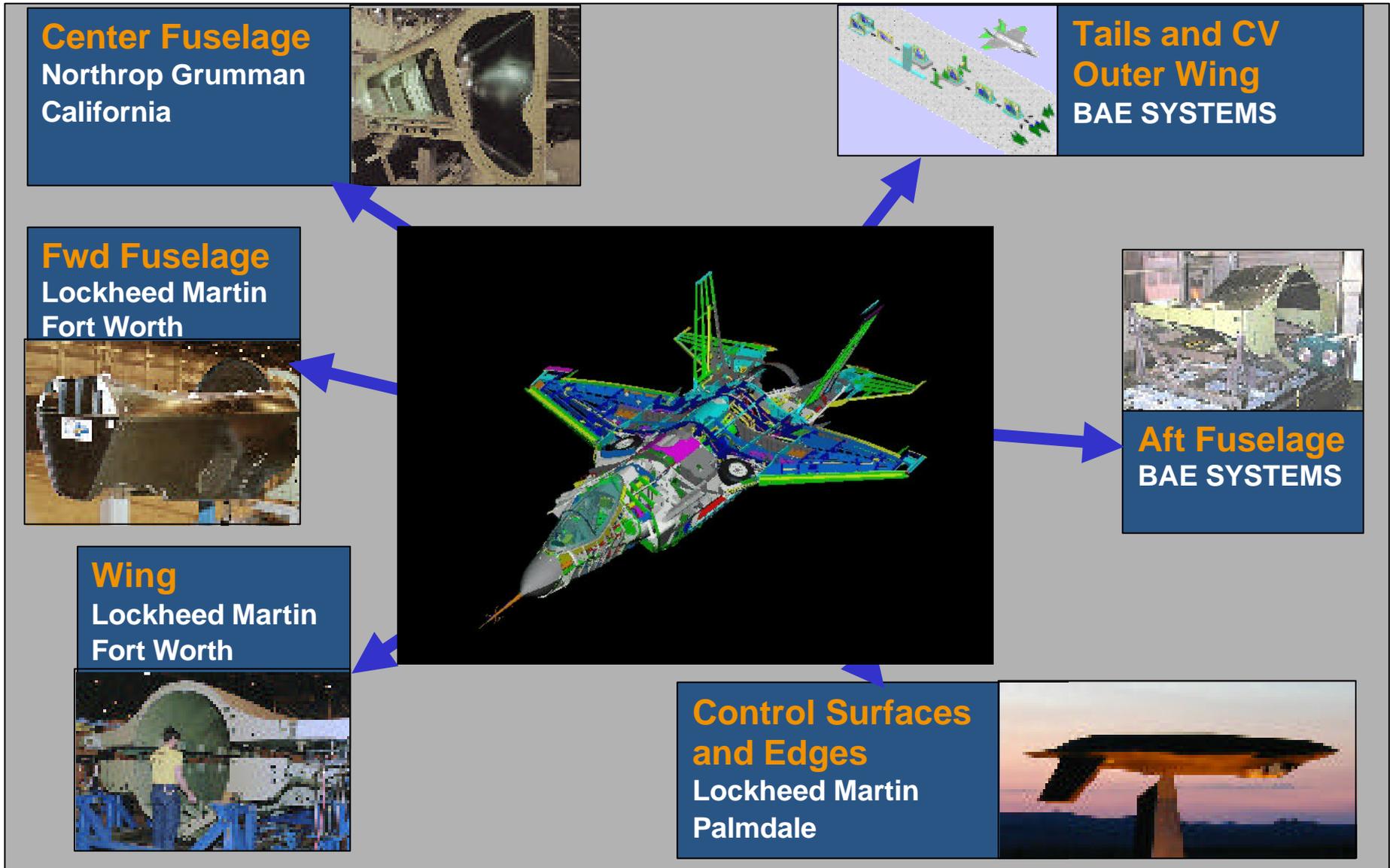
**Short Take-Off
Vertical Landing
(STOVL) F-35B**

