

Achieving an Outcome-Focused Performance Environment



Increasing Value In Weapon System Sustainment

LMI

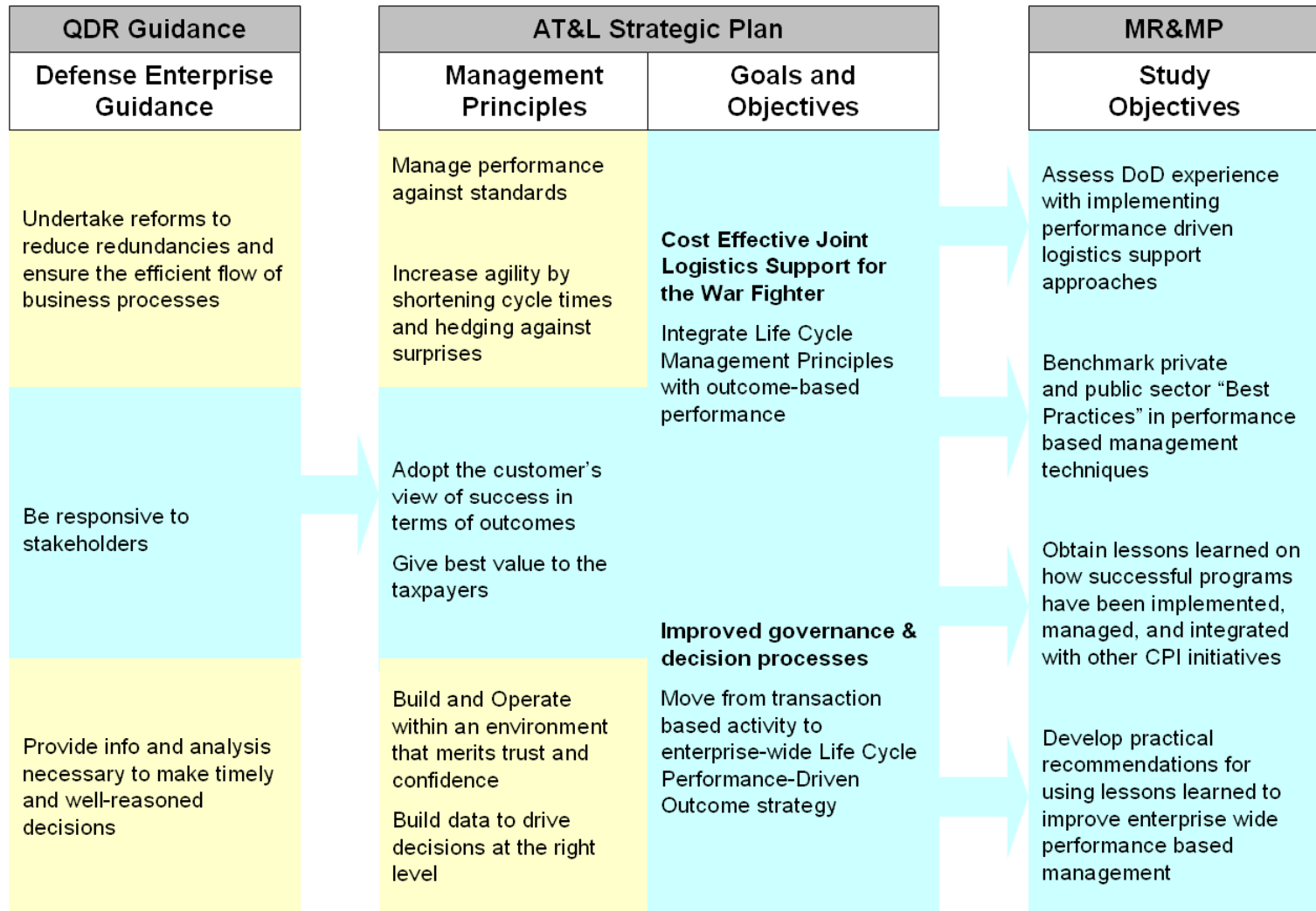
GOVERNMENT CONSULTING

THE OPPORTUNITY TO MAKE A DIFFERENCE HAS NEVER BEEN GREATER

Outline

- Project Tasking in Context
- Methodology
- Findings
- Implications for DoD

Project Tasking in Context



Methodology

Study Hypothesis

DoD can significantly increase the value to the taxpayer and warfighter of its annual expenditure for weapon system sustainment by:

- Adopting a broader view of materiel readiness, with success defined in terms of outcomes
- Adopting an outcome-oriented approach to weapon system sustainment
- Increasing value through performance improvement initiatives

