



Comanche



Total Life Cycle Systems Management

IDGA

Washington, DC

23-24 September 2003

Mr. Mike Behnen
Chief, Supportability Division





Outline



- **Weapon System Capabilities**
- **2-Level Maintenance**
- **Performance Based Logistics**
 - Logistics Transformation
 - Metrics
 - Product Support Integration
 - PBL Barriers
 - Business Case Analysis
 - Core Depot Assessment
 - Comanche Integration
- **Total Life Cycle Systems Management**
 - Path Ahead

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Comanche ORD Requirements



FY 2009 ■ Block I Acft 12-89

FY 2011 ■ Block II Acft 90-209

FY 2013 ■ Block III Acft 210 - XXX

FY 2018/2023 ■ Block IV/V

Sensors

- Radar NVPS
- EOSS 2nd Gen FLIR,TV
- Tactics Expert Function – Partial, Block I
- Radar (Threshold – Block II)
- Tactics Expert Function – Full, Block III
- Sensor Fusion – Block III
- EOSS 3rd Gen FLIR, TV
- Tactics Expert Function – Enhanced, Block IV & V

- UAV Level 2 Control (Threshold)
- UAV Level 4 (Objective)
- UAV Level 4 (Threshold)

Joint Objective Force Connectivity

- EPLRS
- Wideband Area Network

Joint / Combined Arms Team Communications

- UHF/VHF
 - Voice
 - Digital
 - Secure
- SATCOM (Objective)
 - Voice
 - Data
- Link 16 (Objective)
- SATCOM (Threshold – Block II)
 - Voice
 - Data
- Link 16 (Threshold – Block II)
- HF
- GATM
- Cell phone waveform

- EFAMS (Block III)

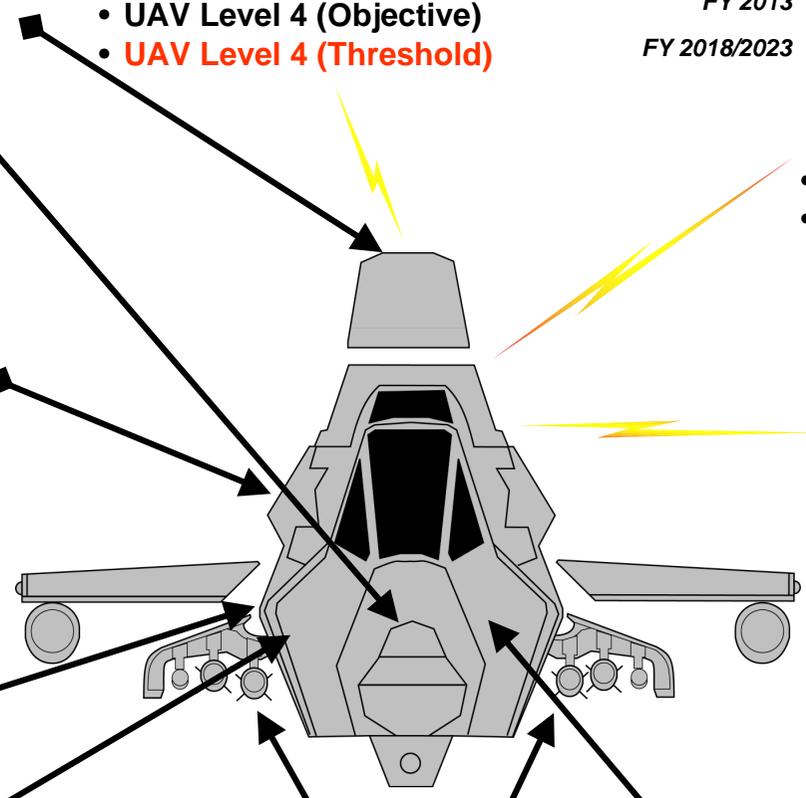
- Low Observable Compliant

Sustainability

- Embedded Diagnostics
- Reduced Logistics Footprint
- CTR Through Spares
- Increase Reliability (Block I, II, III, IV and V)

Weapons

- Hellfire
- Rockets
- TGS
 - Full Accuracy (Objective – Block I)
 - Full Accuracy (Threshold – Block II)
- ATA Missiles (Block III)



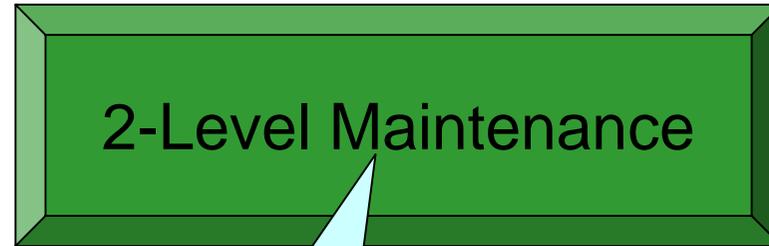
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New Maintenance Requirements and Concepts



Leap-Ahead Technologies



What Makes 2-Level Work?

