

# Global Sustainment

## New Roles for Information Management

April 22, 2008  
Stavanger, Norway

LOCKHEED MARTIN



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# Outline



- **Global Sustainment**
  - **The Issues & Problems**
  - **Needs of Operators and Vendors**
  - **Examples of Specific Challenges**
- **Lockheed Martin's Approach**
  - **Performance Based Logistics**
  - **Lighthouse (R&D Facility)**
- **Challenges**
  - **Global Differences**
  - **Information Management**
  - **Exchange of IP and non-IP**

# Global Sustainment



## Logistics & Sustainment

*“Partnering For Performance”*

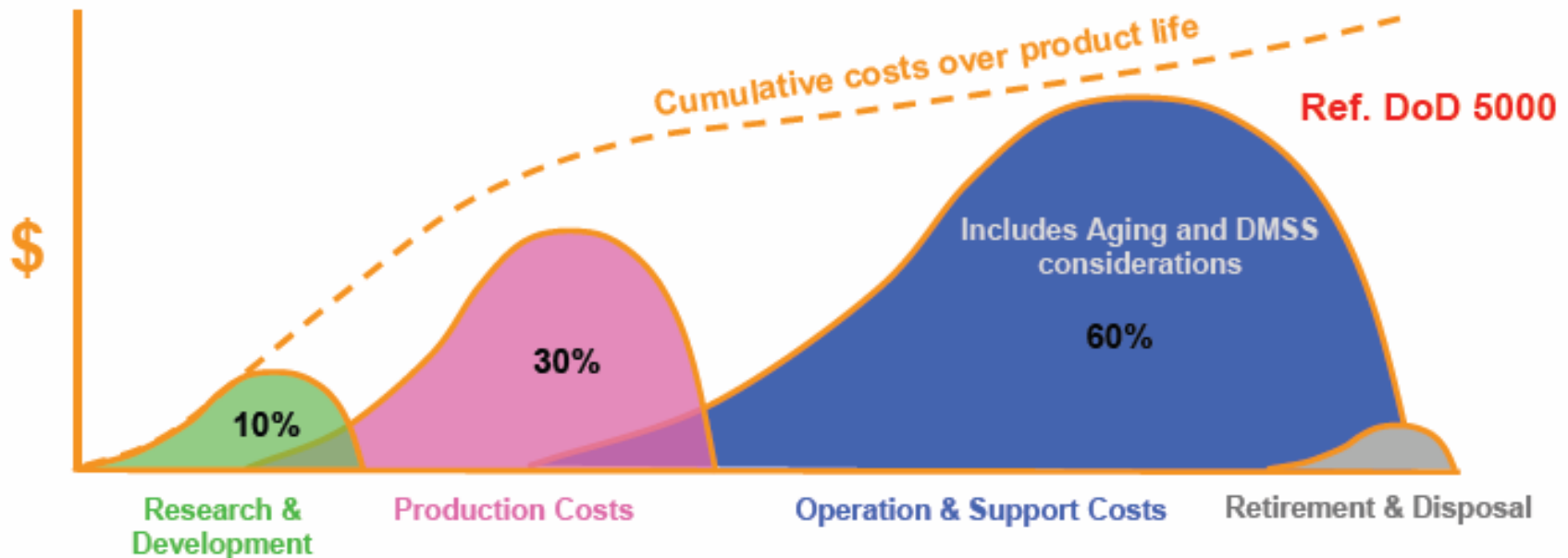
- **The World Might be Flat; but the Data is All Shapes, Sizes and Colors**
- **Platforms Cost More and Will Be in Service Longer**
- **Global Sustainment Depends on Good Data Collection Gathering Techniques AND Needs to Be Clear for Good Analysis**
- **Global Nature of Alliances, Partnerships and Vendor/Suppliers Required to Provide an End Product or Service...This isn't your Father's Oldsmobile!**
- **To Remain Competitive, Coopetition is Acted Upon on an Opportunistic Basis. The Ones that Can Integrate Quickly, Win**

