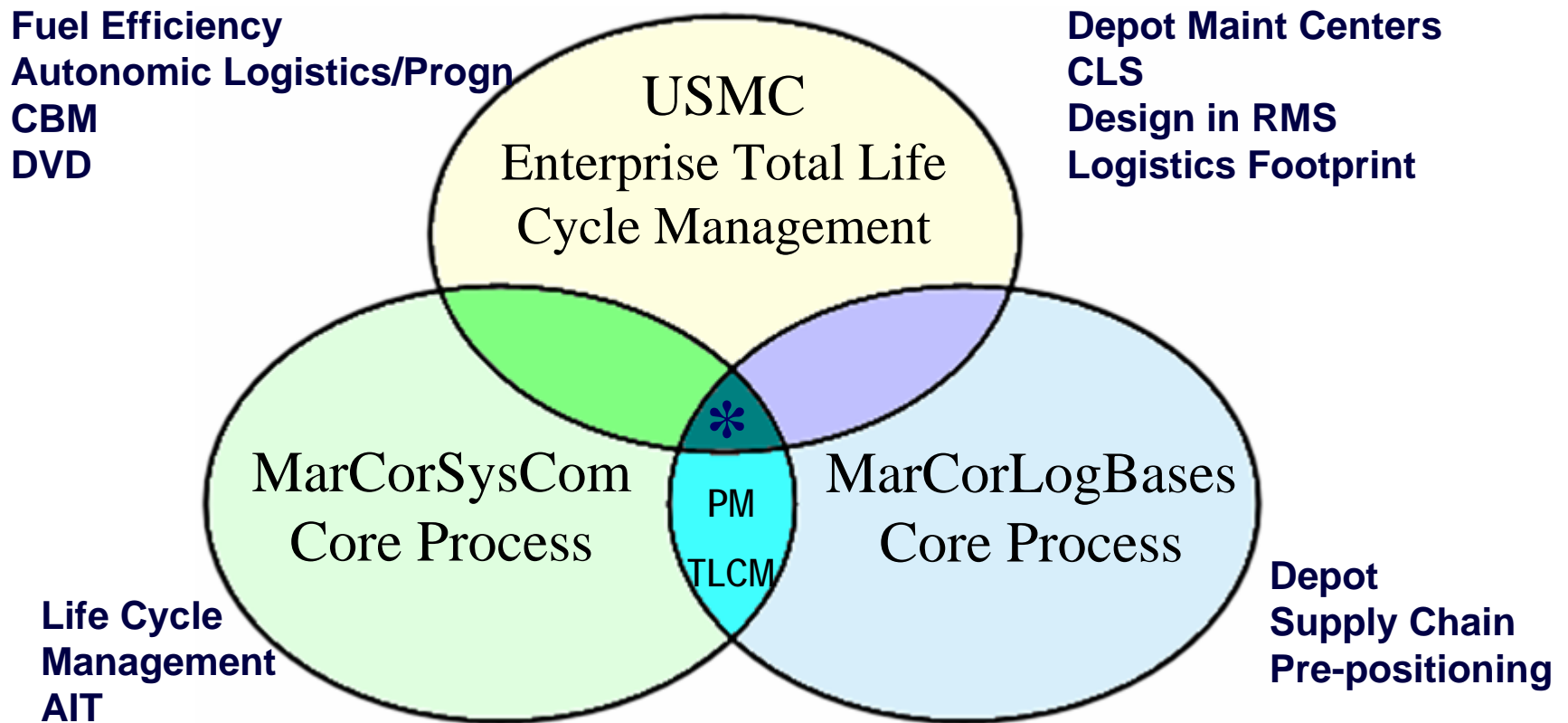


# DOD Maintenance Symposium 2005



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

# Applying Comprehensive decision-making processes to our maintenance environments



\* 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



