



JSF PROGRAM UPDATE

October 2003

Major General Jack Hudson, USAF

Program Executive Officer, Joint Strike Fighter Program



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**



SERVICE NEEDS

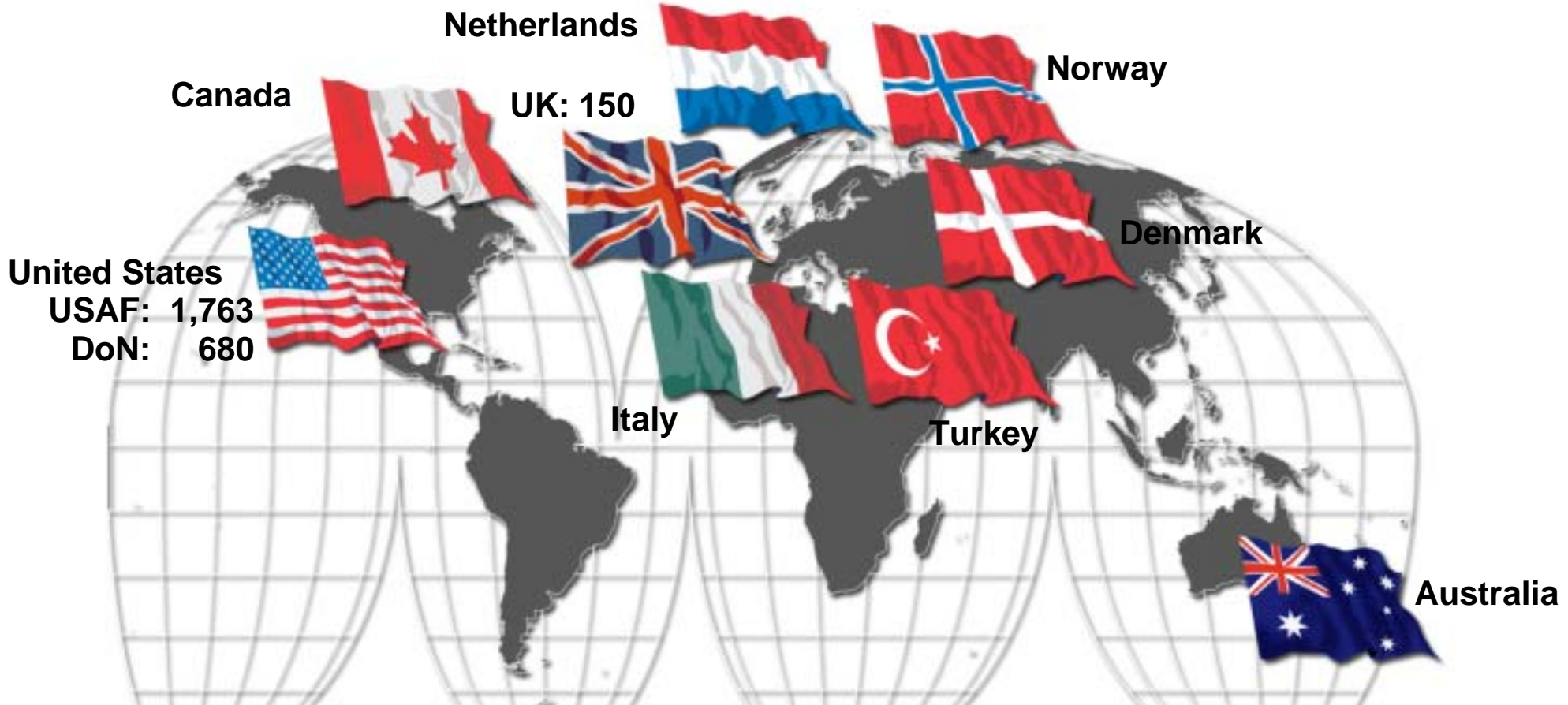
- **USAF: 1763 CTOL**
 - Multi-role (primary air-to-ground) fighter to replace the F-16 and A-10 and to complement the F-22
- **DoN: 680 CV/STOVL**
 - USN - Multi-role, stealthy strike fighter to complement the F/A-18E/F
 - USMC - Multi-role, short takeoff, vertical landing strike fighter to replace the AV-8B and F/A-18C/D
- **UK (RN and RAF): 150**
 - Supersonic STOVL replacement for the Sea Harrier and GR-7
- **Requirements Document**
 - JORD Signed 13 March 00
 - JROC Validated 11 April 00
 - JROC Revalidated 18 October 01