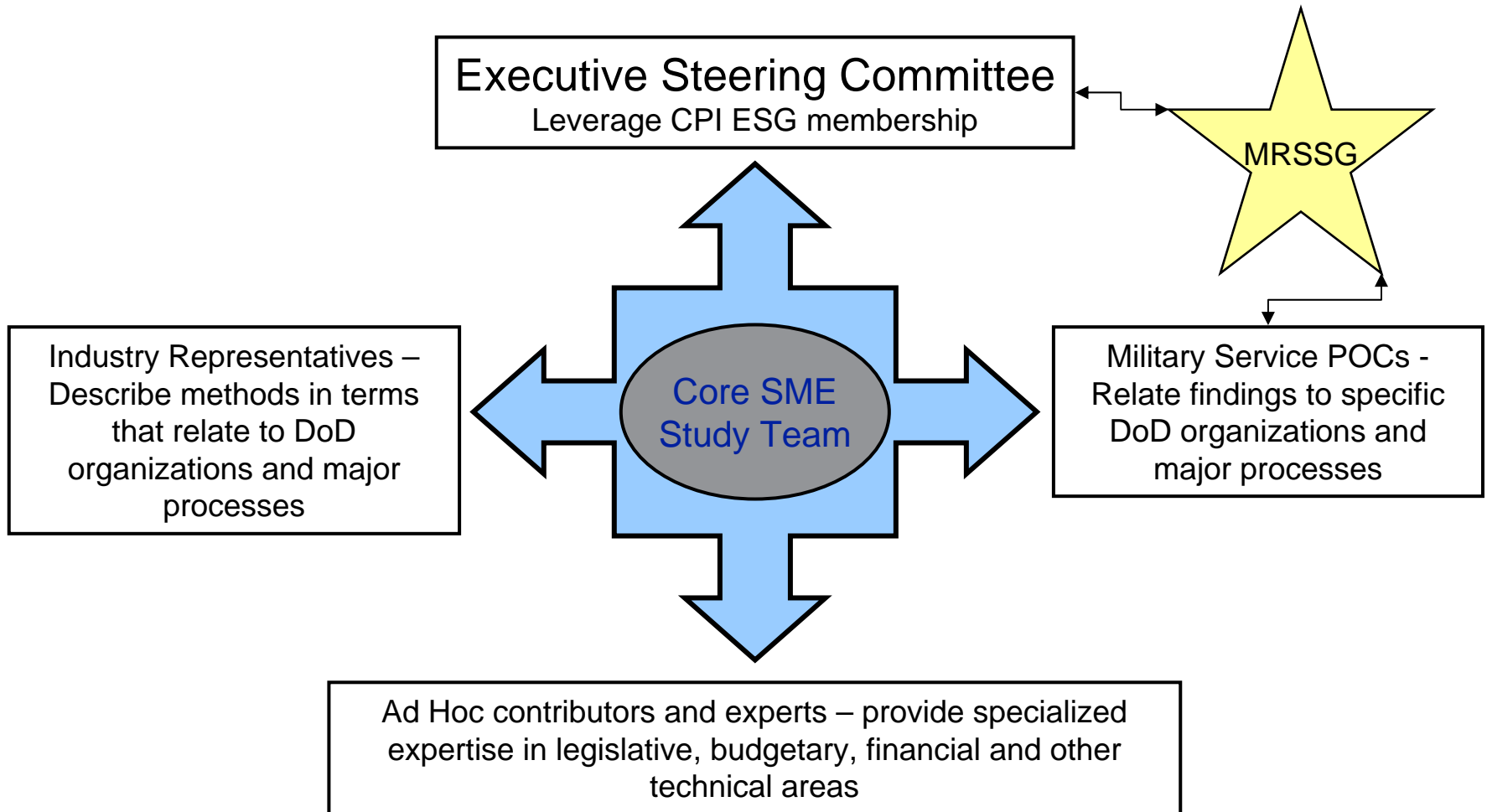
To test this hypothesis we needed to:

- Identify best practices employed by high-performing organizations to achieve desired outcomes
- Compare management practices across DoD and industry to identify the best approach for DoD to successfully implement an outcome-focused performance environment for weapon system sustainment