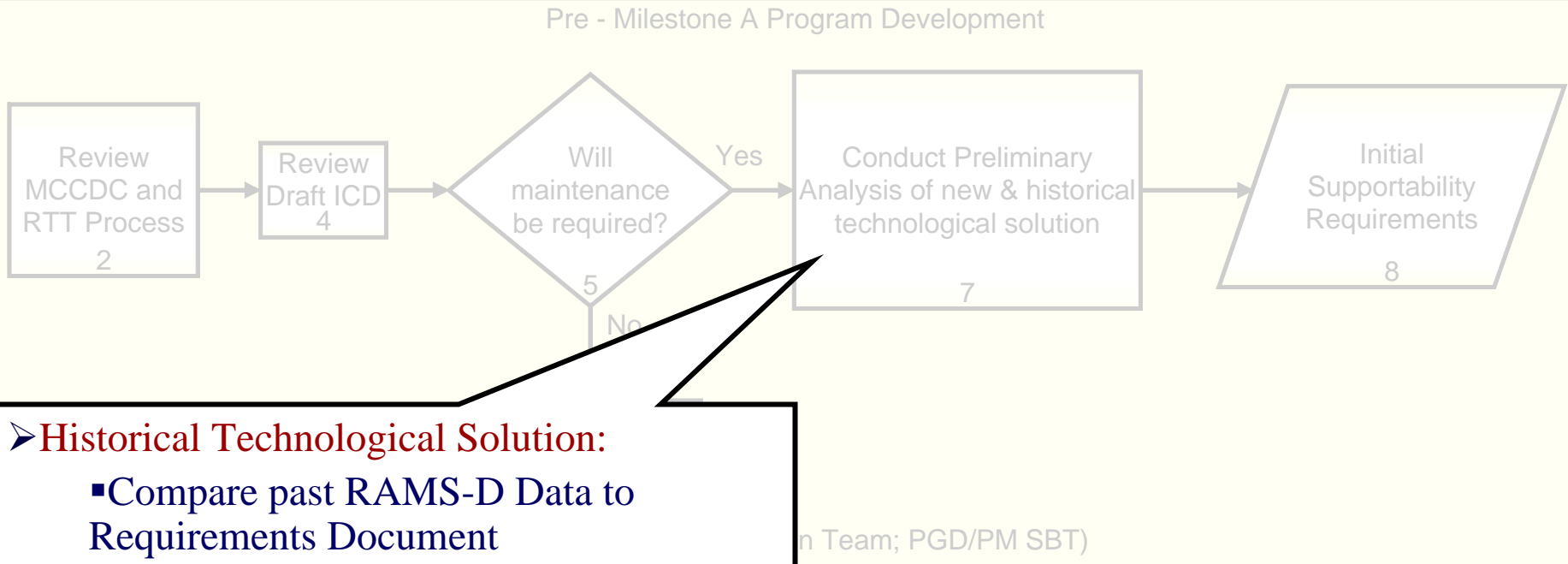
## Sustainment Logistics

Operations &  
Support



Disposal

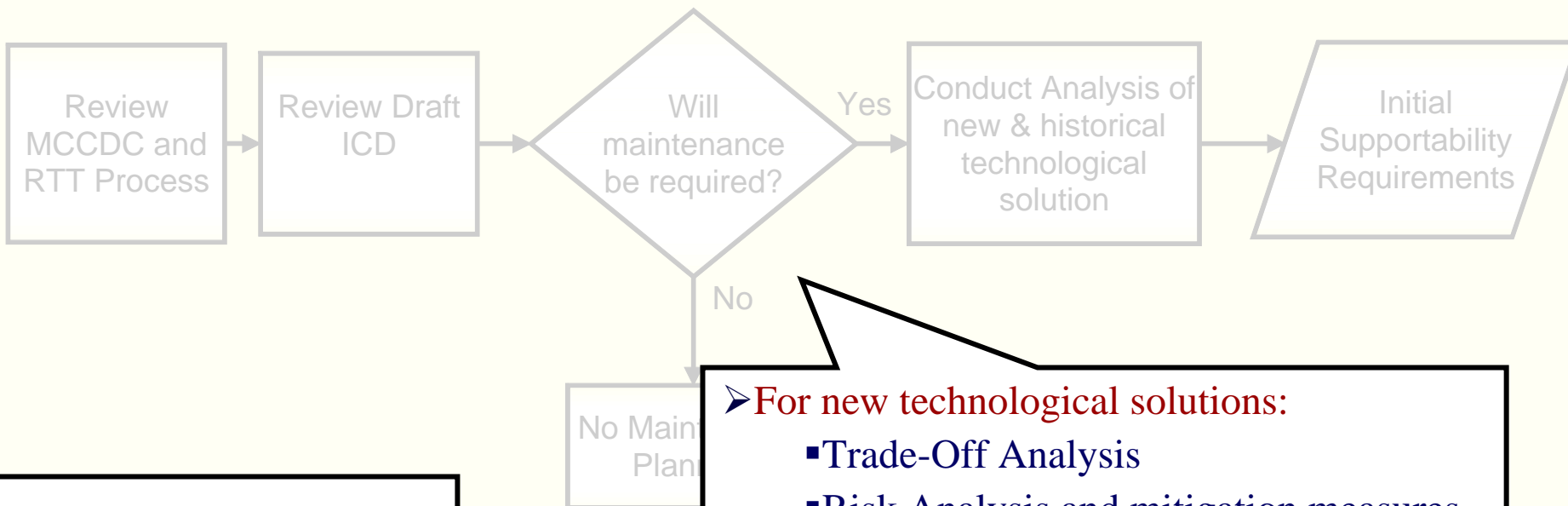
# Applying Lessons Learned in the Requirements Analysis Phase