2,593 US/UK JSFs



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 and RAF):** Supersonic replacement for Sea Harrier and GR-7

2,593 US/UK JSFs

> 2,000 International JSFs



JSF SDD PROGRAM SCOPE

Fast Paced, Highly Integrated Production Readiness Development Plan

- *Airplane Lines Freeze in Summer 2002*
- *First Flight in Fall 2005*

Development & Integration of System Software

- *Spiral Development Delivered in Three Block Upgrades*

22 Test Aircraft

- *14 Flight Test Aircraft*
- *8 Ground Test Aircraft*

Over 50 Suppliers Now Fully Involved

Develop Two Interchangeable Engine Versions



Concurrent With First Production Deliveries in 2008 (CTOL & STOV)

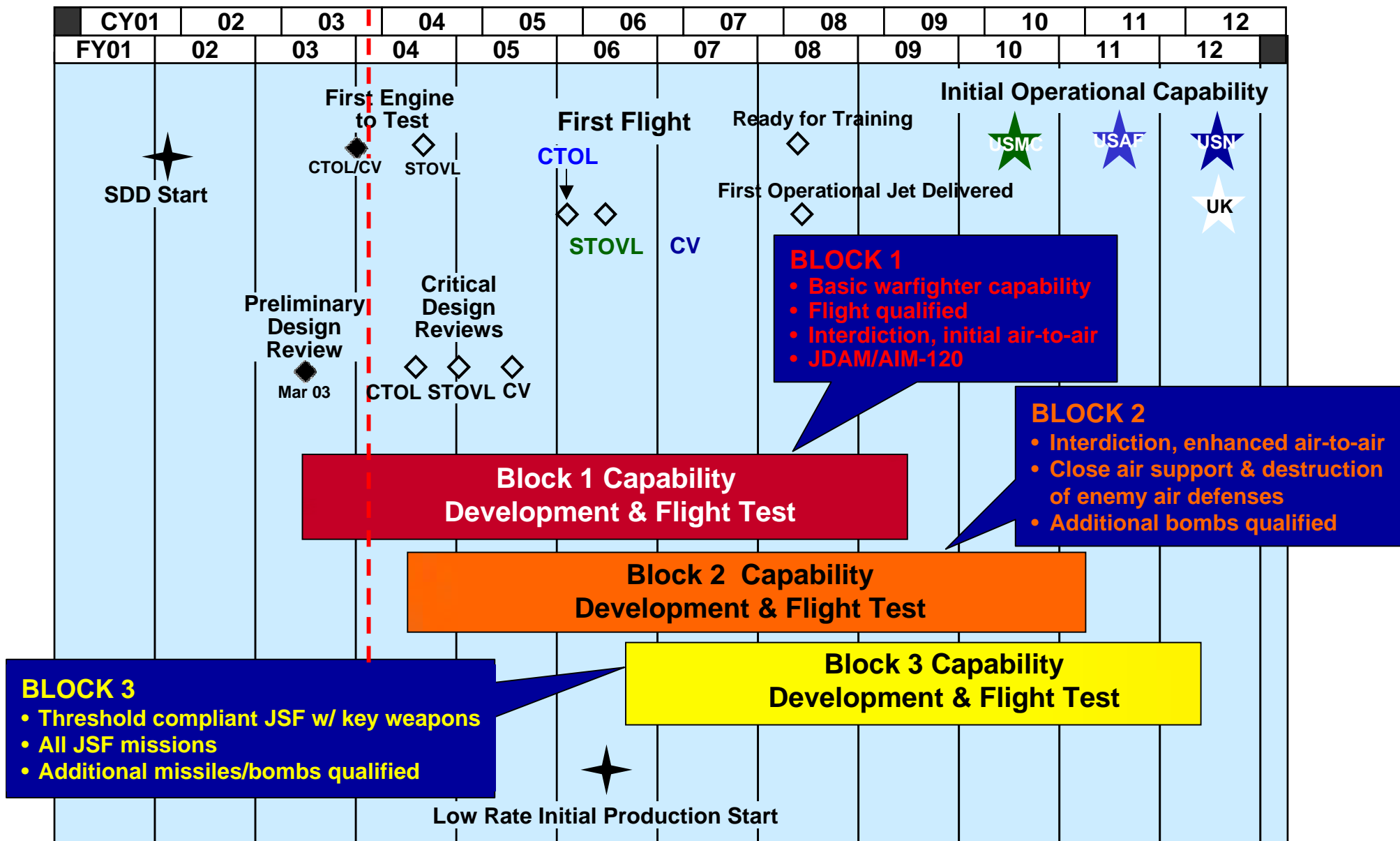
Extensive Engineering, Testing, Modeling & Simulation