Decrease Time to Repair
(Enhance Maintainability Attributes)

Design Out AVIM Tasks
(Repair Level Analysis)

Decrease Time to Troubleshoot
(Integrated Diagnostics)

Decrease Task Complexity
(Portable Maintenance Aid)

Increase System Availability
(Performance Based Logistics)

Decrease Sustainment Cost
(Functional Partitioning)

Decrease Removal Frequency
(Increase Component Reliability)

Decrease False Removal Rate
(Portable Maintenance Aid)
(PMA Instrumentation Pack)

1989 US Army Aviation Logistics School Study Concluded
2-Level Maintenance Must Be A Design Constraint;
It Is Not Feasible For the Army's Legacy Fleet

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2-Level Maintenance



Product Support Integrator (PSI)

Continuous Technology Refreshment

- Reliability Improvements
- Hardware Changes
- Software Changes

PM/PBA Oversight

- Conf MGT
- Item MGT
- Air Worthiness



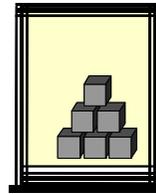
Wholesale Supply



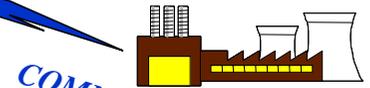
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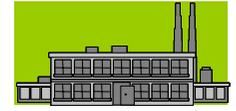
TMs



SSL**



COMMERCIAL



ORGANIC

User Feedback

PBA

ORGANIC USER LEVEL

USER MAINTENANCE ON AIRCRAFT

E-PLL*



* Enhanced PLL ** Supplemental Supply List

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2-Level Maintenance and Supply Support



- Aviation maintenance concept of the future
 - Military Occupational Specialty (MOS) Consolidation
 - Permits Maintenance Man-hour Reductions
 - Increases the Commander's Availability of Combat Assets
- Emphasizes Repair by Replacement at the User (Unit) Level
- Eliminate Intermediate Level Aviation Maintenance, its Associated Costs, & Footprint
- Enhanced Prescribed Load List
 - Composition of an E-PLL Has Yet to be Determined
- Supplemental Supply List
 - Forward Depot Support Mechanism Managed by the PSI

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Performance Based Logistics

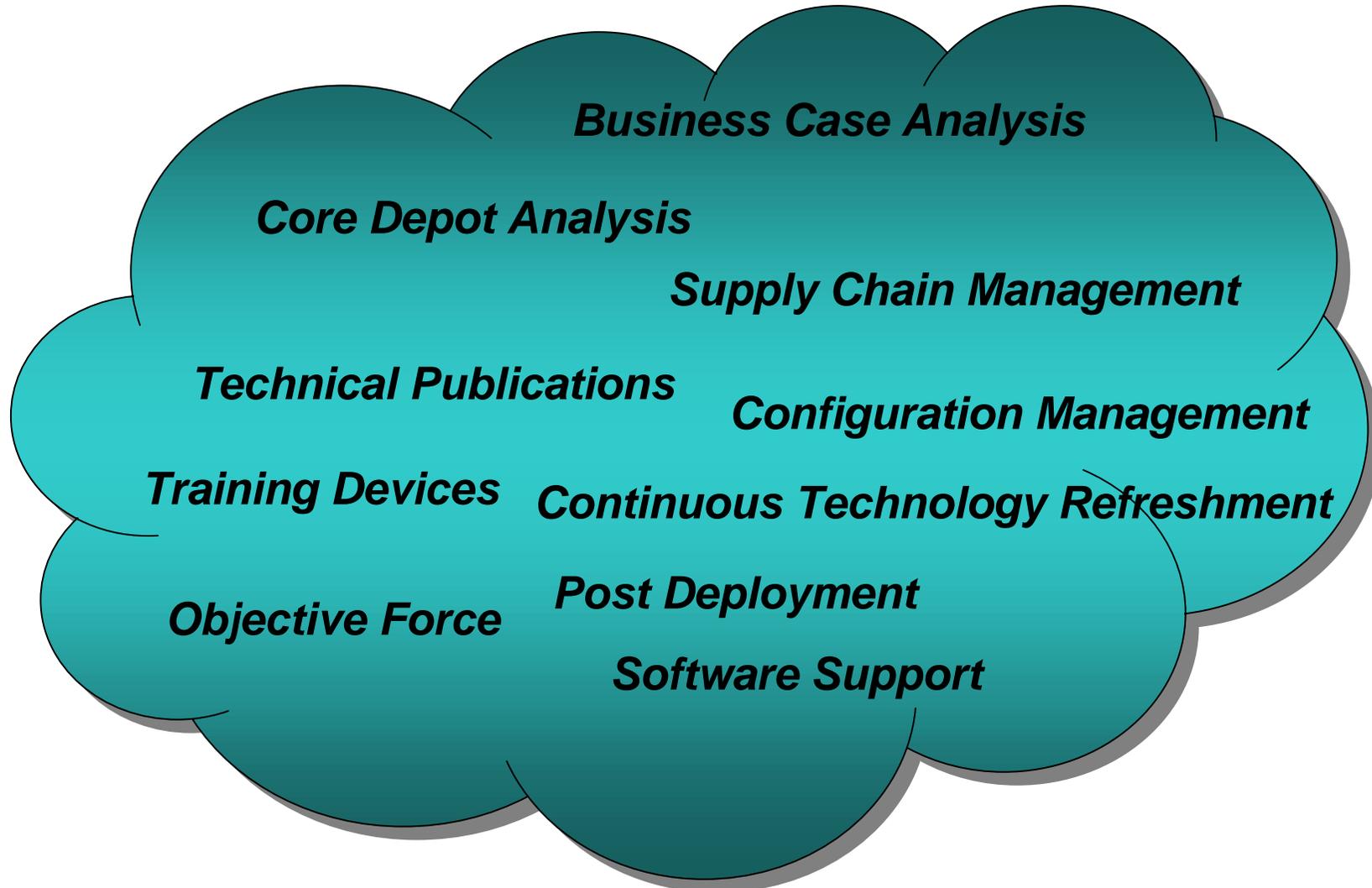


Comanche: A long-term agreement with a product support provider, be it, public, private, or partnership. Performance Based Logistics provides incentives and empowers the Product Support Integrator to meet the users performance requirements, improve product reliability and support effectiveness, and reduce total ownership costs.

