Advances in Acquisition Project Management

CAPABILITIES FOCUSED ACQUISITION PROCESS

–Continued–

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Acquisition Objective

**Today**
Radio (Legacy)
Platform-Centric
Datalink-Centric

**Tomorrow**
System (Network)
Interoperable
Net-Centric

- Managed System
- Seamless Operation
- Open System Architecture
- Fully Interoperable
- Enterprise

Better Knowledge .. Better Planning .. Better Execution .... Better Results
Battle Cmd/Vehicle Integration
“A Teaming Effort Success Story”

**Early 2000’s**
- Fielded Battle Command

**Late 1990’s**
- Working Closely with PEO C3T to Integrate Battle Command

**2004**
- PEO GCS Supports the Planning of Spin Out (then termed Spiral Outs)
  - Combining Current Battle Command With FCS BC/SOSCOE, JTRS

**Now**
- Integrating SO1 LUT Configuration and prepping for Tests
- Building/Executing Spin Out Production Phase IMP/IMS

**2005**
- Leading the Synchronization With FCS & Leading the fielding of Spin Outs

**Project Management Office, Modular Brigade Enhancements**
- Established 19 Sep 05

Integrating *Battle Command Systems* in a manner that maximizes the use of BC information and minimizes impact to vehicle and crew

ABCs, FBCB2/BFT, SINCGARs, EPLRS Based Units
Supporting the Army Vision Require Synchronization Modernization WHY?

WHAT WORKED BEFORE..........

- Vehicle infrastructure has remained relatively constant since the last development/improvement program
- Requirements are evolving / expanding and requires integration of new capability
  - New/Updated CDDs/CPDs under development
  - Integrating new capability adding to already strained power, space, and weight claims
- Integrating more in current vehicle configuration impacts crew and vehicle capability

...DOESN’T NECESSARILY WORK NOW!

We are at the degradation point
Moore’s Law**
Doubling of the number of transistors on integrated circuits every 18 months.

Falling further behind increases obsolescence and the cost to catch up.

Obsolescence Breakpoint
Point where component is no longer available

** Computer industry technology "roadmaps" predict (as of 2001) that Moore's Law will continue for several chip generations.
Capabilities Management Challenge

Multiple, independent solutions increasing burden on the unit and impacting overall capability.

Fewer, well coordinated materiel solutions that are employed consistently across all systems & optimizing overall capability.
CF Needs to meet Future Force Required Capabilities

Sample Capability Difference Areas
Unmanned Systems
Networked Battle Command
Supportability/Reliability
Survivability
Lethality

Differences

Future Force Capabilities
HBCT
SBCT
Other BCT
Aviation
Fires Brigade
IBCT
Notional 1-n Gap Analysis
CASTFOREM provides SoSAT parameters associated with warfighting technology effectiveness
- e.g. probability of platform/subsystem mission survival, probability of mine detection

SoSAT provides CASTFOREM parameters associated with platform reliability and sustainment
- e.g. downtime due to (lack of) reliability failures
Integrated Analyses to Maximize Operational Effectiveness

SoSAT CLOE ...

CASTFOREM APS ...

JANUS -360 SA ...

GRIP Improved embedded training ...

1-N List Impacts

Optimization

Constraints -Budget -SWAP

Cost/Benefit

Rank Order Based on cost/benefit

Modernization Plan

Increases in Force Operating Capabilities With various BCT solution configurations

Sustainment
Survivability
Situation Awareness

1-N List Impacts

Evaluating Operational Effectiveness
PEO GCS SE Contracted Effort

- SE Contractor brought in to support execution of efforts like this

- Focus:
  - Supporting the execution of the common capability analysis
  - Developing for the PMs and PEO the SE processes

- Benefit:
  - They will get real-life experience with this effort and be able to develop better processes, determine tools and training needs
Ground Vehicle Analyses Process

1ST LEVEL Analyses

- Requirements (CDD, CPD, ONS, etc.)
- Capability Requirements Analysis (Capability Mapping)
  - Common capability requirement identified
- Possible common solutions
  - Vehicle Change Analysis
- Current Block Upgrade Needs

2ND LEVEL Detailed Analyses

- Available FCS Technologies
- Capability Search & Analysis
  - Candidates identified
- Other Available Technologies
  - (From Other PEOs, RDECOM, Commercial Sector)
- Cross-Vehicle Analysis
- Program Sys Eng Analysis
  - Common solutions possible
- Program and Lifecycle Cost Analyses of alternatives

3rd LEVEL Implement

- Capability Search & Analysis
- Candidates identified
- Program Sys Eng Analysis
  - Common solutions possible
- Program and Lifecycle Cost Analyses of alternatives
- More?
- Capability Down Select Decision(s)
- Optimal Solutions

- MS A
- MS B
- MS C
- FRD

Inputs
Process
Outputs
**PEO GCS Modernization Tenets**

### Facing Common Upgrade Challenges

- **Exceeding Weight Limits**
- **Power Availability**
- **Capability Needs**
- **O&S Cost Increasing**

### Opportunity for Common solutions

- Minimizing Development Costs
- Commonized Capability Across Fleets
- O&S Cost Benefits
- Increased quantities yielding procurement cost saving

### Modernization Leveraging Arforgen

**RESET & Train** vs. **UPGRADE & Train**
SUMMARY
Making It All Happen: “A Broad Ground Vehicle View”

Example: Programs Must Be Aligned To Enable Battle Command

**Requirements Alignment**

Vehicle CDDs → BC CDDs

(Capability/Brigade-Level Requirements Documents)

**Funding Alignment**

BC Hardware Funded + BC Software Funded + Vehicle Integration Funded = Fielded Battle Command

Any one of these are not funded = Fielded Battle Command

**Schedule Alignment**

Vehicle Schedules → IMP/IMS → BC Schedules

**SO1 Is Marching In This Direction**

- SO1 CDD
- SO1 Production Phase IMP/IMS under development
- Funds Management Alignment

Battle Command Development and Battle Command Vehicle Integration: *Synchronization is the Key to Success*