***Semantic Web Holds Great Promise***

# Total Lifecycle



**An estimated 60% of costs are in post delivery operations and support costs.**



**Extending O&M to the Global Market Further Exacerbates the Tail-end**

# Lockheed Martin International Relationships



**C130-J:** UK and US



**JSF:** 8 Partner Nations



**VH-71:**  
LM/Bell/Agusta Westland Team



**T-50:**  
Joint Program with Korea Aerospace Industries (KAI)



**MEADS:** Joint Development Among US, Germany, and Italy



**F-2:** Partnership with Mitsubishi Heavy Industries



**ATLAS V:**  
Russian RD-180 Engine

**Deepwater:**  
EADS/CASA HC-235A



**Littoral Combat Ship:**  
Significant International Content

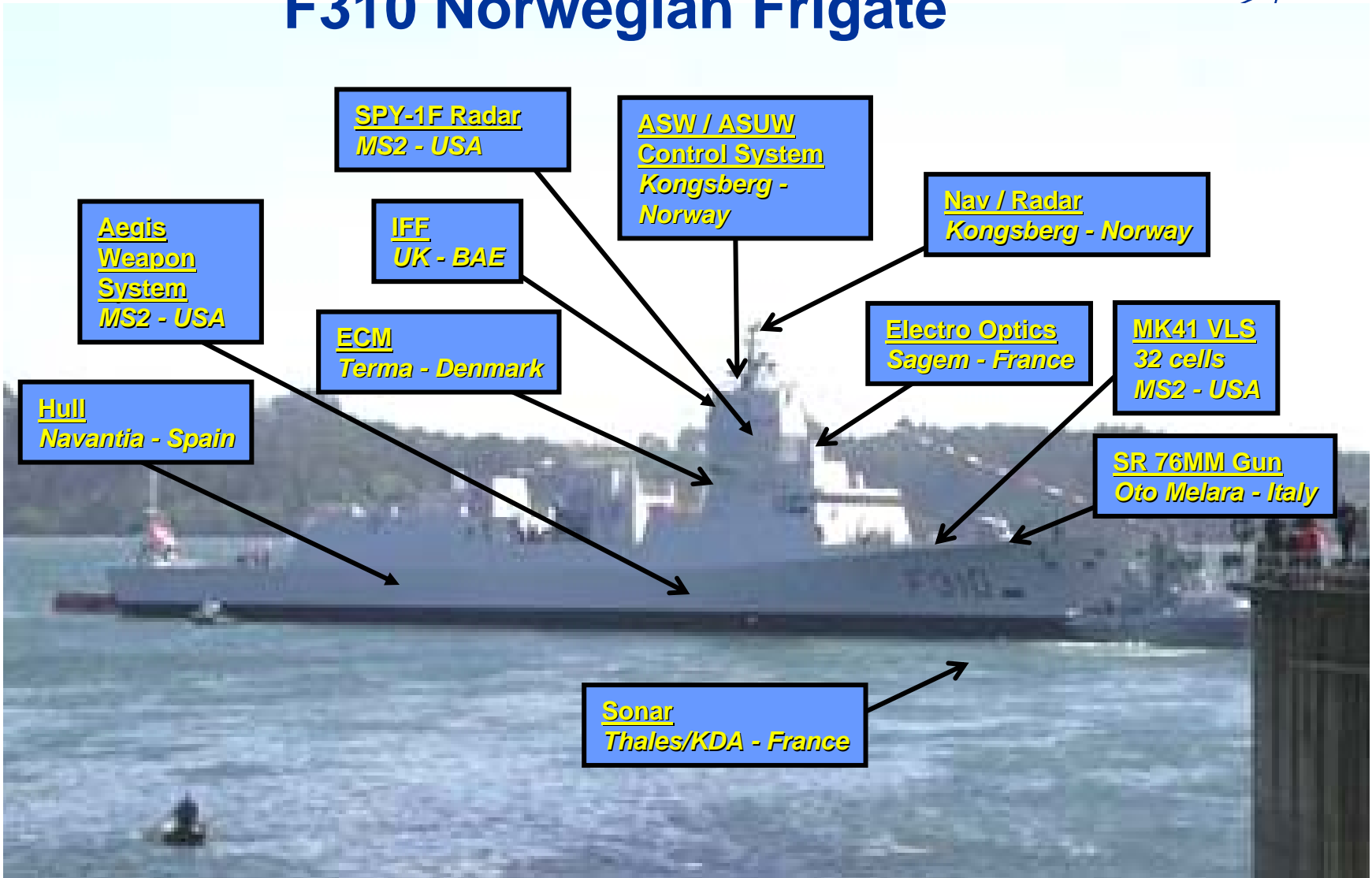


**USMC LWPM:** Designed by HMT Vehicles, UK subsidiary



**Globalization is Here Today...**

# Global Supply Chain: F310 Norwegian Frigate



**Fridtjof Nansen Launch**

# Global Supply Chain & Asset Management

- USMC, OUSD, & NDLO sought an integrated IUID solution that would:
  - Comply with DoD’s IUID registry requirements
  - Demonstrate the business case for IUID transformation
  - Build on experience and life-cycle management capabilities
  - Exercise interoperability between 2 applications
- Pilot involved int’l partners, multiple agencies & commercial entities
- First USMC “in field” IUID marking & data submission to the DoD Registry
- First Norway IUID capability, data management, & PLCS linkage to DoD