Methodology

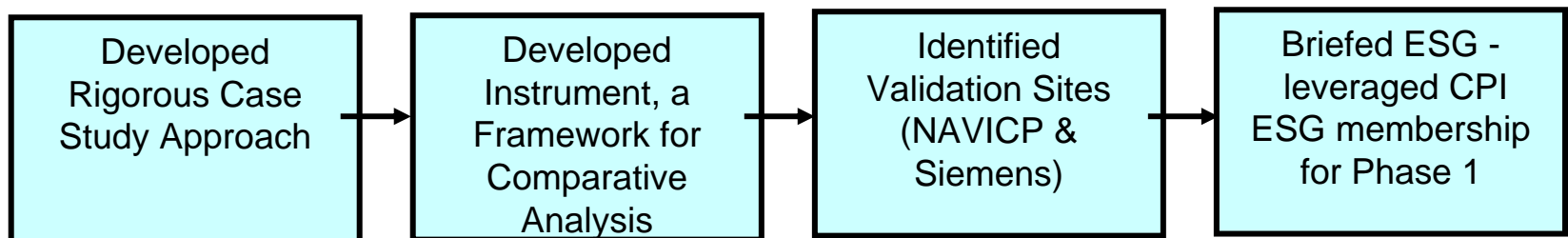
Study Team Interfaces



Methodology

A Case Study Approach

- Constructed and validated case study research instrument (structured interview template)
- Identified key performance areas for successful product lines based on literature review and SME experiences
- Identified and selected industry companies
- Structured questions to assess maturity in key performance areas
- Finalized instrument after rigorous pre-test in industry and DoD



Methodology

Developed a Maturity Matrix

| Performance Characteristics | Stage of Maturity | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Less Mature | More Mature |
| Performance Definition | <ul style="list-style-type: none"> Strategy not clearly defined Performance goals weakly linked to desired outcomes | <ul style="list-style-type: none"> Clear, customer focused strategy Externally focused, balanced performance goals are quantitatively linked to desired outcomes |
| Performance Achievement | <ul style="list-style-type: none"> Single, output focused metric No instituted performance review cycle | <ul style="list-style-type: none"> Balances, outcome focused metrics with external perspective Organizational support for corrective actions |
| Organizational Mechanics | <ul style="list-style-type: none"> Loosely structured organization Multiple chains of command Few organizational controls in place | <ul style="list-style-type: none"> Matrixed organizational structure Senior leadership driven Employees empowered with clear bounds and controls |
| Information Management | <ul style="list-style-type: none"> Focus on information systems Functional systems with minimal integration and significant external processing | <ul style="list-style-type: none"> Focus on information flows Integrated systems Significant external data sharing |
| Value Chain Integration | <ul style="list-style-type: none"> Value chain not defined Tactical supplier and customer relationships | <ul style="list-style-type: none"> Value chain clearly defined several tiers up and down stream Value chain managed via partnerships |
| Process Innovation | <ul style="list-style-type: none"> Process innovation is ad hoc Process improvement focused on fixing "pain points" | <ul style="list-style-type: none"> Formal process innovation programs Process innovation targets the value chain |
| Product Improvement | <ul style="list-style-type: none"> Ad hoc product improvement programs Product improvement tied to outputs | <ul style="list-style-type: none"> Formal product improvement programs Product improvements tied to outcomes |
| Critical Capability Management | <ul style="list-style-type: none"> No awareness of critical capabilities No formal critical capability management program | <ul style="list-style-type: none"> Active protection of critical capabilities Critical capabilities used as strategic advantage |
| Financial Management | <ul style="list-style-type: none"> Little understanding of organizational cost drivers Infrequently updated financial measures used by managers | <ul style="list-style-type: none"> Clear understanding of value chain cost drivers Frequently updated leading and lagging measures used by managers |



Methodology

Site Selection

| <u>Industry</u> |
|-----------------------------------------|
| ▶ Boeing Military Aircraft |
| ▶ <i>personal computer manufacturer</i> |
| ▶ Siemens Energy and Automation |
| ▶ Sikorsky Aircraft |
| ▶ United Parcel Service |
| ▶ West Marine |

| <u>DoD Activities</u> |
|---------------------------------------|
| Joint Program |
| ▶ Joint Strike Fighter (JSF) |
| Army |
| ▶ Shadow TUAV |
| Navy |
| ▶ F/A-18 |
| ▶ NAVICP Common Avionics IWST |
| ▶ T-45 |
| Air Force |
| ▶ C-17 |
| ▶ F-15 |
| ▶ J-STARS |
| Marine Corps |
| ▶ Global Combat Support System (GCSS) |
| ▶ Combat Operations Center (COC) |