Maturation, Validation & Demonstration of Autonomic Logistics Concept



System Development and Demonstration (SDD) Schedule

We Are Here





KEY PERFORMANCE PARAMETERS

USMC/UK ★

USN ★

Joint ★

KPP

USMC

USAF

USN

UK

★ Radio Frequency Signature	Very Low Observable			
★ Combat Radius	450 nm USMC Profile	590 nm USAF Profile	600 nm USN Profile	450 nm UK Profile
★ Sortie Generation	4 Surg / 3 Sust	3 Surg / 2 Sust	3 Surg / 2 Sust	3 Surg / 2 Sust
★ Logistics Footprint	< 8 C-17 equivalent loads (20 PAA)	< 8 C-17 equivalent loads (24 PAA)	< 46,000 cu ft 243 ST	< 21,000 cu ft 102 ST
★ Mission Reliability	95%	93%	95%	95%
★ Interoperability	Meet 100% of critical, top-level Information Exchange Requirements Secure Voice and Data			
★ STOVL Mission Performance		N/A	N/A	
Short Take-Off Distance	550'			450' ski-jump
Vertical Lift Bring Back	2 x 1K JDAM, 2 x AIM-120 With Reserve Fuel			2 x 1K JDAM, 2 x AIM-120 With Reserve Fuel
★ Maximum Approach Speed	N/A	N/A	145 knots	N/A



