2011 Integrated Warfare Systems Conference

PEO IWS Enterprise Product Lifecycle Management Integrated Data Environment (ePLM IDE)

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Source: National Institute of Standards and Technology (NIST)

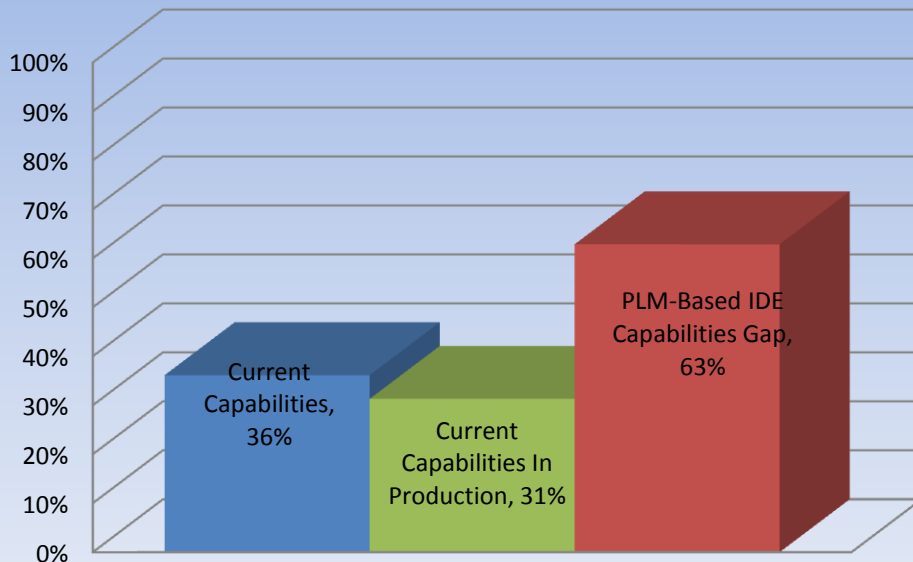## ePLM IDE IS THE *ENABLING* ENVIRONMENT

PEO IWS
Current State of Affairs

KNOWLEDGE MANAGEMENT = INTEGRATED DATA ENVIRONMENTS (IDEs)

IDE FUNDING PROFILE ($M)							
	FY11	FY12	FY13	FY14	FY15	FY16	Total
Maintenance / Software	$5.39	$6.09	$5.51	$5.68	$5.90	$5.72	$34.29
Infrastructure (servers, hosted hw, etc.)	$2.08	$2.03	$1.92	$2.02	$2.31	$2.07	$12.43
Development	$6.29	$3.72	$3.78	$3.85	$3.93	$4.32	$25.89
Total Ownership Cost	$13.76	$11.85	$11.21	$11.55	$12.14	$12.10	$72.62

- PEO IWS will spend $12.1 M/ year over the next six years on Integrated Data Environment (IDE) technology ($72.62 M total over six years)

- On average, a 63% capability gap exists in that any one PEO IWS IDE does not address the full capability set identified by OPNAV N4 in the Navy PLM/IDE Strategic Plan

- IDE capabilities are consistently duplicated across the 26 IDE instantiations that PEO IWS funds to support its programs

PEO IWS IDE Average Capability

Current Capabilities, 36%

Current Capabilities In Production, 31%

PLM-Based IDE Capabilities Gap, 63%

PEO IWS ePLM IDE
The Solution

DoD 5000.02 IDE Requirement

2.3.14.2. Integrated Data Environment

The PM should summarize in the Acquisition Strategy plans to establish a cost-effective data management system and digital environment.

PMs should establish a data management system within the IDE that allows every activity involved with the program to cost-effectively create, store, access, manipulate, and exchange digital data. This includes, at minimum, the data management needs of the system engineering process, modeling and simulation activities, test and evaluation strategy, support strategy, and other periodic reporting requirements.

The PM should use existing infrastructure (e.g. internet) as appropriate and the summary in the Acquisition Strategy should briefly include leveraged and/or planned new development IDE infrastructure.