Methodology

Integrated Analysis

- Interviewed sites to document practices and enablers
- Populated maturity matrix for all organizations
- Used PD & PA as “dependent variables” to identify top performers
- Assessed cause and effect relationships across performance characteristics
- Identified common themes that contributed to their success
- Performed gap analysis to identify most salient elements for DoD performance-driven advancements

| | | | |
|------------------------|-------------|-------------------------|-------------|
| Performance Definition | More Mature | Top Performers | |
| | Less Mature | | |
| | | Less Mature | More Mature |
| | | Performance Achievement | |



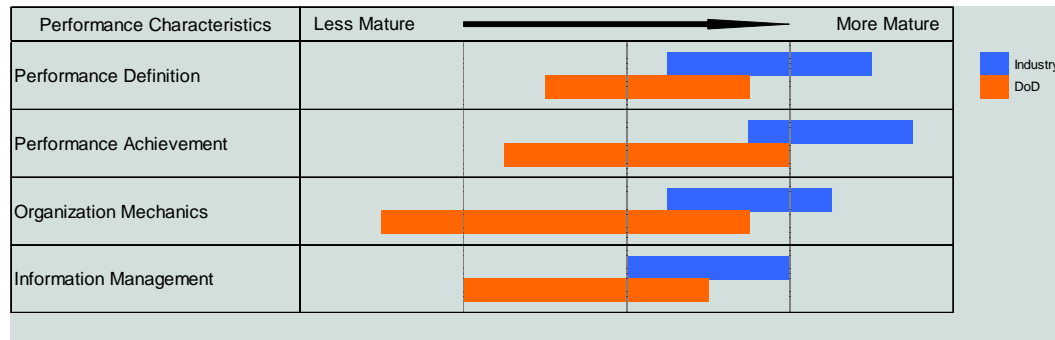
Findings Overview

- Outcome-Focused Sustainment Value Chains Already Exist in DoD
- “Trigger Event” Compelled Top Performers To Become Outcome-Focused
- Common Themes - Framework For Outcome-Focused Performance
 - Best Practices For Success – Maturity in Performance Definition, Performance Achievement, Organizational Mechanics, and Information Management form foundation for outcome focus
 - ‘Best Practices For Success’ Enable Broader Foundation For Value Creation – Maturity in Value Chain Integration, Process Innovation, and Product Improvement allow for greater value creation
 - Disparate Maturity Limits DoD’s Ability To Increase Value - Lack of maturity in the areas of Critical Capability Management and Financial Management limits DoD’s ability to fully achieve an outcome-focused performance environment



Findings

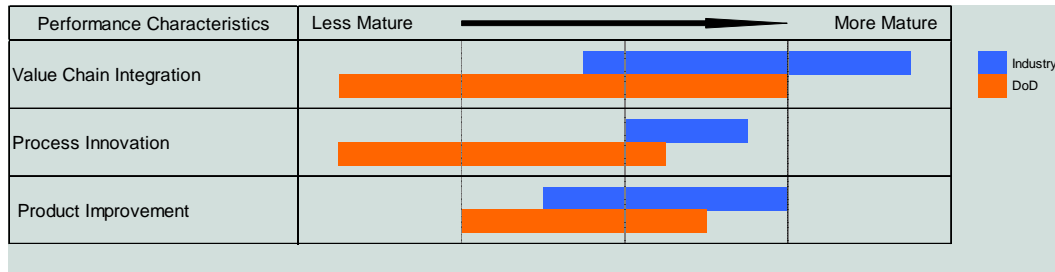
Best Practices for Success - Foundation for Outcome Focus



- Define outcomes with the range and depth needed to describe success in tangible terms
- Balance external (customer-oriented) and internal (financial - or asset-oriented) outcomes
- Articulate distinct outcomes by customer segment, mission profile, location
- Develop formal governance model to align elements based on the criticality of participation or engagement in outcome achievement
- Enable governance and decision processes with standard displays of performance-to-plan
- Define sufficiency in information transparency, content, standard data methods, and timeliness before addressing the technology used

Findings

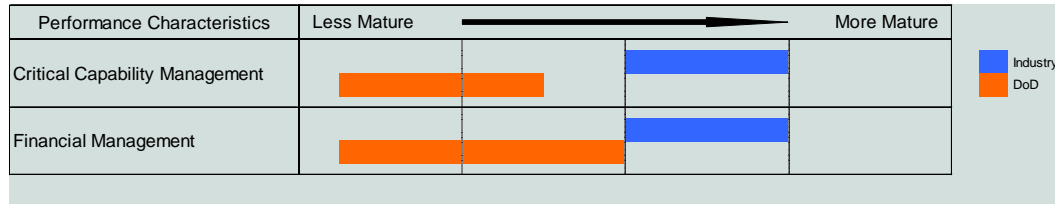
Foundation For Value Creation



- Maturity was the natural result of, or occurred in step with maturity in ‘best practices’
- Provider-customer relationship understood, categorized, and managed based on characteristics of that relationship
- Full alignment of provider community focused all elements on increasing value at outcome level, and not simply managing the inputs and outputs
- Integrated chains magnified value creation of innovation efforts by applying the expertise and resources from across the chain, not just from a single activity
- Exploited relationships to identify, approve, continue, or end initiatives based on their impact on outcome achievement and the creation and realization of value