USMC
& UK



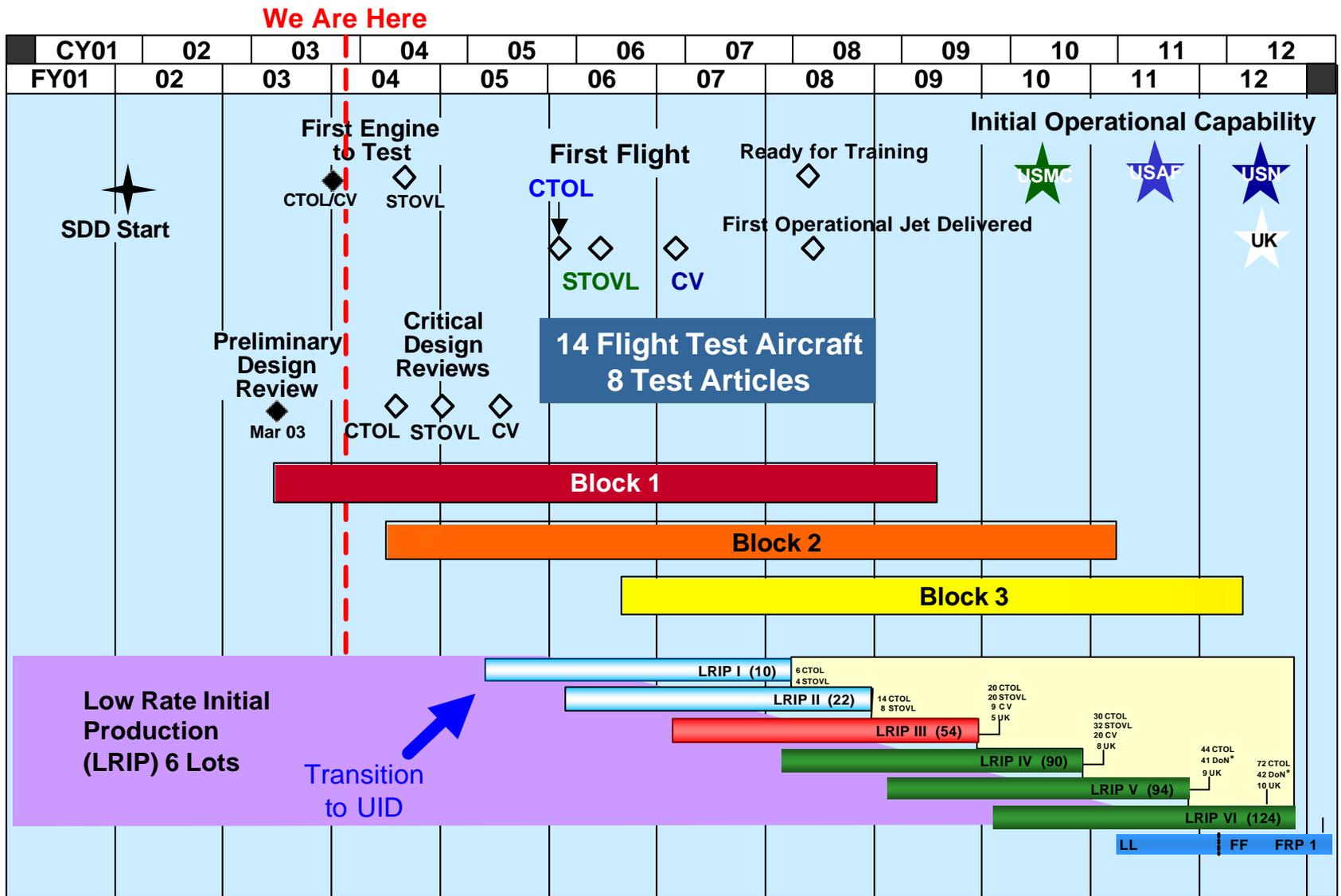


Worldwide Production





System Development and Demonstration (SDD) Schedule





Current JSF Barcode Approach

- **JSF Acquisition Strategy**
 - Best Value Performance Based Contractor Logistics Support Approach
 - Under Total System Performance and Integration Responsibility (TSPIR), Contractor Responsible for Configuration Management
- **Contractor Researched an Affordable Barcode Marking Method for SDD**
 - Contractor's SDD Barcode Solution ([Auto-ID](#)) is Approx. 75% of UID Requirement
- **Requirement for Barcoding of Most Parts by JSF Suppliers**
- **All Parts Removed/Installed Will be Scanned**
- **Data Captured in Autonomic Logistics Information System (ALIS)**



Why Automated Bar Coding Is Important

- **Affordably Capture the Part Data for Traceability and Accuracy**
- **Improved Supply Chain Management**
 - Spares Control and Inventory Accuracy
- **Enables Automated Cost Tracking**
- **Facilitates Lifecycle Management Asset Tracking**
- **Improved Configuration Management**

