

DOD Maintenance Symposium 2005

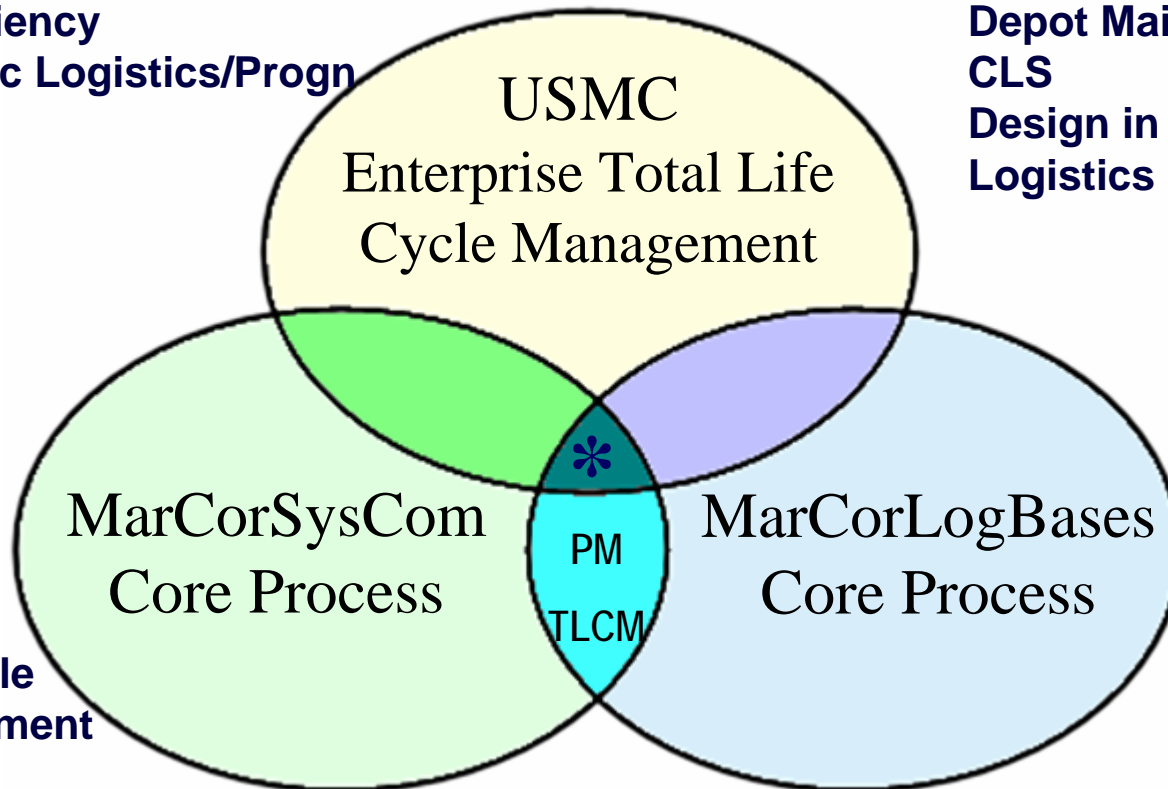


“Diagnosing, Assessing, & Applying Throughout the Life Cycle”
Presented by: Yvonne Romero, MCSC