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Performance Based Logistics



Considerations are All Encompassing

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Logistics Transformation



21st Century Information Systems

2-Level Maintenance

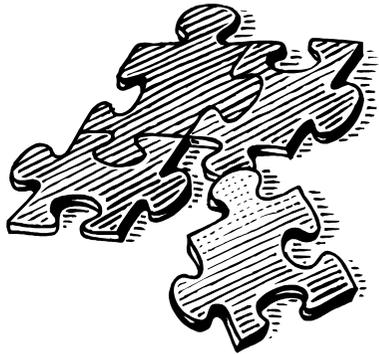
Business Process Reengineering

Minimize Logistics Footprint

Reduce Infrastructure

Represents Best Value

Compete Supply Support



Legacy Information Systems

3-Level Maintenance

Organic Infrastructure

High Cost (Pipeline)

Sole Source through ICS

Business as Usual

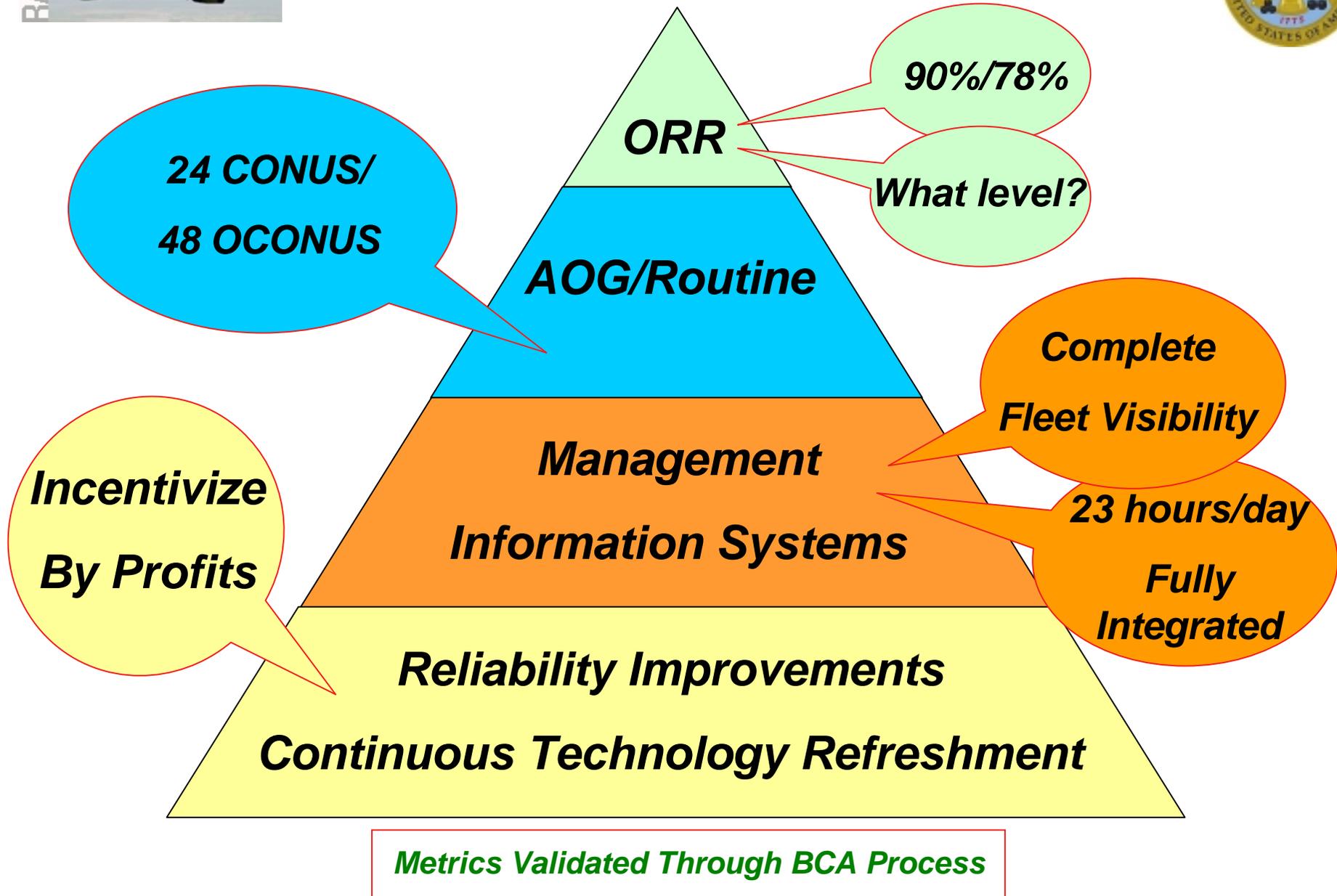
PBL



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Performance Metrics



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Product Support Integrator Concept Development