Dot Peened 2D
Data Mark on JSF
F135 Engine Part

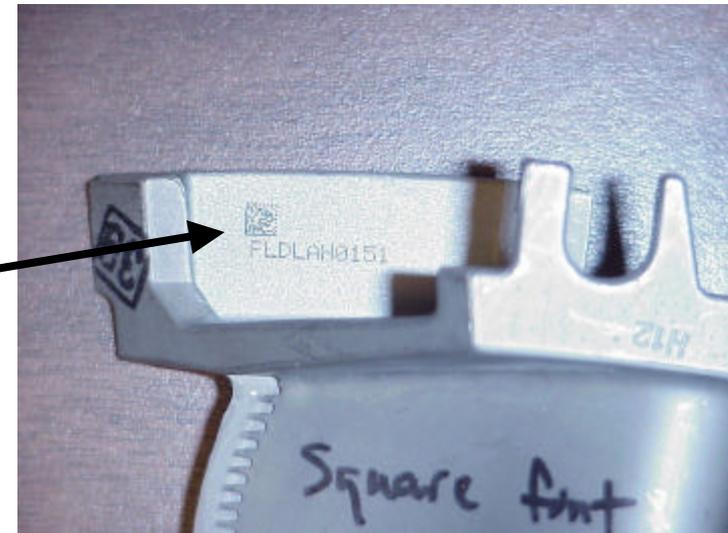
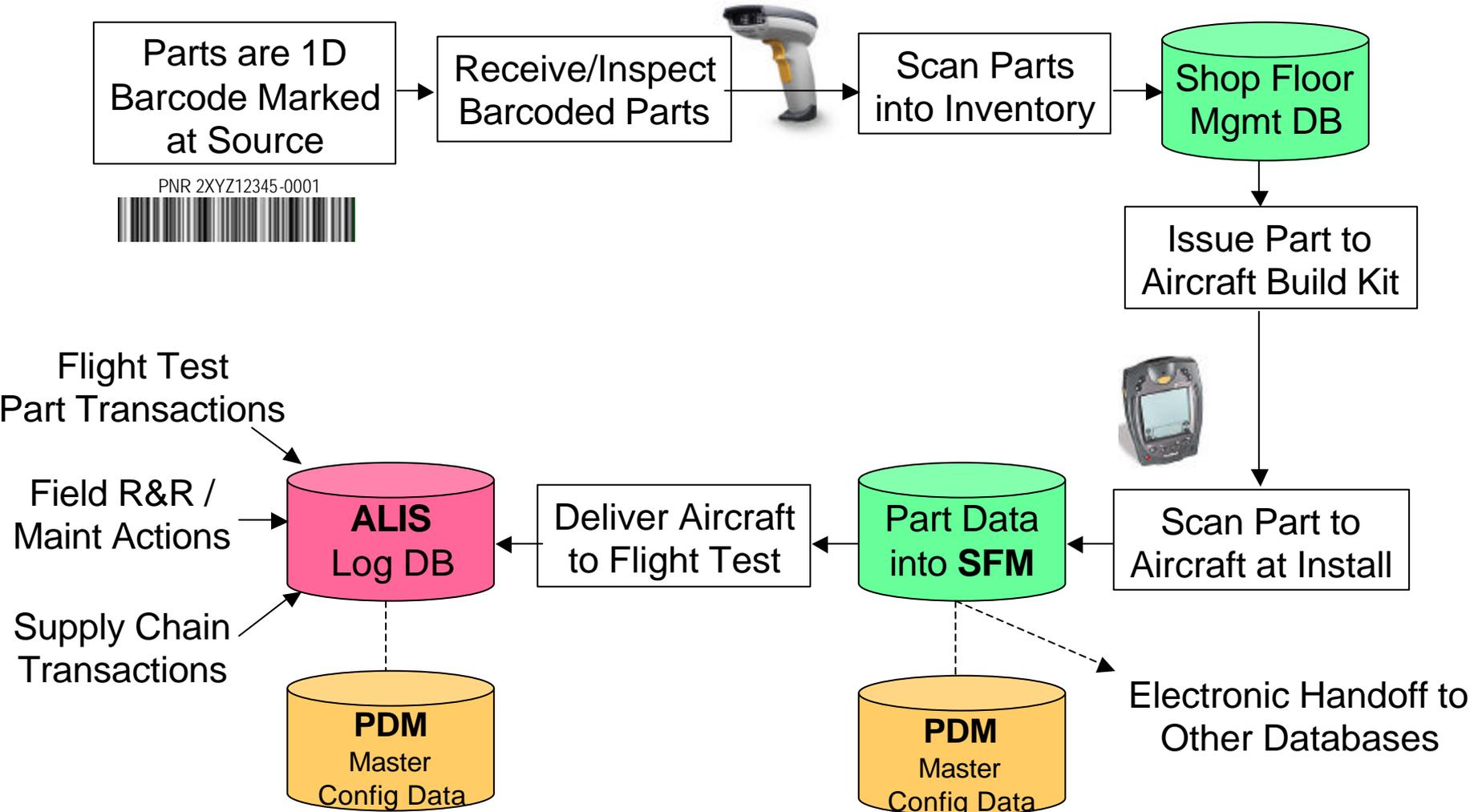