JSF FAMILY OF AIRCRAFT

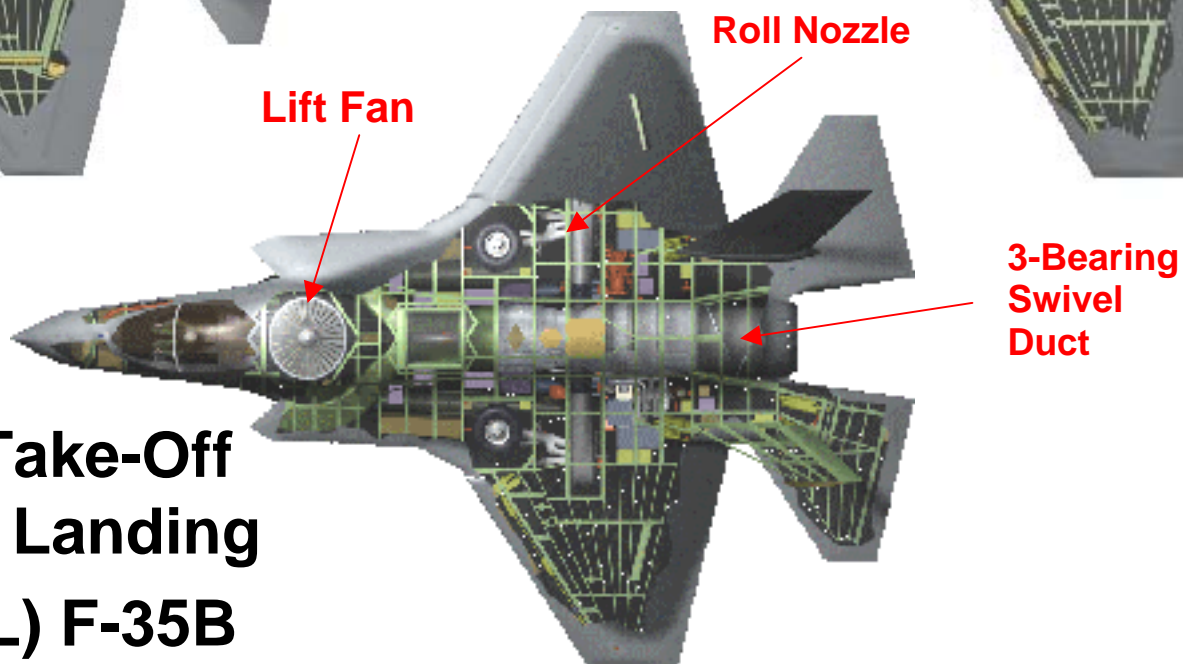
**Carrier Variant
(CV) F-35C**



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



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





ENGINE INTERCHANGEABILITY



- **Physically** and **Functionally** Interchangeable
- Any Aircraft Able to Use Any Engine
- Common JSF Autonomic Logistics System Interfaces



PRATT & WHITNEY F135

**GE AIRCRAFT ENGINES/
ROLLS ROYCE F136**



***JSF Engines - - Common Core for Aircraft Variants,
Competition in Production***



AUTONOMIC LOGISTICS SYSTEM TECHNICAL SOLUTION

INTEGRATED SUPPORT

- Design Data → Direct to → Support Information
- Failure Prediction → Remove Unit Before Failure



TECHNOLOGICALLY-ENABLED MAINTAINER



FLIGHT OPERATIONS

- Integration for Optimal Mission Performance
- High Sortie Generation Rate
- Low Logistics Footprint

AUTONOMIC LOGISTICS INFORMATION SYSTEM



INTELLIGENT AIR VEHICLE

- Prognostics & Health Management
- Design for Supportability
- High Reliability & Maintainability



Joint Aircrew & Maintainer Training

INTEGRATED TRAINING

- Common, Joint Pilot/Maintainer Training
- Modular, Flexible Training
- Embedded Training