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:

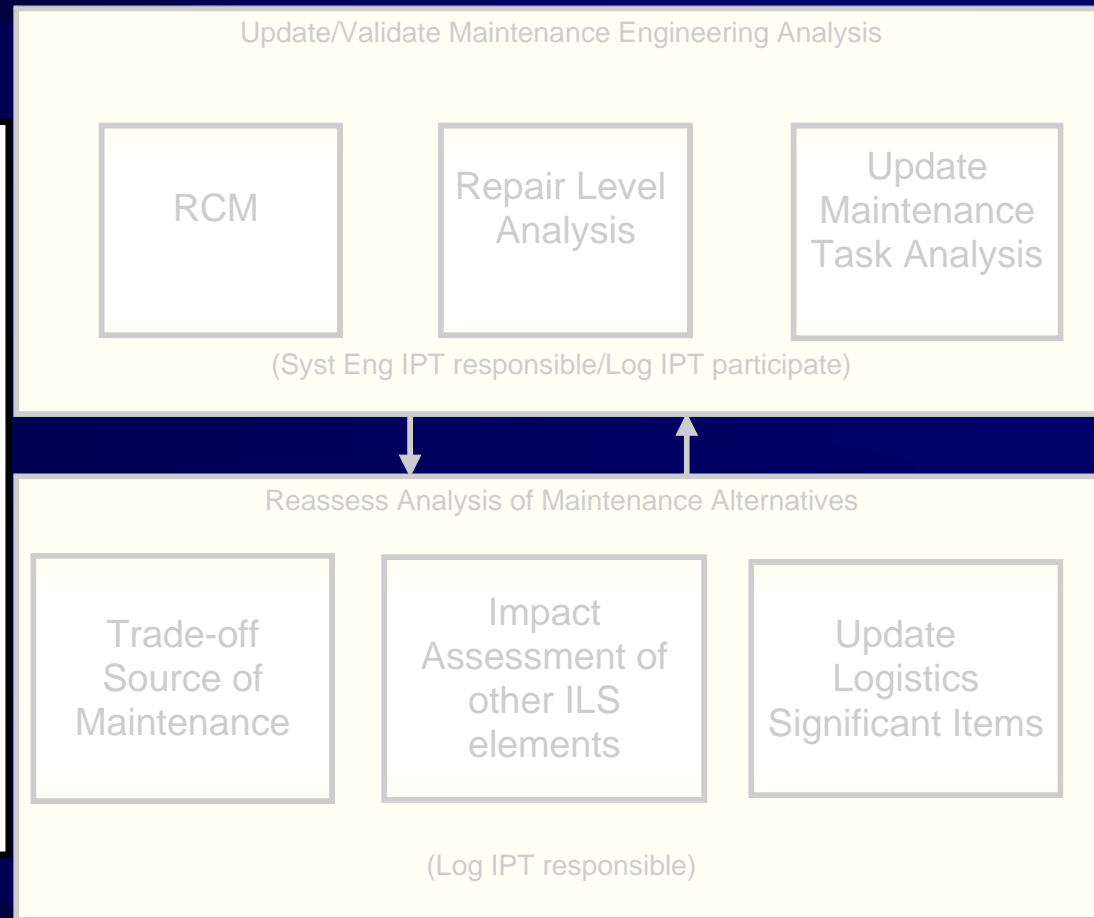
- Trade-Off Analysis
- Risk Analysis and mitigation measures
- ILS trade-off analysis
- Supportability
- Ability to achieve mission in operating context

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**