Diagram of JSF SDD Approach





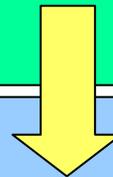
SDD to LRIP

• SDD (Auto-ID)

- Contractor's SDD Barcode Solution is Approx. 75% of UID Requirement
- 1D Based Approach, With 2D Barcode Optional

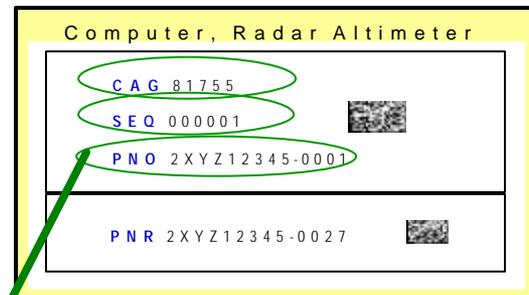


Loaded Software



• LRIP (UID)

- LRIP Part Marking Differences
 - Barcode has both Original and Current Part Number
 - 2D Data Barcode
- Part Traceability Data 4X Compared to Legacy Programs



Loaded Software



UID: XX817550000012XYZ123450001
(Max of 78 characters, Expect JSF to have between 25-35)



Barcoding Issues



Supplier Base

Issue: Diverse Group of Domestic and International Suppliers (Over 400 in Annex A & B of GPA)

JSF Solution:

- **AUTO-ID is a Requirement on all Supplier Purchase Orders (Same for UID in LRIP)**
- **Requires Frequent Configuration Management (CM) Conferences and Q&A Sessions**
- **Contractor Policies Issued on Part Numbering and Part Marking**
- **Must Include Suppliers in UID Planning**



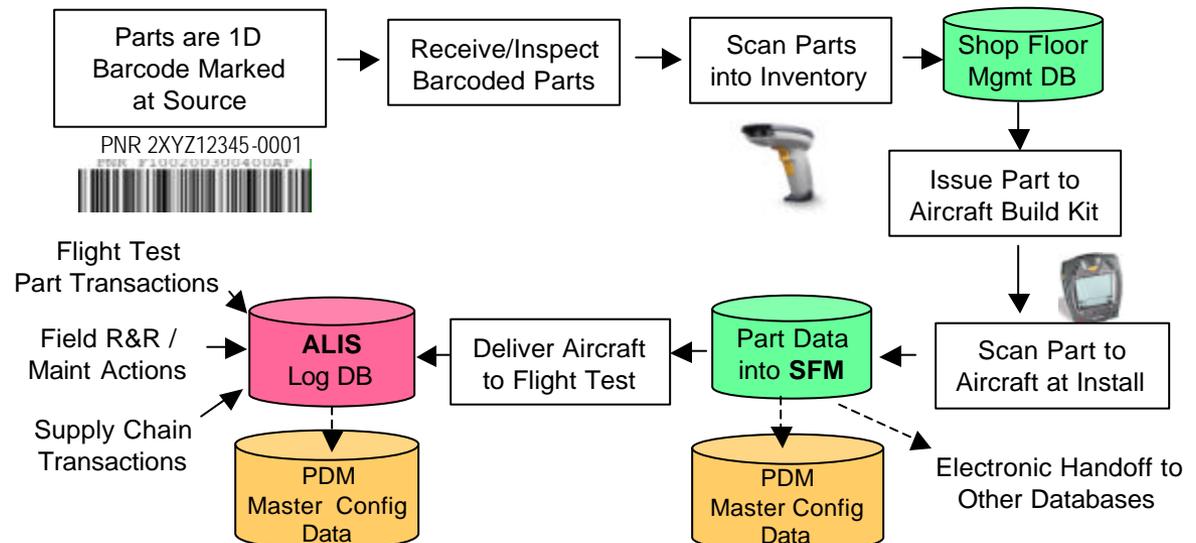
Data Handling

Issue: Data Capture and Handoff

JSF Solution:

- Autonomic Logistics Information System (ALIS) and Product Data Manager (PDM) in Development
- ALIS is the Interface for “As Maintained” Data Handoff to PDM (CM Vault)
- All Parts are Scanned as they are Removed and Installed
- Demonstration of Data Handoffs in 2005
- ALIS Connectivity Wherever JSF is Deployed, Plan for Daily Upload of CM data to PDM

**JSF Auto-ID
Approach in SDD**



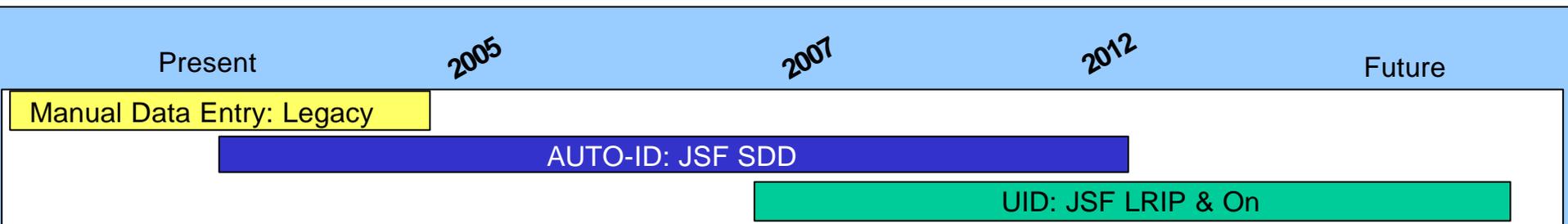


Transition to UID

Issue: Moving From AUTO-ID to UID

JSF Solution:

- **Procedural Change from Manual to Automated Approach**
 - Resolving Process/Training Issues
- **AUTO-ID Effort Supports Spiral Development Plan for UID**
 - Demonstrate End-to-End Solution (Part Marking, Reading, Verifying and Capture of Data)
 - Monitor/Incorporate New Technology
- **Update Other JSF (LM, OEM) and Legacy Databases for UID**





Cost

Issue: UID is not Currently a SDD Contractual Requirement

JSF Solution:

- **Develop ROM/Proposal as Part Of LRIP**
- **Spiral UID into LRIP/FRP**
- **Determine Feasibility of Pilot Program with Selected Suppliers to Reduce Risk**
- **Demonstrate Affordable Operating Costs**
- **Increase Reliability and Maintainability of Equipment**



Parts Marking Technology

Issue: Diverse Part Marking Issues on JSF: Small, Hot, Corrosive, Contaminants, Low Observable Mat'l, etc.

JSF Solution:

- **Integration of Various Part Marking Systems to Read and Verify Bar Codes**
- **Working Closely With Suppliers to Meet Requirements**
- **Allow Widest Range of Available Marking Systems by Suppliers**
 - Electro-Chemical Etch Marking
 - Pin Marking
 - Laser Etch
 - Dot Peening
 - Ink-Jet
 - Ultra-Sound
- **Robust Software Allows Input/Output of Virtually any Barcode Marking Syntax and Semantics**
- **Addressing Durability Issues— Marking Stays on and Remains Readable**





Out Years

- **Analyze Future Technology Solutions**
 - Piggy-back on Commercial Advances Options for Consideration
 - Radio Frequency Identification (RFID)
 - Active or Passive
 - Contact Memory Buttons
 - Embedded Smart Chips



WORKING TO AFFORDABLY MEET THE REQUIREMENTS OF THE WARFIGHTER





Backups



Unique Identification (UID) Policy

- **Mandatory DoD Requirement on all Solicitations Issued on or After 1 Jan 04**
- **UID Policy Strongly Encouraged for Incorporation into Ongoing Contracts Where it Makes Good Business Sense**
- **UID Required for Property Items Delivered to the Govt if:**
 - Acquisition Cost of \$5k or More
 - Serially Managed, Mission Essential or Controlled Inventory
 - Component of a delivered Item, if PM Determines UID Required
- **Existing GFP Exempt Until 1 Jan 05**
- **All PM's for New Equip, Major Mods and Reprocurement of Equip and Spares Shall Begin Planning to Apply UID to Tangible Items**