PEO IWS Implementation BCA

Program Executive Office Integrated Warfare Systems (PEO IWS) enterprise Product Lifecycle Management Integrated Data Environment (ePLM IDE) Business Case Analysis (BCA)
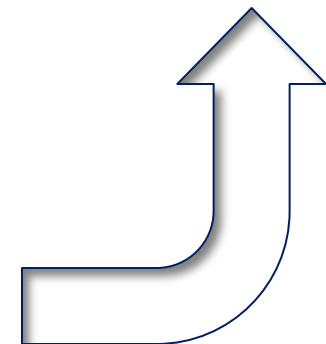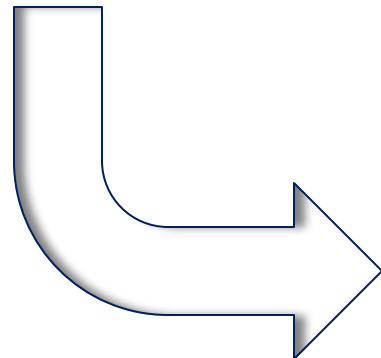
Total Savings (6 yr) : $12,182,423

ROI:130%

Fleet Readiness & Logistics IT Governance
EXCOMM WORKING GROUP: Product Data Management
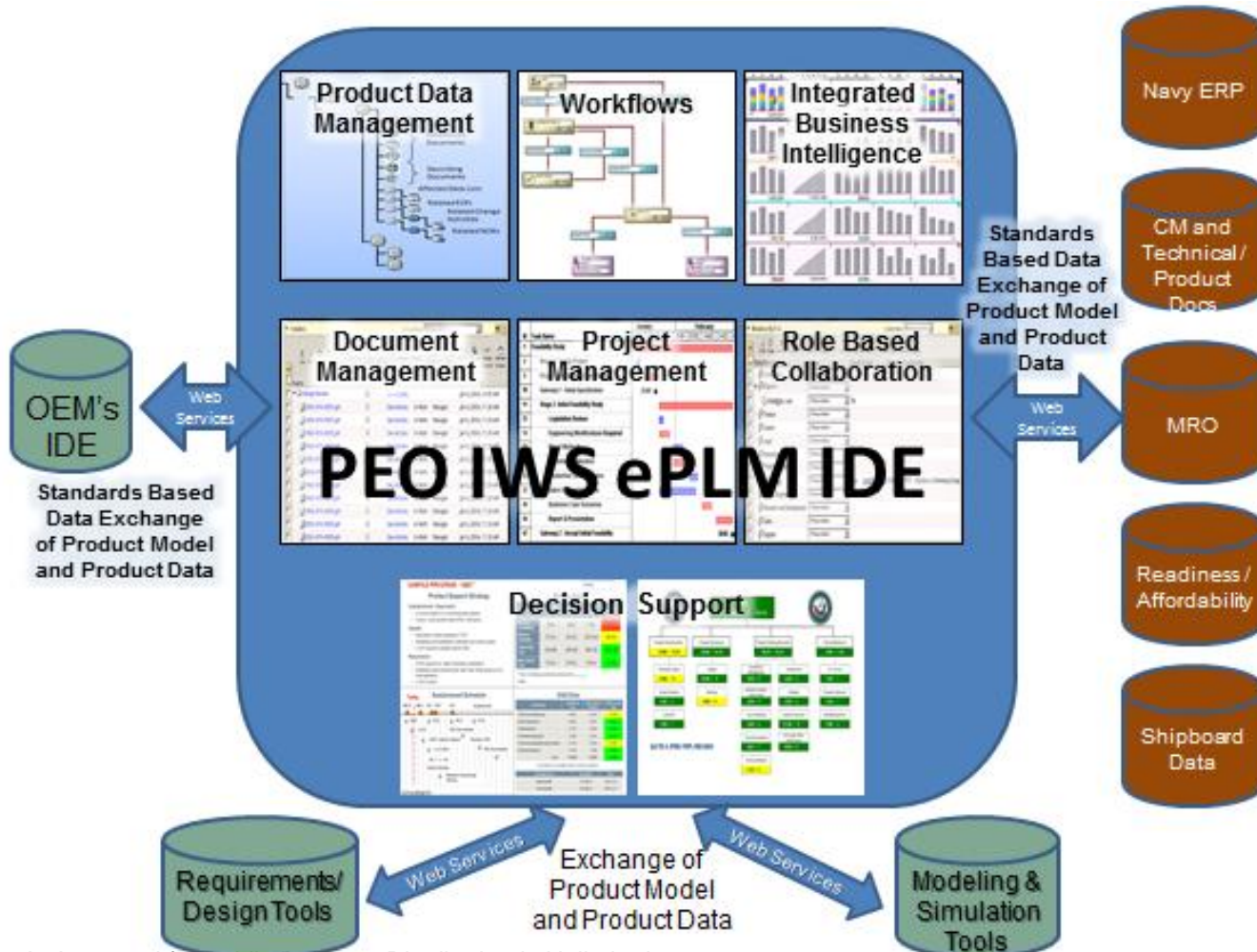**Product Lifecycle Management Strategic Plan**