**Partnering to Implement Global Data Initiatives**

# Lockheed Martin's Approach Center for Innovation

Systems Engineering Tools  
Modeling & Simulation  
Operations Analysis  
Networks  
Reconfigurable Laboratories  
DOD Experimentation  
Framework

Investigating and Implementing Strategic Technologies for our  
Customers

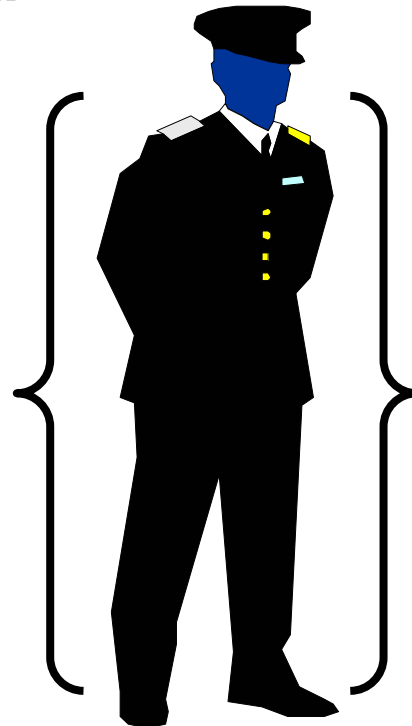


# Lockheed Martin's Preferred Approach: Performance Based Contracting



## Traditional Support: Transaction Based

- Parts
- Repair
- Technical Support



Product  
Support Manager

## PBL Approach: Desired Outcomes

- Operational Availability
- Operational Reliability
- Logistics Response Time
- Cost-per-Unit Usage
- Reduced Footprint

**PBL Buys Outcomes**

# PBL Maturity



## OSD PBL Maturity Model

Mission Performance  
Weapon System Performance  
Logistics Performance  
Distribution Performance