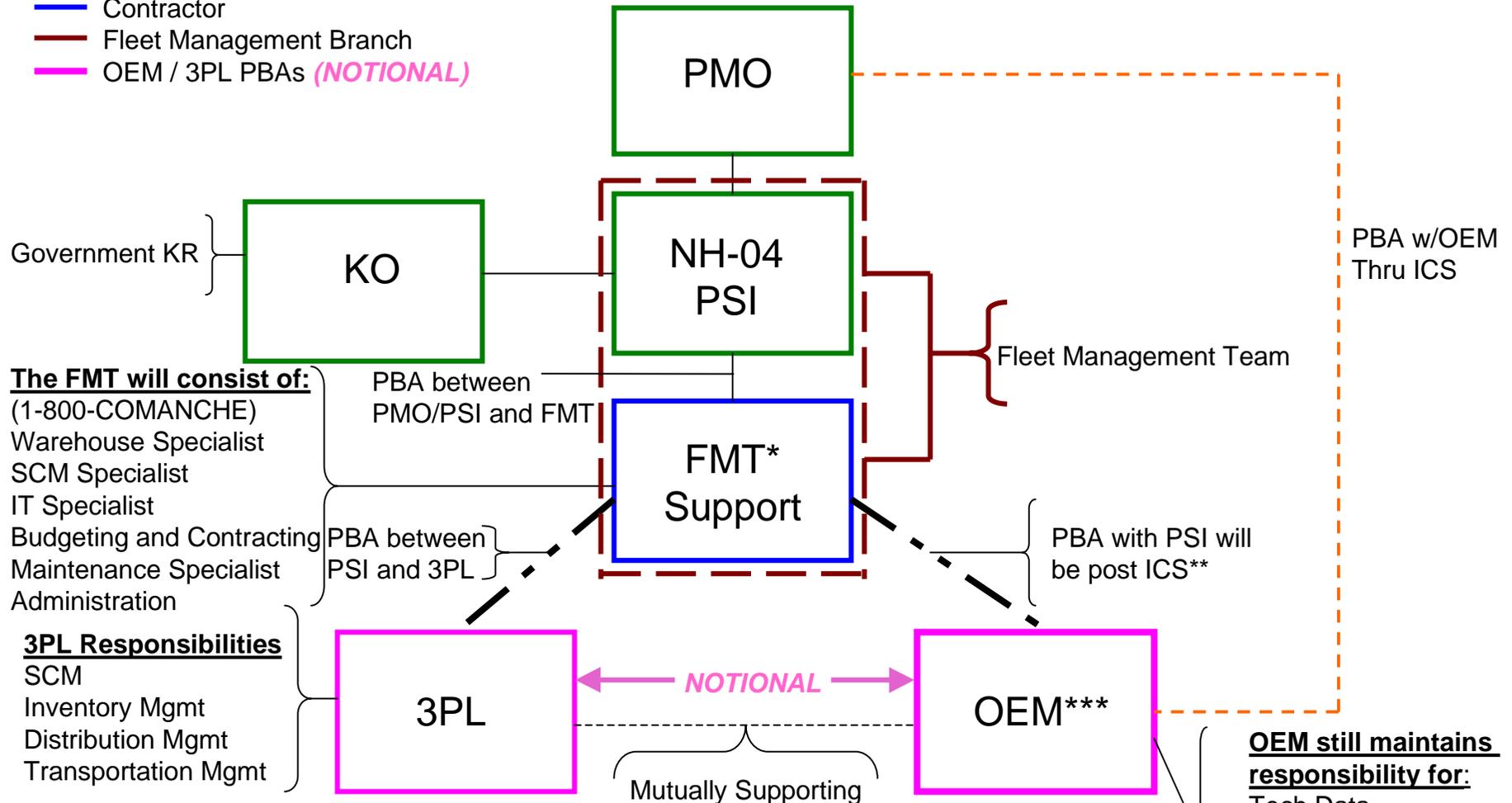
****Fleet Management Team Supports the PSI***



1-800-COMANCHE



- Army / Government
- Contractor
- Fleet Management Branch
- OEM / 3PL PBAs (*NOTIONAL*)



The FMT will consist of:
 (1-800-COMANCHE)
 Warehouse Specialist
 SCM Specialist
 IT Specialist
 Budgeting and Contracting
 Maintenance Specialist
 Administration

3PL Responsibilities
 SCM
 Inventory Mgmt
 Distribution Mgmt
 Transportation Mgmt