Integrated JSF AL System - Affordable, Supportable, Survivable, & Lethal



INTERNATIONAL COOPERATIVE AGREEMENTS

**Level I – UK Memorandum of Understanding
(MOU) Signed 17 Jan 2001**



Level II – Italy MOU Signed 24 Jun 2002



Netherlands MOU Signed 10 Jun 2002



Level III – Turkey MOU Signed 11 Jul 2002



Canada MOU Signed 7 Feb 2002



Australia MOU Signed 31 Oct 2002



Denmark MOU Signed 28 May 2002

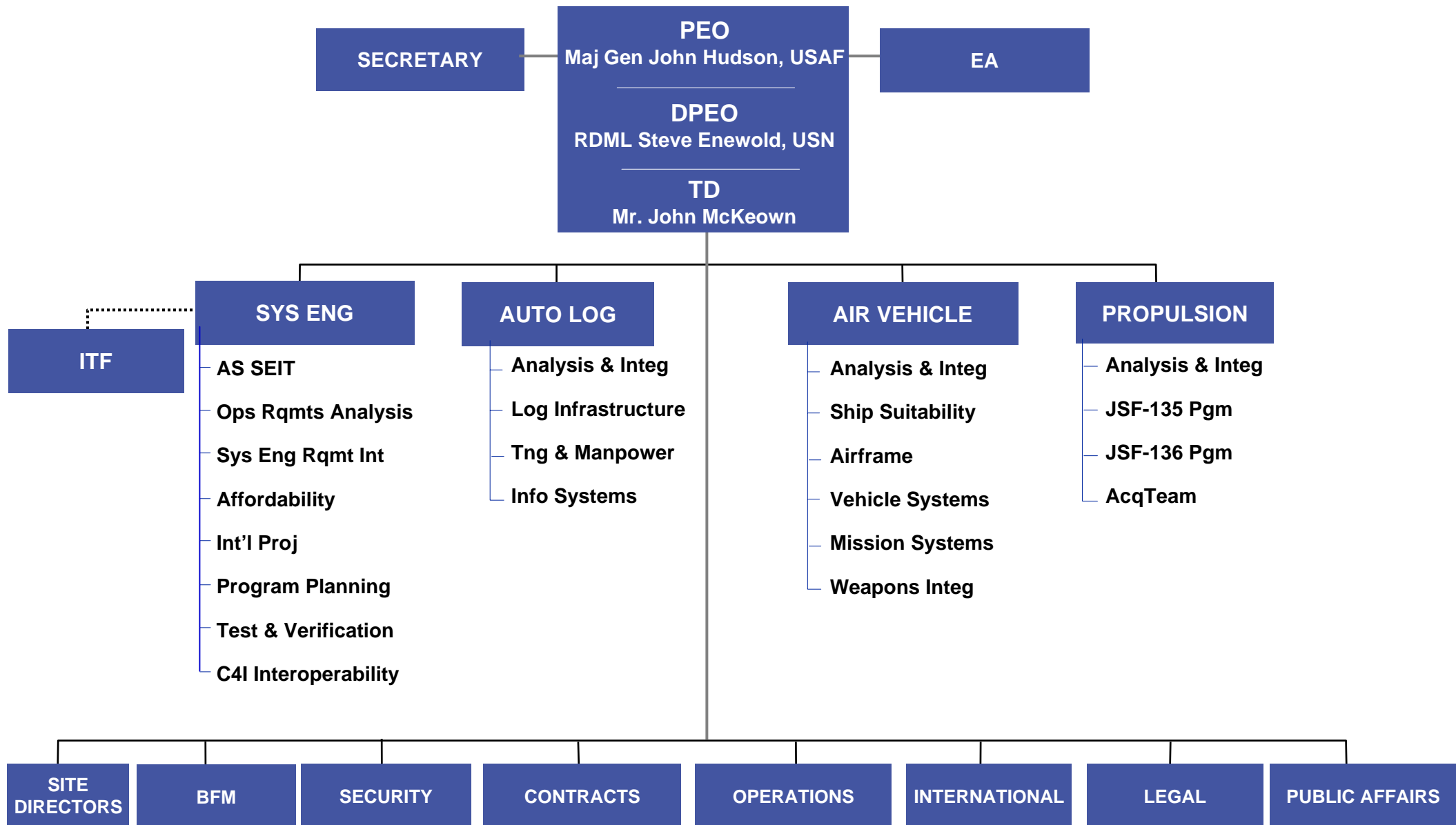


Norway MOU Signed 20 Jun 2002



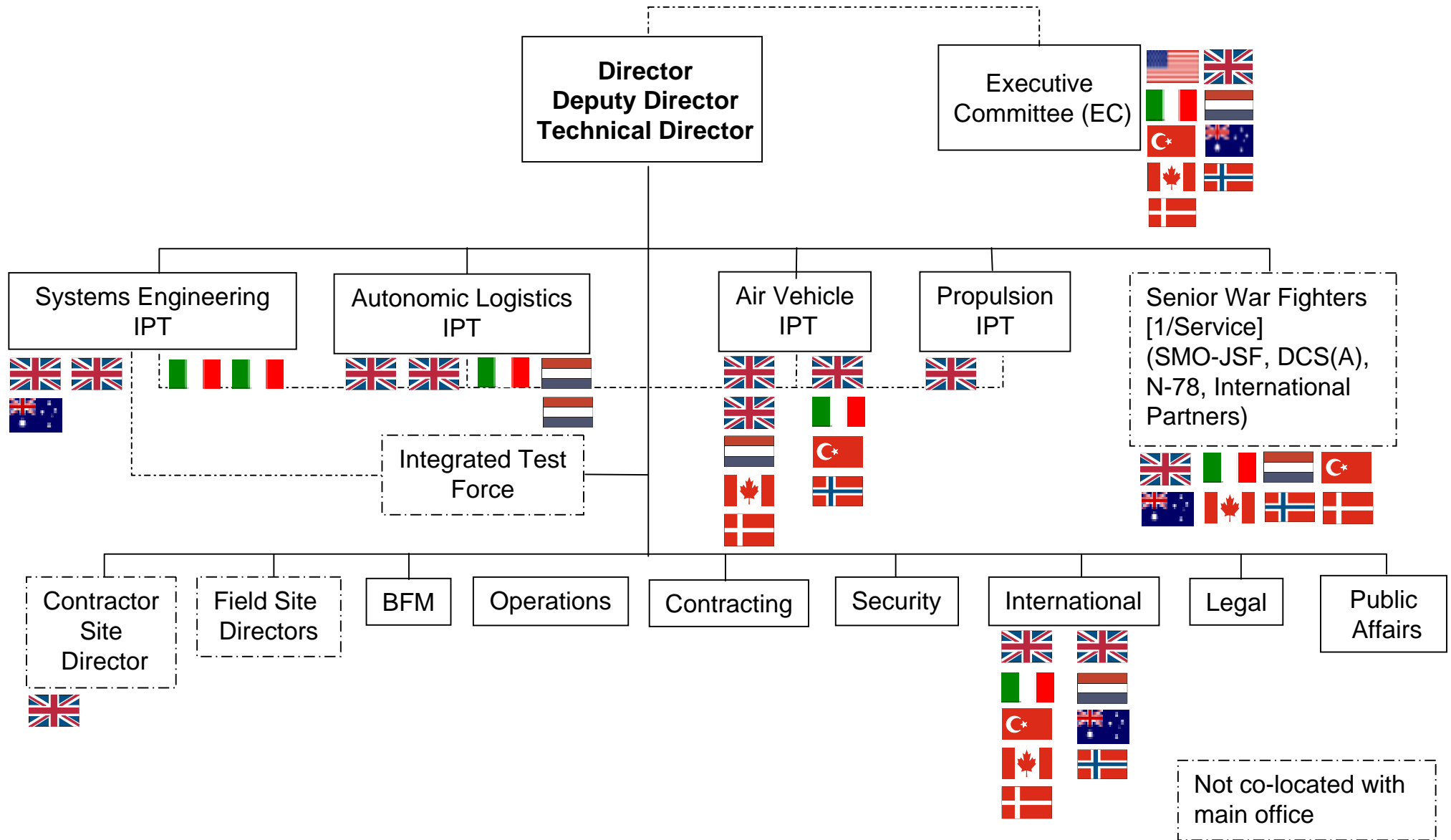