Findings

Disparate Maturity Limits DoD

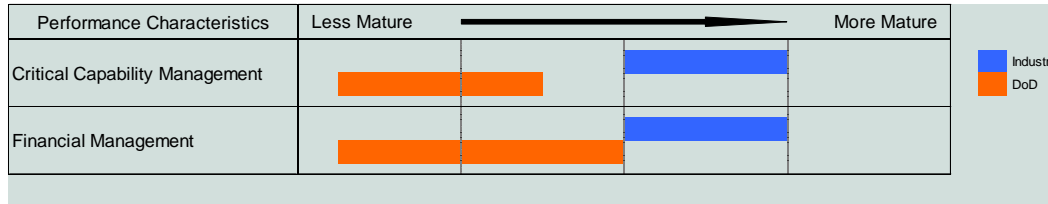


Critical Capability Management

- Industry sought technical, process, and decision-making superiority through capability maturity and process modularity
 - Product-related capabilities evaluated based on risks associated with level of technology, impact on quality, or availability in the open market
 - Process-related capabilities based on factors of process wholeness or integration, impact on time-definite delivery, and cost posture
 - Industry maintained a level of internal maturity appropriate for effective decision making
- DoD respondents addressed those functions directed by law, higher authority, or policy, little indication these were considered critical in addition to being required

Findings

Disparate Maturity Limits DoD (cont)



Financial Management – DoD consistently lagged Industry in ability to:

- Define specific and tangible financial indicators as critical to outcome achievement
- Integrate and drive the resource and investment machines in the creation of value
- Focus accountability for financial achievement
- Measure cost of operations, goods sold, assets, and inventory for product lines
- Develop techniques to transform the role of resource managers to a more strategic, analytical, and participatory role

Implications For DoD

Build on Maturity Analysis and Assessment of Best Practices

- Expand and Enhance the Body of Knowledge - Flesh out concepts, develop techniques and tools, and devise ways to align the processes that enable the value chain
- Proceed Deliberately - Select programs, or value chains, to test prototype applications; showcase successful techniques
- Enable the Community - Provide the tools, training, and policy environment needed for the community to transform



Implications for DoD

Expand and Enhance the Body of Knowledge

- **Clarify What Really Matters.** Describe and quantify a broader view of materiel readiness. *Define dimensions for Ready, Flexible, Reliable, Resilient, and Rational (cost of Operations and Assets)*
- **Create Governance And Accountability.** Create a product-centric enterprise. *Address Impact of Common Providers and Operational Units (Field-Level Support)*
- **Link Inputs And Outputs To Outcomes.** Determine and optimize the logical links among resources, activities, and outputs of the sustainment enterprise
- **Devise And Apply A Value Creation Model.** Identify, integrate, and align existing capabilities to ensure they are sufficient to create and realize value throughout the product-centric enterprise



Implications for DoD

Proceed Deliberately

Translate an enhanced body of knowledge into practical and manageable steps through:

- Focused and directed workshops targeted at learning more about top performers and refining practical steps to implementation
- Pilot programs to demonstrate the applicability and suitability of alternative strategies
- Leveraging ongoing CPI initiatives



A Way Ahead

| | |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clarify What Really Matters | <ul style="list-style-type: none">• Describe how services relate readiness outcomes to measures of success• Determine what measures are used• Determine if new KPPs policy is being implemented |
| Link Inputs And Outputs to Outcomes | <ul style="list-style-type: none">• Assess capabilities to establish cause & effect relationships• Assess ability to present BCA for entire logistics chain• Identify readiness modeling tools available/used |
| Create Governance and Accountability | <ul style="list-style-type: none">• Analyze attributes of successful PSI• Document organizational, technology & policy enablers• Identify actions to empower organic PSI |
| Devise and Apply a Value Creation Model | <ul style="list-style-type: none">• Best determine VOC• Site visits and assessments of DoD activities & capabilities• Recommend CPI policy changes |



Implications for DoD

Enable the Community

- Enhance Existing Guidance
 - Integrate other transformational guidebooks - Enhance PBL and CPI guidance
 - Create an outcome-focused self-assessment
 - Incorporate the methods, practices, and tools developed and tested
- Identify and Provide Required Training
 - Modify existing Defense Acquisition University learning modules as required