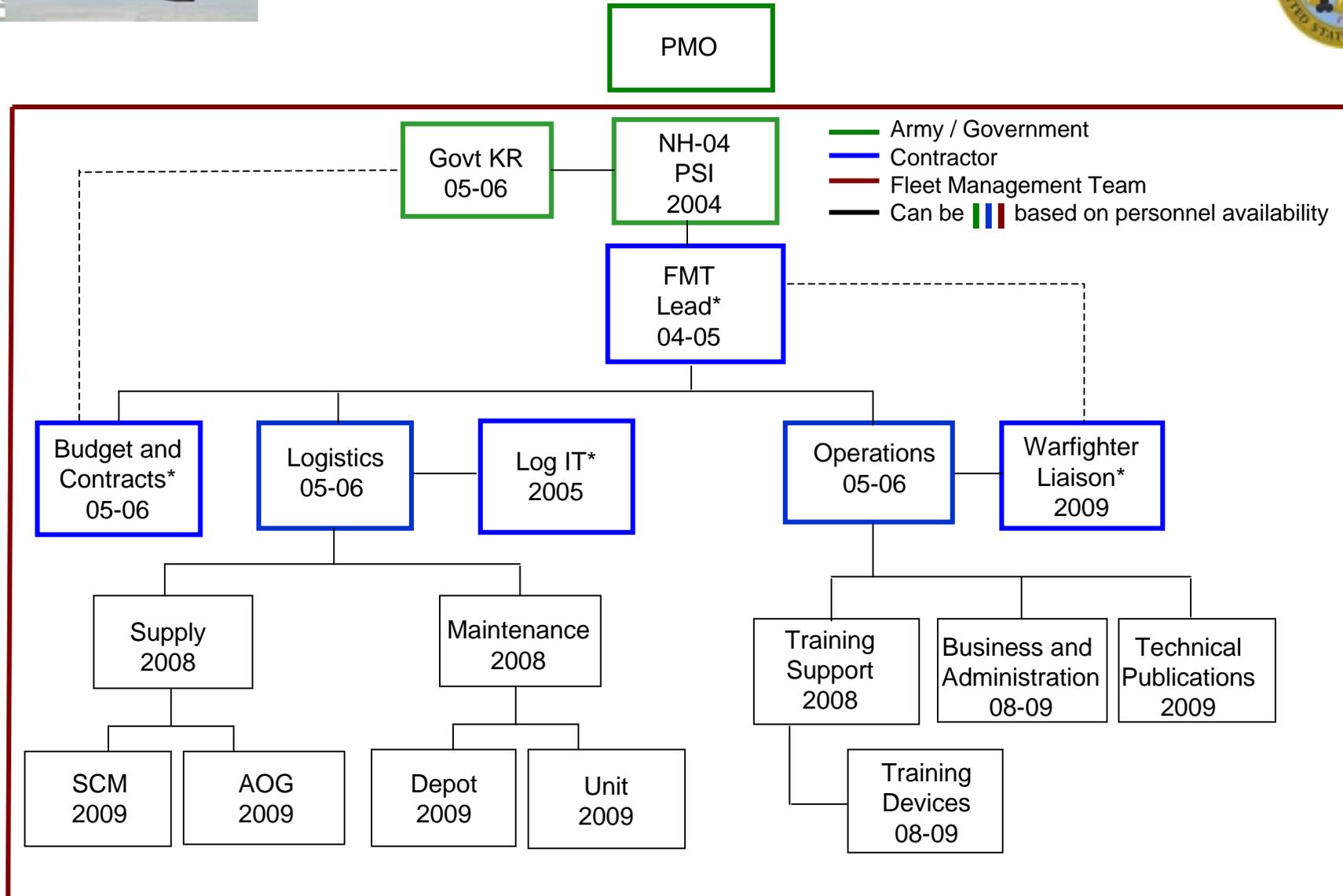
*Fleet Management Team
 **PBA will incentivize and penalize contractor based on metrics compliance
 ***OEM can sub to 3PL – Supply Support will be competitive PBA for Supply Support

OEM still maintains responsibility for:
 Tech Data
 PDSS
 CTR, CM
 Tech Pubs

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Fleet Management Team Task Organization



*Must be a contractor

Checks and Balances



FMT Considerations



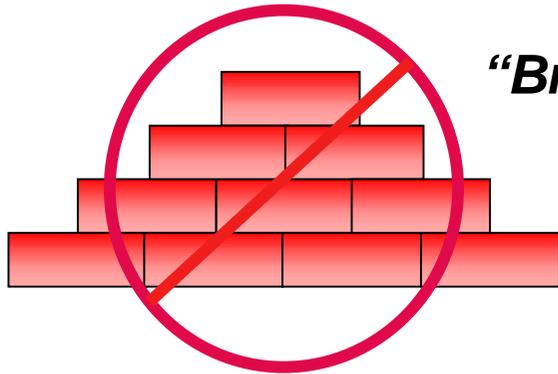
- **Phased Approach**
 - Bring on only when needed and mission dictates
 - Evolve with the system
- **Type of Personnel**
 - **Contractor, Government (includes Matrix), Army**
 - Type position filled, i.e., certain elements must be contractor
 - Based on funds availability and type personnel required or available
- **Number of Personnel**
 - Ramp up sections as needed (evolution)
 - Ensures Maximum use of personnel resources
- **Participation of OEMs**

