“S1000D: Realizing the Benefits of Integrated Logistics Support”

October 12- October 15, 2009
Crown Plaza Hilton Head Resort, Hilton Head, SC, USA

Industry Customer Speaker - Defense
Richard Ruiz
Vice President for Global Sustainment Operations
Lockheed Martin Aeronautics Company
Current Logistics Environment

U.S. Government

- Budget pressures . . . Balancing recapitalization vs. modernization
- Driving to increase logistics agility and flexibility
- Increasing focus on total life-cycle logistics impact
- Operational Commonality

International

- International Standards
- Interoperability
- Common Solutions
Historical Logistics Environment

Logistics Strategy Was To Stockpile Large Quantities Of Everything From Food Rations To Aircraft
Logistics Integration & Life Cycle Sustainment *

• System Life Cycle -- interval from program initiation to system disposal

• Defining the System Configuration at the earliest stages of the life cycle:
  
  – *Define what it takes to support, produce, and test the system ... Then if we can afford it.*

  – *Influence the design*

  – *Plan for logistics*

  – *Execute by testing, manufacturing and supporting.*

Fundamentals of ILS

• 1980’s Focus on Readiness
  
  – Establish readiness objectives
  
  – Enhance visibility of L&S in POM
  
  – Design for R&M objectives
  
  – Set Supportability design parameters
  
  – Fund adequately

• “The 1980s have brought about an increased emphasis on readiness. The Defense Acquisition Improvement Program, initiated in 1981, requires readiness improvement measures, including:
  
  – Establishment of readiness objectives for each material development program.
  
  – Enhanced visibility of logistics and support resource by mandating identification of resources by material system in each Service’s Program Objectives Memorandum (POM).
  
  – Design incorporation of reliability and maintainability objectives.
  
  – Development of contractor incentives for reliability and support enhancement.
  
  – ...the current thrust is on the introduction of readiness implications in the “front end” of system development as a prime objective. Translation into explicit supportability design parameters...to achieve system readiness objectives at an affordable Life Cycle Cost (LCC).

• Effective implementation will be possible only when logistic support resource requirements and supportability-related tasks receive adequate funding.

• Readiness and Support objectives are links to the determination of LCC and O&S costs, which generally account for about 60% of the total system LCC.

Design for Support

• DoD Directive 5000.39 “Acquisition and Management of ILS for Systems and Equipment” emphasizes:

  – *Early identification of supportability requirements*

  – *Iterative relationship between the ILS process and product design*

  – *Use the system engineering process*

  – *Integrate the effects of logistics disciplines and the system design*

Design for Cost

- Design to cost:
  - alternative solutions
  - cost alternatives

- Meet performance and readiness objectives at affordable LCC

- Accurate LCC estimation

- Integrate CAD and CALs initiatives

Hard Realities

Military Aircraft Acquisition
1943-2008

Out of Service Aircraft
In Service Aircraft
Planned Aircraft

1943 to 1965 (22 yrs) – 41 new aircraft
1965 to 2005 (40 yrs) – 14 new aircraft

Trend … Fewer New Systems with Longer Life Cycles
Look-Back at 1999 Joint Product Support Recommendations

- Continued Reform Efforts
- Incremental Progress
- Continued Needs
  - Integration
  - Visibility
  - Modernization
Transforming Logistics

“Cold War”
- $90B/year operating costs
- 80’s readiness
- $67B in inventory
- 16-day Customer Wait Time (CWT)
- 788M cubic feet of storage space

Global War on Terror
- $70B/year operating costs
- High 90’s readiness
- $50B in inventory
- 2-day reliable delivery
- 300M cubic feet of storage space

“Cold War” Global War on Terror
Fiscal Reality

Changes in the Defense Budget
(Constant Dollars)

-31%  -34%

FY99$ - Billions (TOA)

Mil Pers + Retir
Opns & Maint
Proc
RDT&E
Other

Modernization Limits

A Perfectly Executed Modernization Program
*WILL NOT* Modernize the Force!

Generalization

*An Aging Air Force:*
- Smaller
- Older
- *No Light @ End of Tunnel*

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Customer Priorities Have Not Changed

- Improved weapon system performance
- Work within Budget and resource constraints
- Establish Mutually Beneficial Partnerships

The Customer Operating Environment Drives Industry Priorities
Implementing a Life Cycle Management Framework

- Memo from John Young – 31 July 2008
- Reinforce LCM Metrics
- Aligns resources to readiness
- Tracks Total Life Cycle Performance
- Revise 5000.1 & Defense Acq Guidebook
DoDI 5000.02 -- 2008

- Replaced System Sustainment Plan
- Life Cycle Sustainment Plan
- Feedback from fielded systems
- Capture measurable improvements needed

Data Management Strategy: AT&L Policy -- 19 July 2007:

- Assess data required
- Address data restrictions
- Assess long-term data needs
Major Differences

- Increased Focus on Material Design Decision and Planning
- Competitive Prototyping
- Increased Emphasis on Systems Engineering
- Increased Emphasis on Technical Reviews
2008 AIA Exec Panel

- Embed and Maintain Logistics in Acquisition
- Improve FAR guidance for Sustainment
- Integrate Systems Engineering, Product Support, and Total Ownership Cost in LCC
- Measure Sustainment Impact on Total LCC

*Increased Emphasis on Total Life-Cycle Management*
The Challenge of Change

• Accept what has not worked
• Improve early supportability design
• Formulate performance based solutions
• Foster new ways of doing business
“Imperatives for Success”

*Unity of Effort – Capabilities and Authorities*

- Shared Awareness
- Common Measures of Performance

Joint Logistics – Shaping Our Future

*A Personal Perspective –*  
LTG C.V. Christianson (Ret.)

“Sustained joint operational readiness enables freedom of Action…”
Interoperability

• Unity of Structure
• Unity of Application
• Shared Responsibility
• A Common Language
“Getting the Right Things Done” *

• Focus on “True North”

• Clear and Open Dialogue

• Setting a Visible Plan

• Measure Progress and Success

• Review and Update

*Getting the Right Things Done, A leader’s guide to planning and execution, by Pascal Dennis, Lean Enterprise Institute, Cambridge, MA, Dec. 2006.

** TPSMG Presentation excerpt 2004.
Demand for Cost Effective Solutions

“We’ll have to end old ways of doing business...the American people have every right to expect and to demand a government that is more efficient, more accountable and more responsible... As commander in chief...we will always give our men and women in uniform the equipment and the support that they need to get the job done.”

– President Barack Obama
Integrated Life Cycle Logistics & Sustainment

- Shared Expertise
- Resource Integration
- Life Cycle Perspective

- Improved System Reliability & Supportability
- Lower TOC
- Mission Readiness

Delivering Affordable Life Cycle Solutions