-
- Back up



Implications for DoD

Near Term Objectives/Initiatives

- Reassess use of traditional readiness measures in resource decisions
 - Review methods for Setting Aircraft Availability and Mission Capability Goals
 - Evaluate Implications of outcome measures on current Sparing, Readiness, and Manpower models
- Develop Strategic Approach to Value Creation – a value proposition
 - Policy to guide current capability development and employment (RCM, CBM, PBL, Partnering, etc)
- Explicitly recognize attributes and limitations of existing governance models
 - Close the gaps in responsibility, authority, and accountability
 - Address creation of governance in remaining weapon systems



Methodology

Core Study Team

| | |
|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dennis Virag, SAE ARI – President, Automotive Consulting Group | <ul style="list-style-type: none"> - Assisted Toyota development of North American supplier sourcing strategy - Performed benchmark analysis to evaluate Ford's ability to develop and implement new technology in cooperation with leading suppliers |
| Joseph Francis, PCOR - Chief Technology Officer, Supply Chain Council | <ul style="list-style-type: none"> - Former supply chain manager, HP/Compaq - Former chair of Supply Chain Council board |
| Taylor Wilkerson, LMI – Research Fellow, Supply Chain Management, Supply Chain Council certified SCOR trainer | <ul style="list-style-type: none"> - Contributor to Returns and Best Practices development in SCOR Model - Six years experience with supply chain performance management |
| Dr. Nick Avdellas, LMI - Research Fellow, PhD Public Administration and Policy, Lean Six Sigma Black Belt. | <ul style="list-style-type: none"> - Working supply chain and process improvement tasks with the US DoD and Siemens Corp. - Previous consulting experience with IBM and performance improvement in DoD supply and maintenance activities |
| Jerry Cothran, Supply Chain Visions/DAC | <ul style="list-style-type: none"> - Extensive PBL experience at DAU |
| Jerry Bapst, LMI - Research Fellow, Lean Six Sigma Black Belt, CFPIM, CIRM, Jonah | <ul style="list-style-type: none"> - Completed transformational supply chain tasks with Amtrak & Siemens Corp. - Previous consulting with GE, Lockheed Martin, Sikorsky - J&J Company's Director of operations & material management. |
| Dr. Steve Brady, Penn State University - Assistant Professor, Operations and Supply Chain Management | <ul style="list-style-type: none"> - Extensive research in DoD and private industry performance improvement initiatives - Director of Certification, SOLE--The International Society of Logistics |



Value of Money

Focus
Definition
DoD
Implication

| | Cost | Inputs | Processes | Outputs | Outcomes |
|--|------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| | Expenses incurred using the inputs | Resources available to the activity | Actions or services that produce outputs | Products and services produced or acquired | Intended result of the value chain |
| | Appropriations and expenditures that benefit the weapon system outcome achievement | Military and civilian manpower, equipment, and materiel. | Maintenance, acquisition, supply, distribution, engineering, etc. | Components repaired, depot events, spares procured, materiel shipped, modifications designed, etc. | Material readiness (units that are ready for use in terms defined by the warfighter) |