FMT Functions Under Refinement

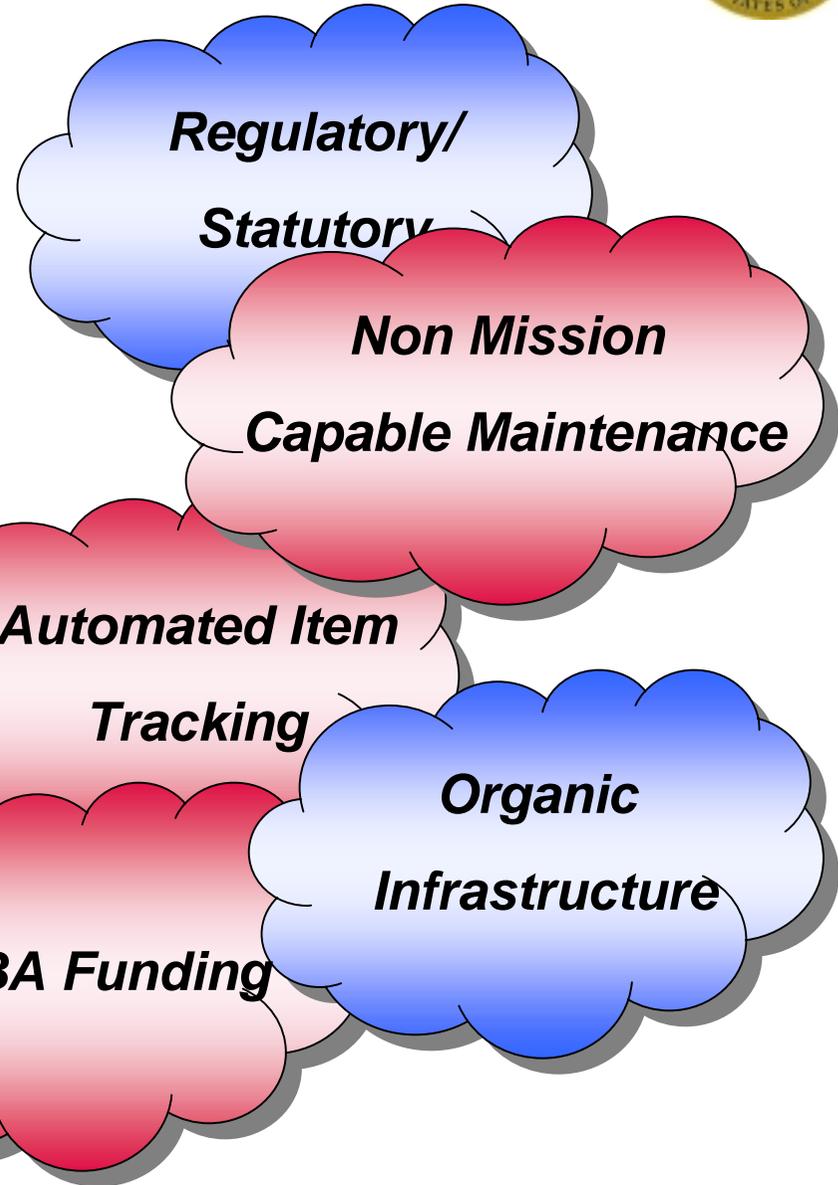
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Potential Barriers



*Not
"Brick Walls"*



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Potential Barriers



**Regulatory/
Statutory**



Title 10 USC
2464, 2466, 2469, 2563
Requires more latitude

**Organic
Infrastructure**



**Not Transitioning in Consonance
with PBL Development**
Business Process Reengineering

**Working Capital
Fund**



TLCM → PM
Fund PMO / Fence WCF PBA Funds
Financial / Business Process Overhaul



Business Case Analysis



Stand Alone Document Analysis of Alternatives

Executive Summary

Purpose

Subject

Metrics

**Scope and
Boundaries**

Boundaries

Inclusive of functional processes and technical architecture descriptions, cost projections, ROI, cost avoidance, action plans, performance measures, risk...