Applying Comprehensive decision-making processes to our maintenance environments

Fuel Efficiency
Autonomic Logistics/Progn
CBM
DVD

Depot Maint Centers
CLS
Design in RMS
Logistics Footprint



Life Cycle
Management
AIT

Depot
Supply Chain
Pre-positioning

* Alignment with Enterprise Level

Marine Corps Systems Command Life Cycle Logistics Roadmap

MCSC Equipping Process

Materiel Solution
Determination

Program
Initiation

Development
Demonstration

Produce /
Procure

Fielding
Process

Operational
Support



Acquisition Logistics Roadmap

Requirements
Analysis

Support
Planning

Design for PEI
Supportability

Design/Develop
Support
Subsystem

Acquire
Support
Subsystem

Field
Support
Subsystem



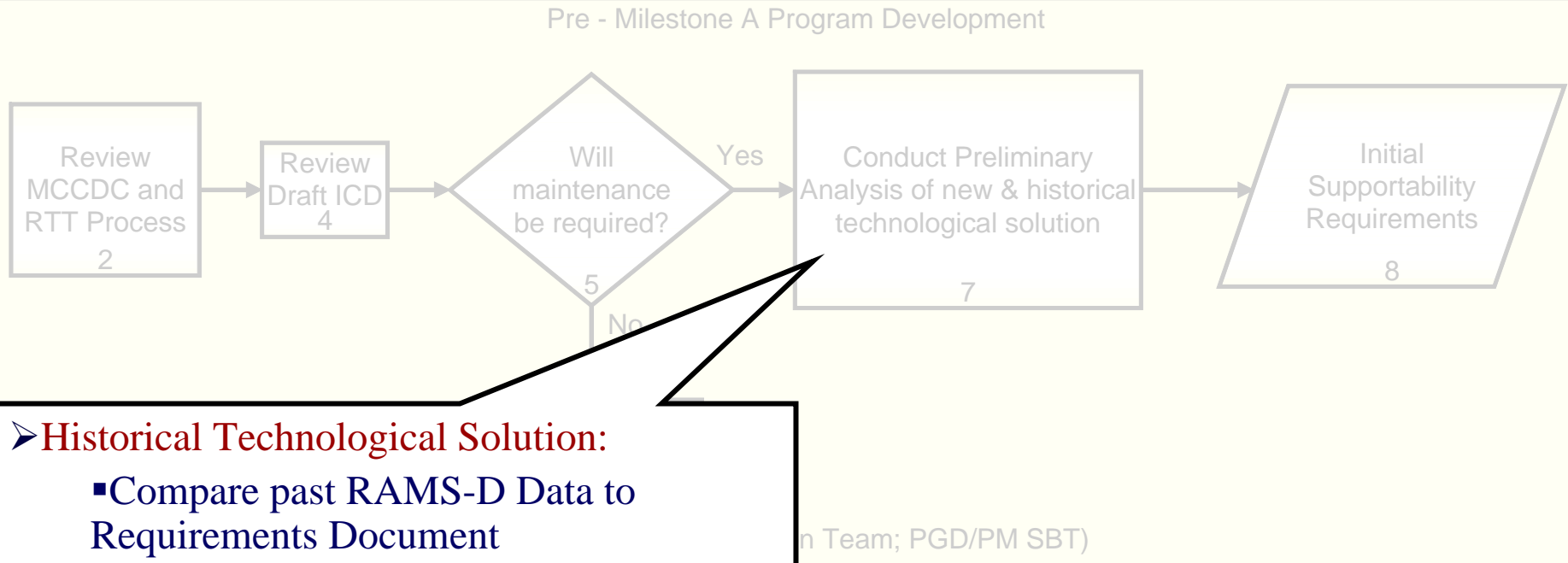
Sustainment Logistics

Operations &
Support



Disposal

Applying Lessons Learned in the Requirements Analysis Phase



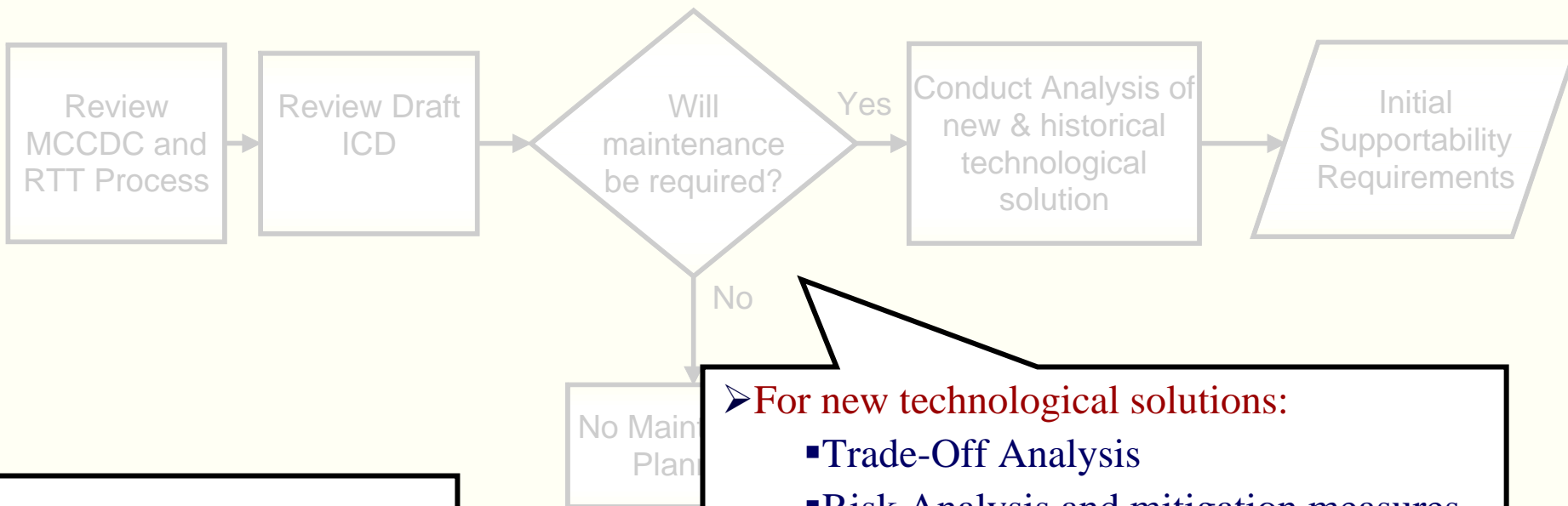
➤ Historical Technological Solution:

- Compare past RAMS-D Data to Requirements Document
- Estimate RAMS-D Trade-offs & Risk Areas
- Assess possible effects of mission and operational environment on RAMS-D

Diagnosing, Assessing, & Applying Throughout the Life Cycle

Applying Lessons Learned in the Requirements Analysis Phase

Pre - Milestone A Program Development



- Industry Skunk Works
- MC Warfighting Lab
- Op Naval Research
- Naval Research Lab
- Army Research Lab

➤ For new technological solutions:

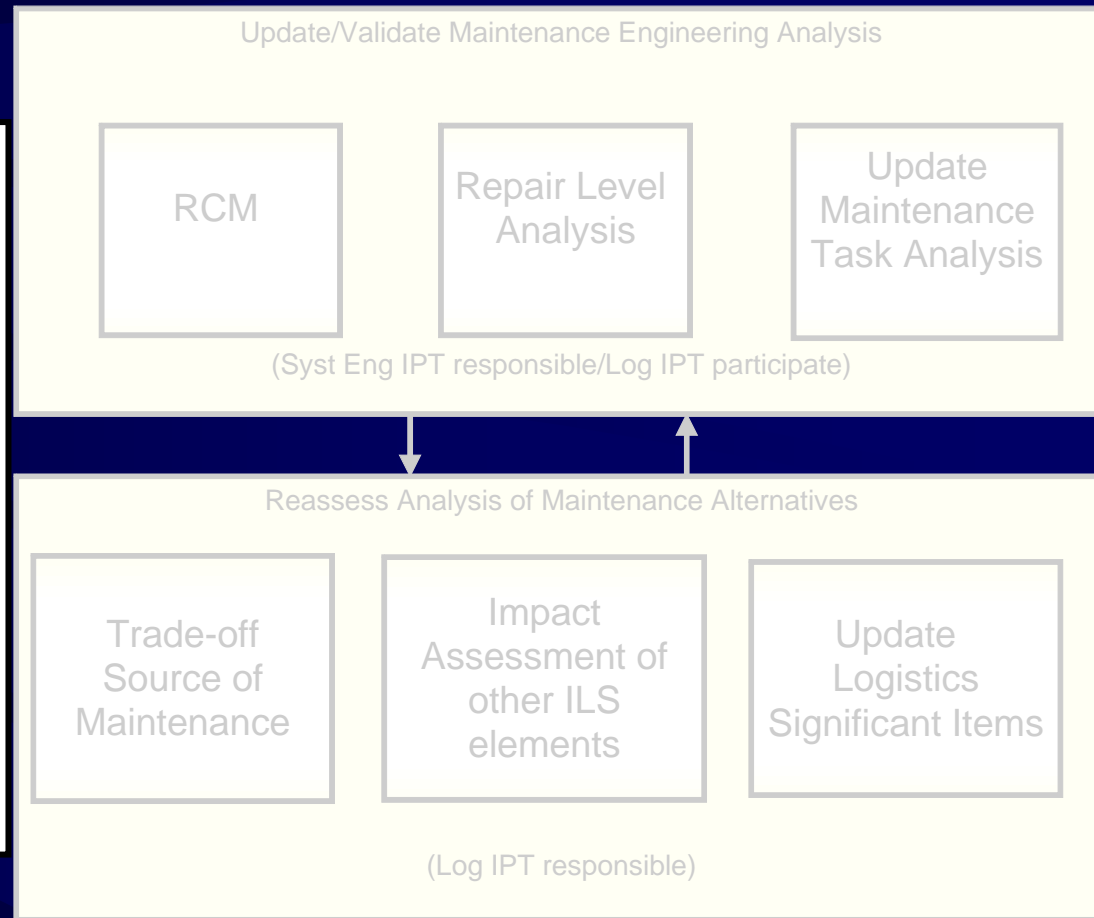
- Trade-Off Analysis
- Risk Analysis and mitigation measures
- ILS trade-off analysis
- Supportability
- Ability to achieve mission in operating context

Diagnosing, Assessing, and Applying Throughout the Life Cycle

Applying RCM throughout Life Cycle to diagnose variances

Design and Develop Phase:

- Conduct trade-offs based on the System Operational Effectiveness, to further define the maintenance strategy
 - Condition-Based Maintenance
- Develop most effective and efficient logistics support strategy
 - Performance-Based Logistics
- Identify the risk areas that require further testing



Achieving weapon system supportability is an iterative process of designing in system performance and supportability to achieve Warfighter capability.

Applying RCM throughout Life Cycle to diagnose variances

Update/Validate Maintenance Engineering Analysis



(Syst Eng IPT responsible/Log IPT participate)

Reassess Analysis of Maintenance Alternatives



(Log IPT responsible)

Operations & Support Phase:

➤ Assess Actual vs. Predicted

▪ Usage

- Unforeseen or combat expedient roles

- Environmental/OPTEMPO Issues

- Concept of Employment

▪ Monitor Trends

- Failure Investigations and Safety Mishaps

- Product Quality Deficiency Reports

Achieving weapon system supportability is an iterative process of designing in system performance and supportability to achieve Warfighter capability.

Applying RCM throughout Life Cycle to diagnose variances



FY 2005 RCM II Analyses (cont.)

Indoor Simulated Markmanship Trainer

Autonomic Logistics

EMSS

Tactical Imagery Production System

High Mobility Artillery
Rocket System

RCM
Requirements
Analysis

RCM
Trailer Crane
Analysis

\$12 M over
the Lifecycle

\$2.7 M over
the Lifecycle

*Note: 10% of total Cost of Clearly Defined Requirements based on GAO Report 1986

Summary

- **Maintenance Planning Process**
 - **Standardized, Repeatable Process**
 - **Standardized Analytical Methodology**
 - **Team-based Approach**
 - **Improving Decision-making throughout the Life Cycle**
 - **Improving Maintenance Efficiency and Effectiveness**