JSF ORGANIZATION



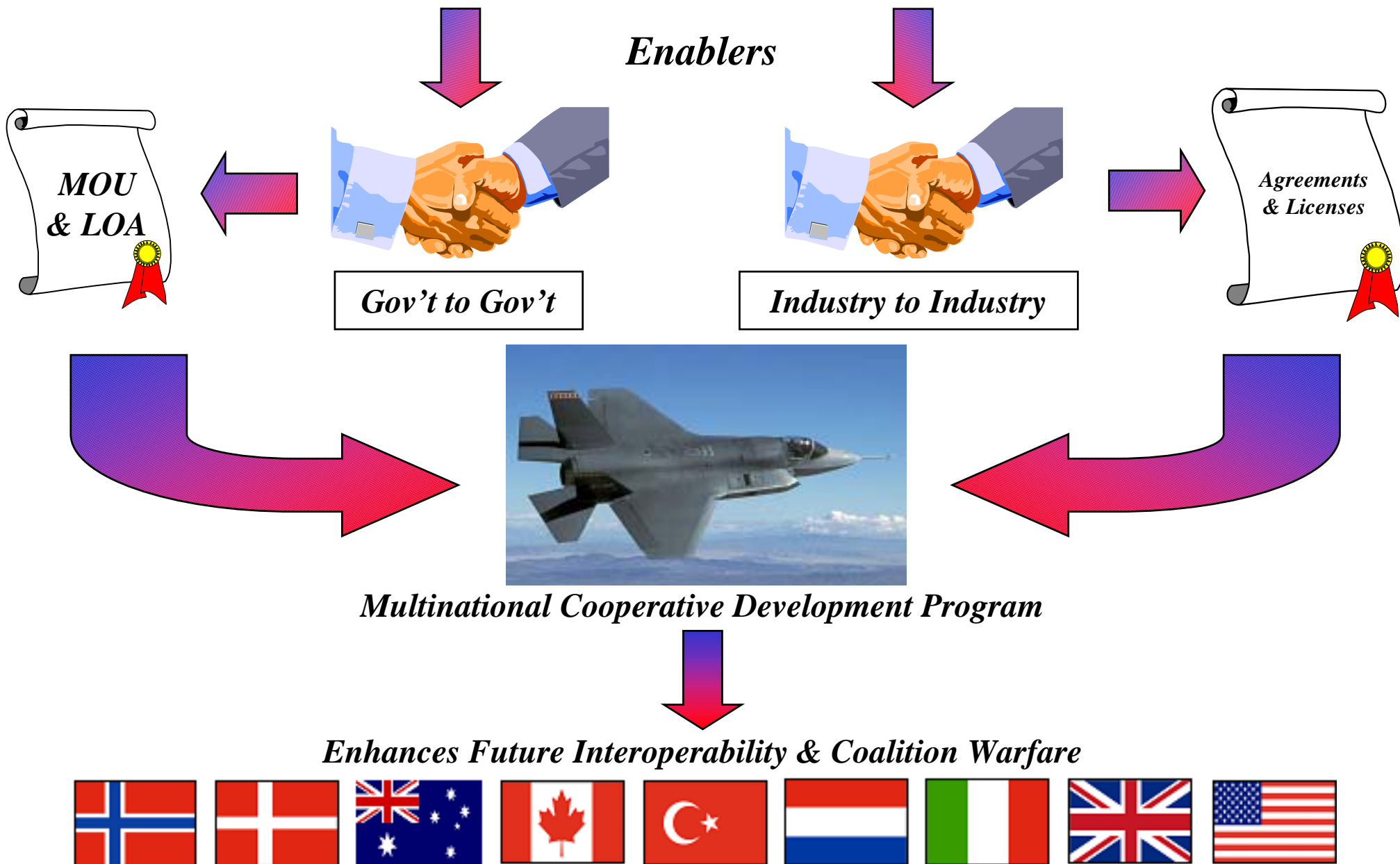


SUPPLEMENTAL MANAGEMENT STRUCTURE





JSF INTERNATIONAL STRATEGY / COOPERATIVE FRAMEWORK





ROAD AHEAD

- **Acq Strategy Update** **Fall 03**
- **CEO Conference** **12-13 Nov 03**
- **Next SWG/CSB/SAE** **Jan 04**
- **CDR-1** **Apr 04**
- **F135 STOVL FETT** **May 04**
- **F136 CTOL FETT** **Aug 04**
- **First SDD Flight (CTOL)** **Fall 05**



SUMMARY



- Transformational weapon system maturing
- True international partnerships forming
- Global Project Authorization being used
- Innovative, integrated management concepts working
- Propulsion CDRs complete
- Air system PDR complete
- CDR & first flight target dates are on track, but the sprint will continue
- Affordability-based decision processes
- Every wicket, every day!
- Performance...teamwork...process discipline

JSF is Redefining the Way We Do Business



WORKING TO AFFORDABLY MEET THE REQUIREMENTS OF THE WARFIGHTER



JSF **JOINT STRIKE FIGHTER**
the next generation strike fighter