As-is compared to and consequences of alternatives

Why the Case is being conducted

What the Case is about

Financial and Performance

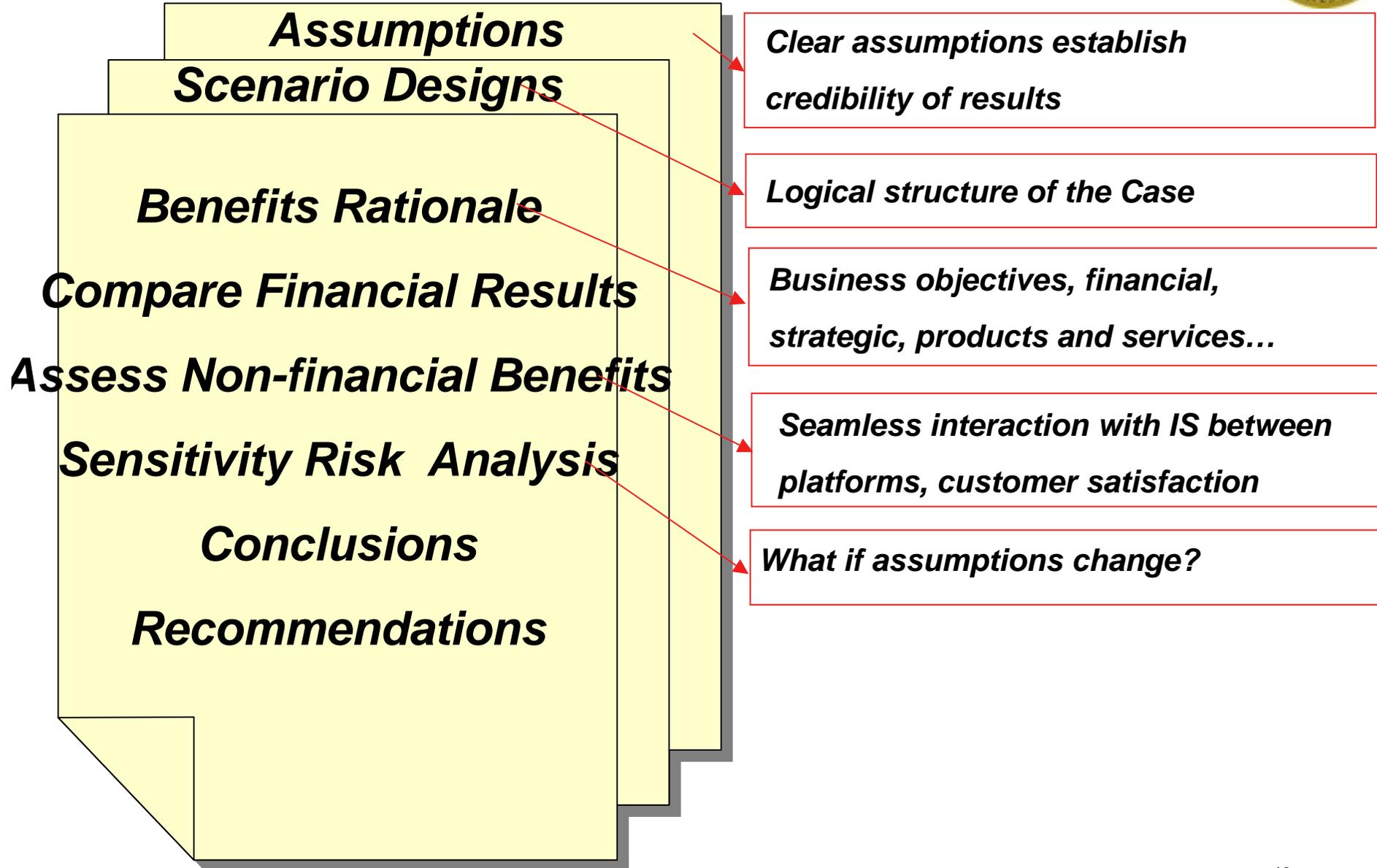
Range of Coverage encompassed

Defines Scope Precisely

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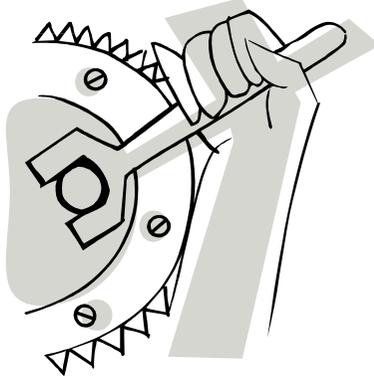
Business Case Analysis



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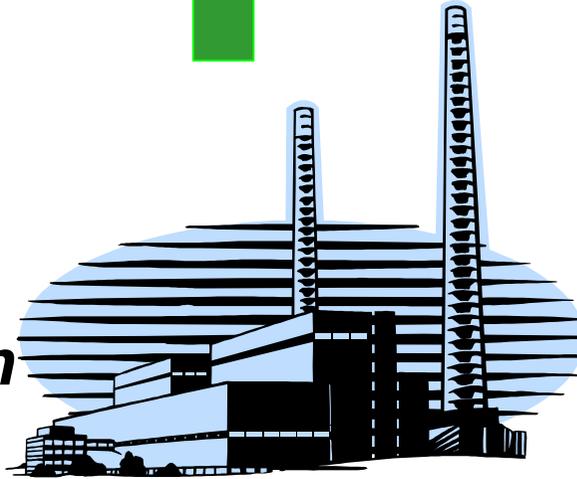
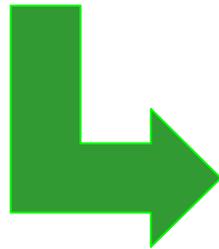
Initial PBL Effort