Contract Scope

Stage 1:  
Delivery Agreement

Stage 2:  
Parts Availability Focus

Stage 3:  
System / Platform Lifecycle Focus

Stage 4:  
Mission Assured Support

Platform

Weapons Systems Scope

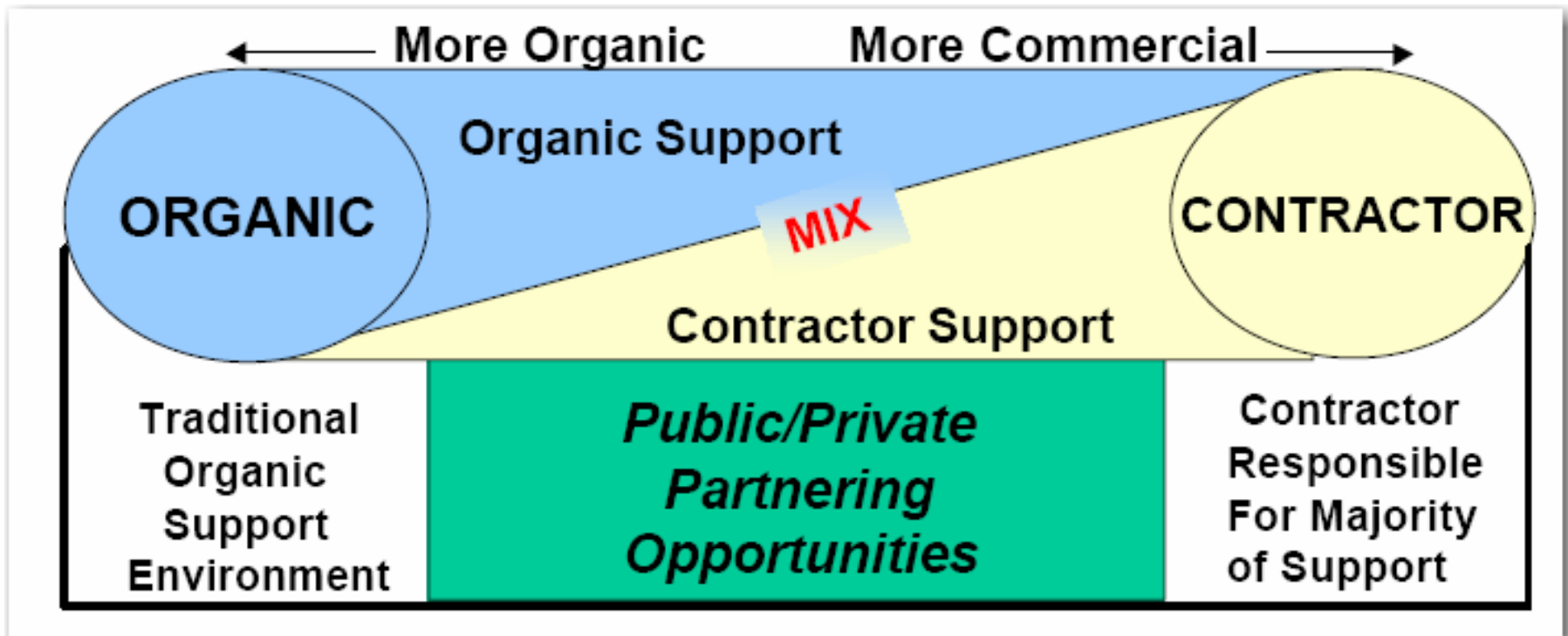
<b>Performance Objective</b>	Delivery Speed	Availability	Operational Availability	Mission Reliability
<b>Functional Scope</b> (responsibility of the provider)	<ul style="list-style-type: none"> <li>Planning</li> <li>Logistics</li> </ul>	<ul style="list-style-type: none"> <li>Planning</li> <li>Logistics</li> <li>Value Engineering</li> </ul>	<ul style="list-style-type: none"> <li>Planning</li> <li>Logistics</li> <li>Value Engineering</li> <li>Config. Mgmt.</li> <li>Maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Planning</li> <li>Logistics</li> <li>Value Engineering</li> <li>Config. Mgmt.</li> <li>Maintenance</li> </ul>
<b>Typical Weapon System Scope</b>	<ul style="list-style-type: none"> <li>Parts</li> <li>Components</li> </ul>	<ul style="list-style-type: none"> <li>Components</li> <li>Assemblies</li> </ul>	<ul style="list-style-type: none"> <li>Systems</li> <li>Platforms</li> </ul>	<ul style="list-style-type: none"> <li>Platforms</li> </ul>

**Integrating Maintenance and Supply Data Is Key to Unlocking the True Potential of PBL's. Frost & Sullivan Report, 2008**

# Public Private Partnership Spectrum

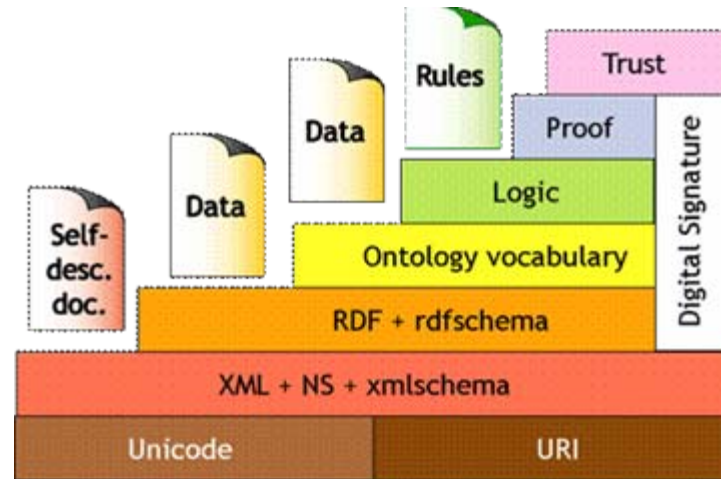


## Spectrum of PBL Options



**Extending PBLs in the Spectrum of PPPs Requires Enhanced Public/Private Systems Interoperability.**

# Information Management; Semantic Web @ Lockheed Martin



- **LM “Fellows” Specializing in Semantic Web**
- **Being Applied in The Lab**
- **Potential Being Demonstrated to Customers**

**Lockheed Martin’s Incremental Approach  
Semantic Web: Follow / Adopt**

# What the Future Holds



- **Today the PBL businesses are at a transition point. The business vision is to enable the adoption and use of Lifetime Support (LTS) best practices application throughout the business**
- **The vision includes taking full advantage of Internet and application integration technologies and common enterprise infrastructure to eliminate excess cost while leveraging the “Best of Practices” across the enterprise**

**Strong Opportunity for Semantic Web to Contribute**