Solution

PEO IWS ePLM IDE Vision Architecture

"Employ a single business process, data management strategy and decision support environment for PEO IWS and its Government and industry partners (OEMs, Design Agents, Engineers, Product Support Integrator's, Product Support Provider's, etc.)"
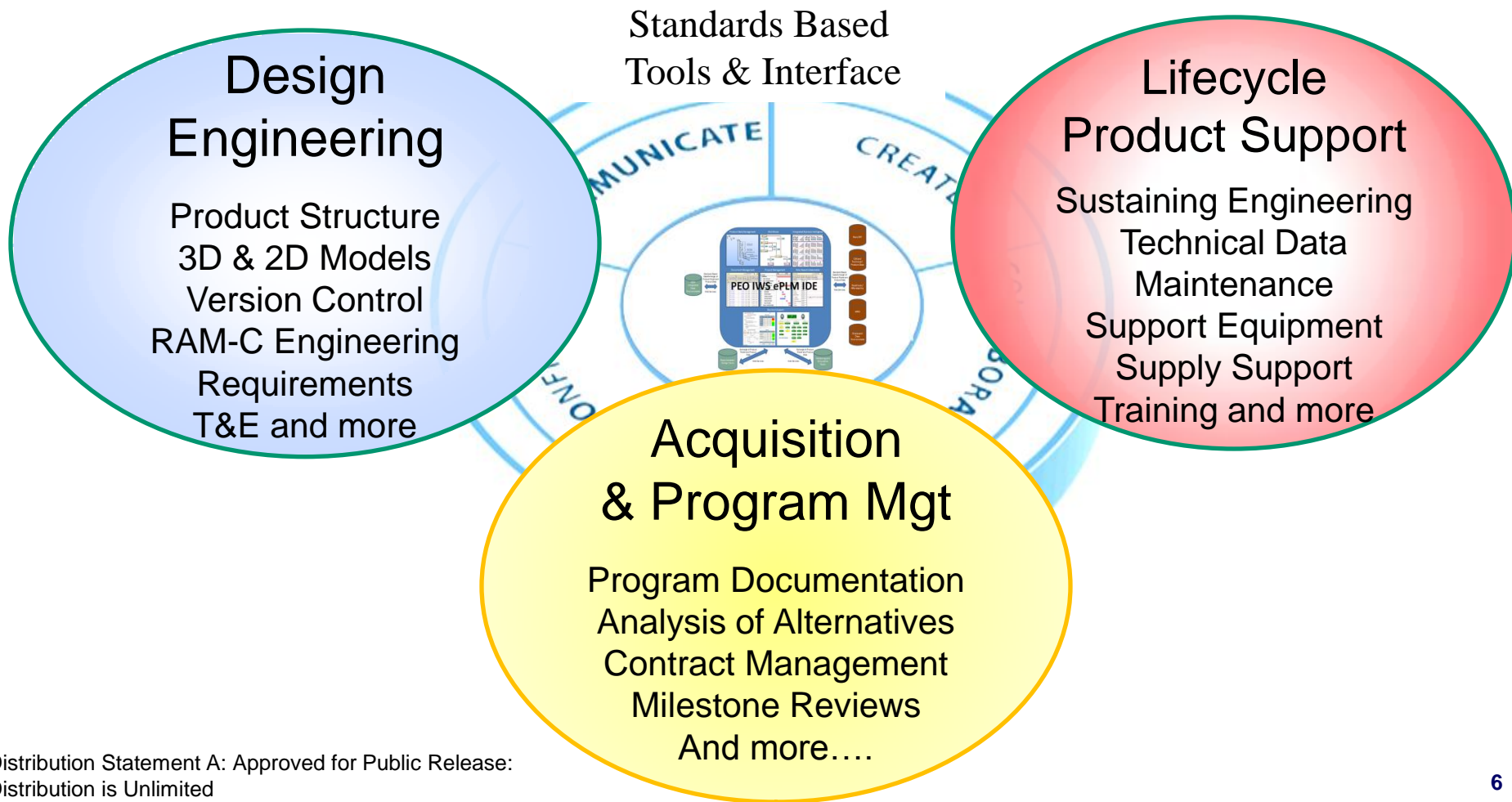
The ePLM IDE Vision Organizational Change