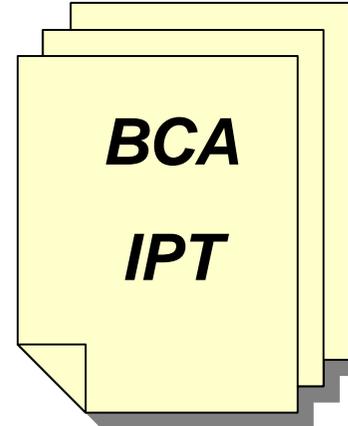
**Core Depot
Assessment**

2004-2006

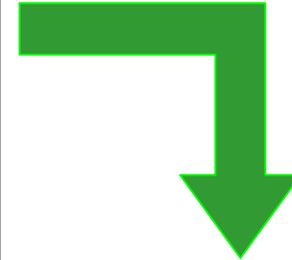
2-year Revalidation



**Source of Repair
Determination**



**Depot
Working Group**



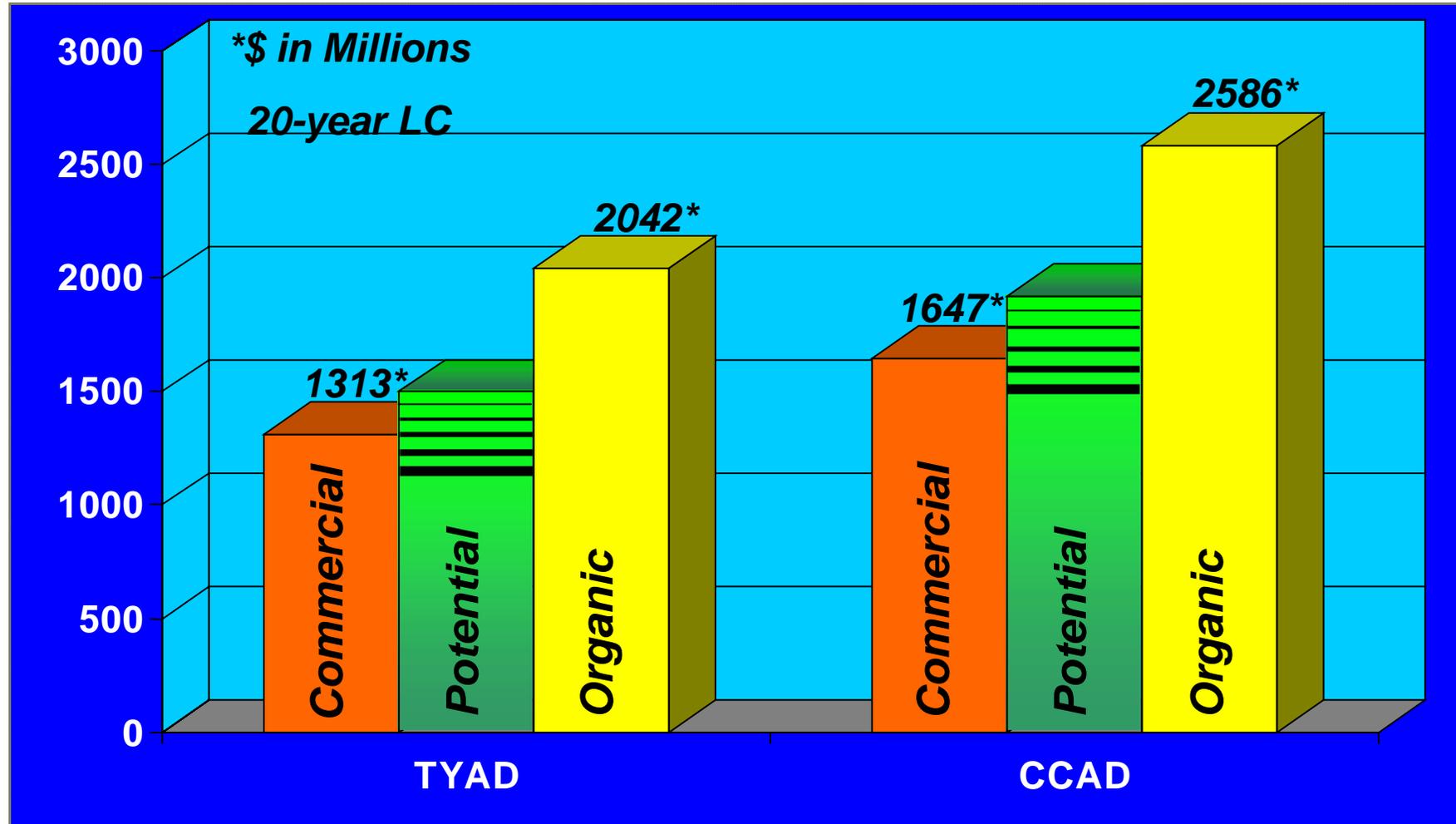
**Analysis of Cost
Alternatives**



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Depot Level Repairables



24 Sub-systems 437 Depot Level Repairables



Comanche PBL Integration



- **Considerations for BCA**
 - Objective Force
 - Unit of Action
 - Unit of Employment
- **Horizontal Technology Integration**
 - Leverage Existing PBL Implementations
 - Reduce System Sustainment Cost
 - Capitalize on Existing Management Information Systems

Comanche Will Integrate Similar Weapon Technology into a Common Logistics Infrastructure Responsive to the Operational Requirements of the Objective Force

Performance-Based Logistics Objective Force Fire Control Sensors

**Focused Operational
Availability
Within
Global Combat
Support System-Army**

**Forward
Depot**

**Forward
Depot**

**Total In-transit
Visibility
Automated
Diagnostics**

**Agile & Responsive
Requisition &
Supply Network**

OEM Organic

Objective Force Fire Control Radar

OEM

OEM



PBL Path Ahead



- **CDA (On-going)**
 - Determines Source Of Repair for BCA
 - Forwards Results to the BCA IPT by sub-system
- **PSI Preparation**
 - Develop Methodology and Information Base
 - May 2003 to August 2004
 - Transition Methodology to PSI (2004-2005 time frame)
- **BCA IPT**
 - Establish in September / October 2003
 - Analyze Cost Alternatives on SOR Recommendations
- **Market Research 3PL June-October 2003**
 - To understand best commercial practices
- **Fleet Management Team Organizational Development 2004 - 2005**

С О М М А Р И С Н Е
С О У Л Т Р А Ч Ы