Efficiency

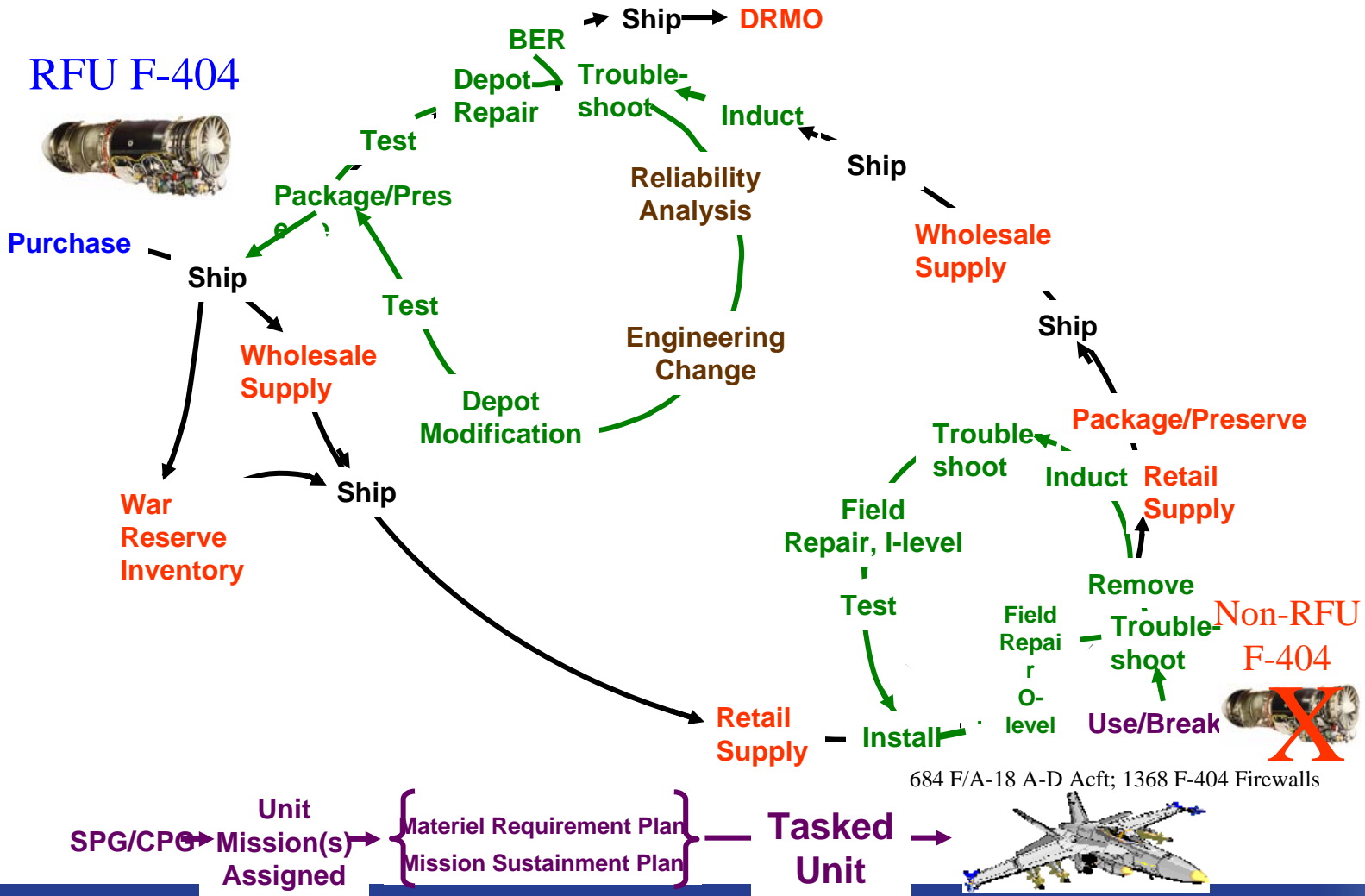
Effectiveness

ESG Functions and Communication

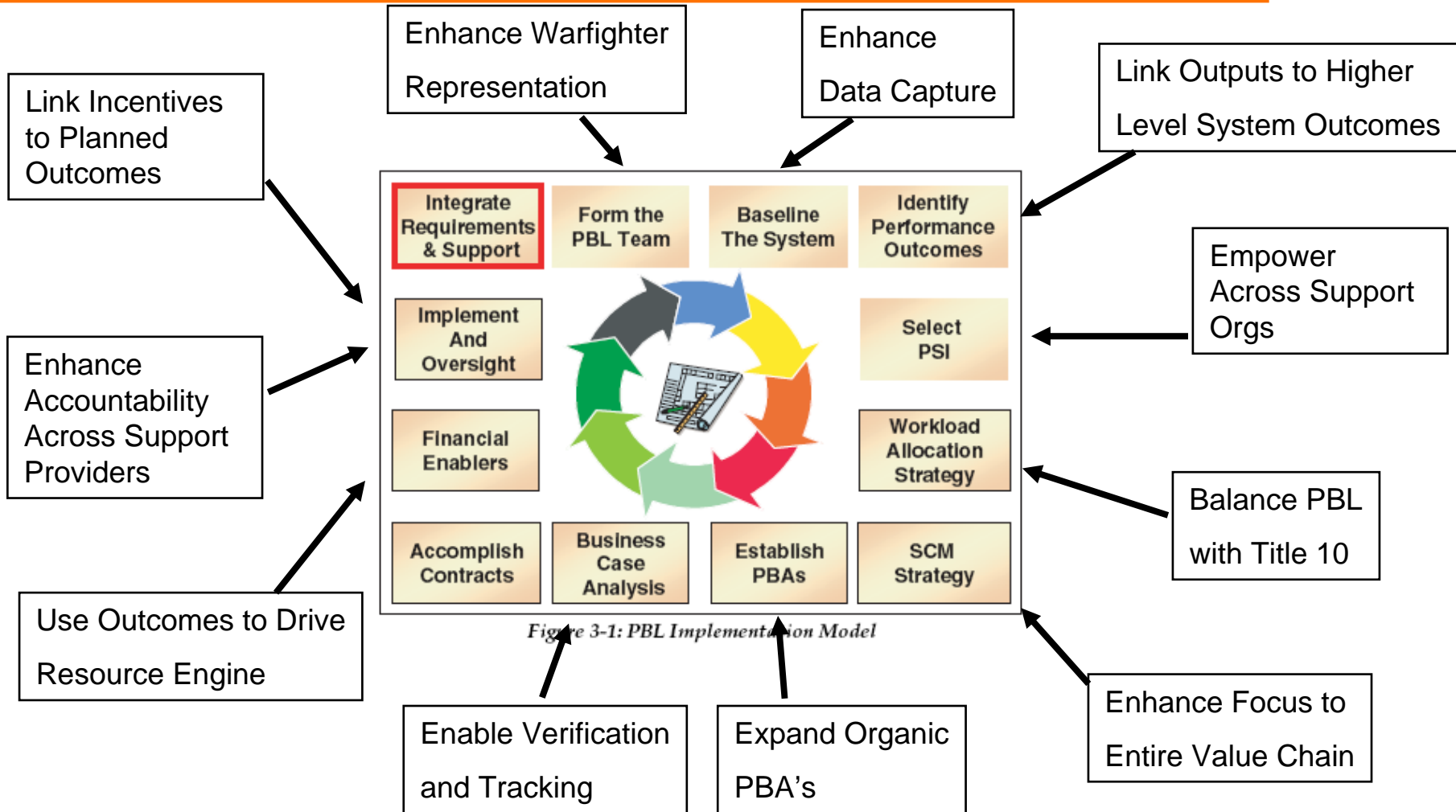
- Validate study methodology
- Provide analogous/applicable experience with successful performance based management
- Collaborative interface with core study team and service representatives
- Meeting waypoints
- Study update communication
- Guidebook review



Value Chain