Bridge the gap between the Engineering Product Development and Lifecycle Product Support worlds with a robust *"enabling"* environment by leveraging a suite of COTS PLM technologies

Standards Based Tools & Interface

Design Engineering

Product Structure
3D & 2D Models
Version Control
RAM-C Engineering
Requirements
T&E and more

Lifecycle Product Support

Sustaining Engineering
Technical Data
Maintenance
Support Equipment
Supply Support
Training and more

Acquisition & Program Mgt

Program Documentation
Analysis of Alternatives
Contract Management
Milestone Reviews
And more….

Provide the required/authoritative information, business processes, and analytical tools to ensure Affordable System Operational Effectiveness via *continual* materiel and non-materiel trade-offs throughout a Weapon System's lifecycle
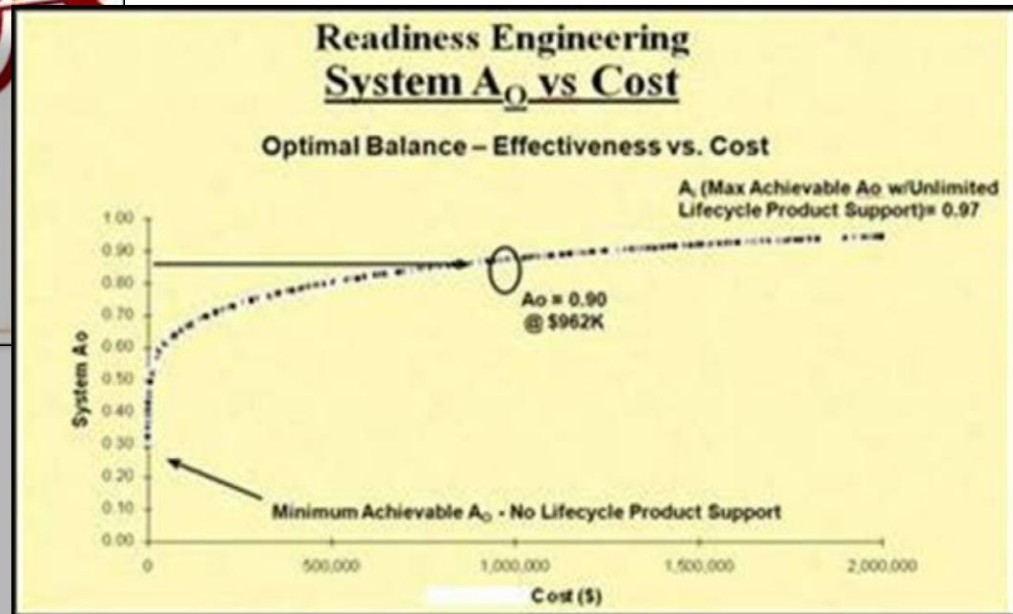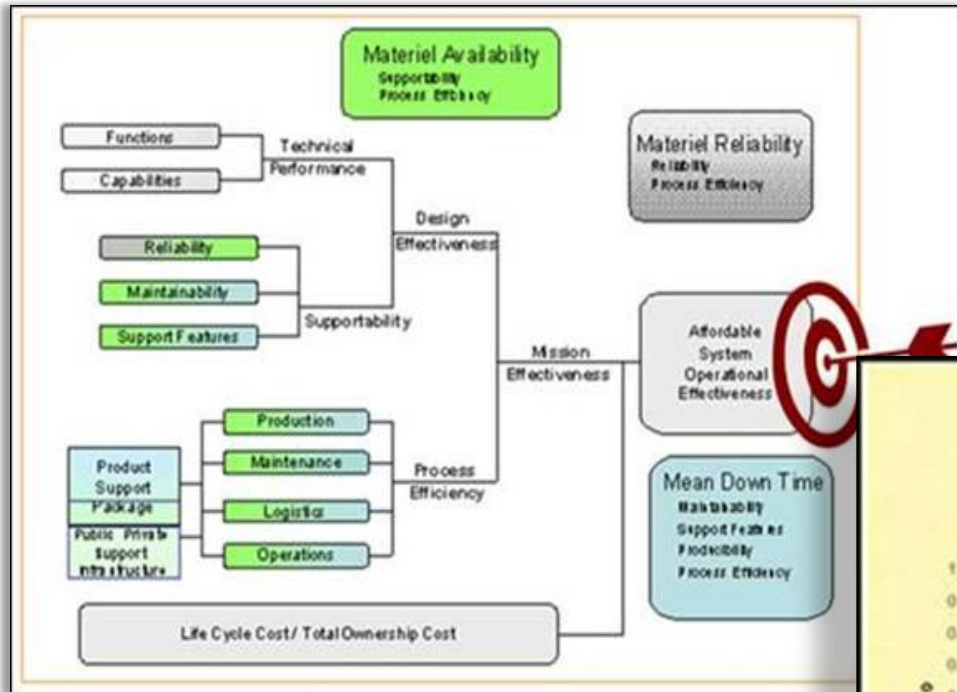
The Perfect Storm

PEO IWS ePLM IDE

Dr. Ashton Carter Better Buying Power

Requirements for Lifecycle Management and Product Support

Data Center Consolidation

WSARA Product Support Assessment

DoD 5000 Integrated Data Environment Requirement

Reliability Analysis, Planning, Tracking, and Reporting

DoD 5000 Data Management Strategy Policy

WSARA 2009

Systems Engineering Plan Template

Sustainment Quad Chart

PEO IWS Enterprise Product Lifecycle Management Integrated Data Environment (ePLM IDE)

Executive Overview

September 2011

Summary ePLM IDE Benefits

- Reduce man hours to find and analyze data associated with solving readiness, affordability, capability, and suitability issues

- Facilitate more effective, informed, and traceable decision making

- Reduce business process cycle times

- Fund and implement advanced capabilities as an enterprise vice funding "programs" individually

- Enable continuous material and non-material tradeoffs

- Satisfy Data Center Consolidation (DCC) mandates saving PEO IWS ~$12 million over 6 years

- Increase collaboration and data sharing amongst Government and Industry organizations

PEO IWS ePLM IDE Roadmap

Fiscal Year	2011				2012				2013				2014				2015				2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Acquisition (Services, Software, and Infrastructure)
- FY11 Funding
- RFP Development and Release
- SPAWAR ESI Software Buy
- Evaluation and Award
- FY 12 Services and Data Center Funding
- FY 12 Services and Data Center Funding
- FY 13 Services and Data Center Funding
- FY 14 Services and Data Center Funding
- FY 15 Services and Data Center Funding

Capability Deployment (Requirements to Capability)
- Requirements to Capability IPT
- Initial Baseline Configuration Deployment
- Capability Deployment 2
- Capability Deployment 3
- Capability Deployment 4
- Capability Deployment 5
- Capability Deployment X

Infrastructure
- Development Environment Stand Up
- Production Environment AoA & Selection
- Production Environment Stand Up – SSC PAC
- IA / ATO
- Scale for Growth
- Scale for Growth
- Scale for Growth
- Scale for Growth

Existing IDE Migration
- Prioritize & Select
- Migrate IDE 5
- Migrate IDE 4
- Migrate IDE 1
- Migrate IDE 2
- Migrate IDE 3
- Phase 2 Migration
- Phase 3 Migration
- Phase 4 Migration
- Phase 5 Migration

Training, Support, & Comms
- Leadership Communication
- Initial Help Desk Capability
- User Communication
- Help Desk AoA and Implement
- Curriculum Development
- Phase1 Training Execution
- Phase 2 Training Execution
- Phase 3 Training Execution
- Phase 4 Training Execution
- Phase 5 Training Execution
- Phase X Training Execution

Backup

Product Lifecycle Management (PLM) Defined

CIMdata, a leading independent PLM organization defines PLM as:

– **A strategic business approach that applies a consistent set of business solutions that support the collaborative creation, management, dissemination, and use of product definition information**

– **Supporting the extended enterprise (customers, design and supply partners, etc.)**

– **Spanning from concept to end of life of a product or plant**

– **Integrating people, processes, business systems, and information***

Three core or fundamental concepts of PLM are:

– **Universal, secure, managed access and use of product definition information**

– **Maintaining the integrity of that product definition and related information throughout the life of the product or plant**

– **Managing and maintaining business processes used to create, manage, disseminate, share and use the information**