Observations and Critiques from Many Sources

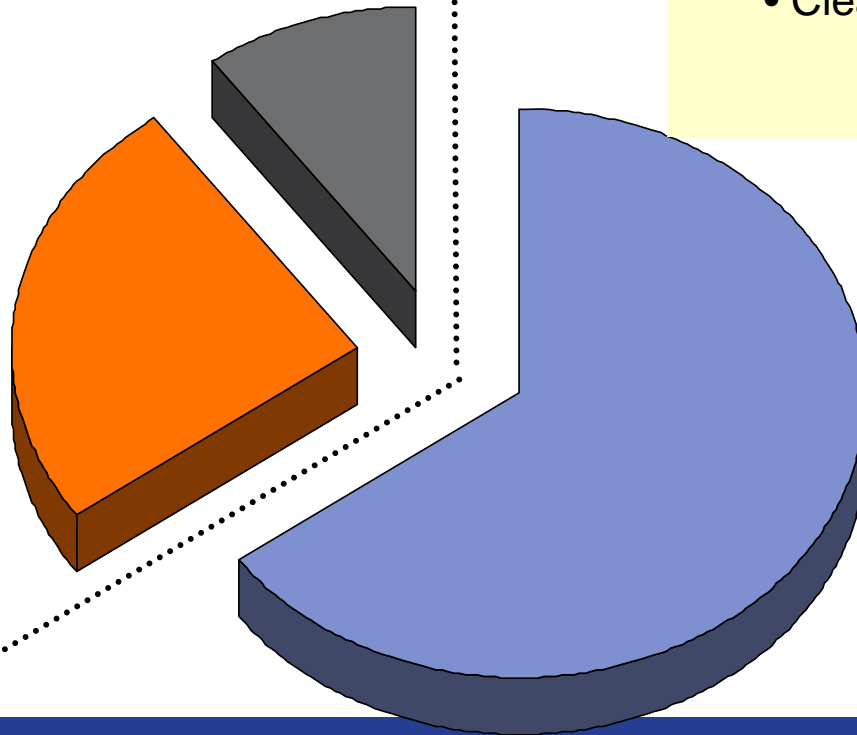


Total Support Strategy Providers

- Few Agreements
- Few Incentives
- Local Oversight
- Local value creation
- Disparate accountability
 - “Best Effort”

Common
Organic
Providers

Field-Level



- Integrated support
- Long term agreements
- Performance Monitoring
- Performance Incentives
- “Bottom line” Value creation
 - Clear accountability

Commercial
PBL

