Considering Cost in Requirements Generation

17 Sep 09 Brief

to

Navy / Marine Corps Cost Analysis Symposium

CDR Steve Rasmussen
OPNAV N810
Joint Requirements and Acquisition Branch

steven.rasmussen@navy.mil
(703) 693-8777
What N810 does

• Joint Capabilities Integration and Development System (JCIDS) gatekeeper
  – Independent: monitors R3B (Navy only)
  – Joint interest / JROC interest: moves through JCB/JROC
• Focal Point for Functional Capabilities Board reps
• Not the decision-maker
  – Support / inform decision making forums
  – Visibility into JCIDS process
  – Endorse all Acquisition Program Baseline (APBs)
  – Route and track Urgent Operational Needs, Joint Operational Needs, and COCOM Integrated Priority Lists
• These slides discuss observations from our view
  – Not THE OPNAV position
• “Programs are allowed to enter and proceed through the acquisition process with requirements that are not fully understood, cost and schedule estimates that are based on optimistic assumptions, and a lack of sufficient knowledge about technology, design, and manufacturing.”
Requirements

- Essentially, what the warfighter needs
  - Derived from capability gap assessment
  - Includes capability and capacity
  - Validated by analysis…but also warfighter perspective (COCOM)
  - Usually somewhat unconstrained
- Historically, given as a list (KPPs), with direction to acquisition community to find a way
  Perception: “JROC never met a requirement it didn’t like”
Capability Gap Analysis

- Cost not usually addressed in detail during this phase except for DOTMLPF Change Requests
- Capability gaps are usually not contested.

Linking requirements and cost early takes a different mindset.
Cost in the Requirements Process

- Cost isn’t money
  - Cost is what you give up to achieve something else…
- Hazard of unconstrained “requirements”
  - Doesn’t address the “what are we giving up”
  - Doesn’t capture second-order effects / risk
- Navy gate process now requires us to look at cost early in the process (in the AoA)
GAO View

Unhealthy Competition for Resources

Pressure on decision makers to:

...promise high performance

...promise low resource demands

...move forward, get knowledge faster

Source: GAO
Improvement Initiatives

- **JCIDS**
  - Disciplined, Joint requirements process
- **Nunn-McCurdy legislation**
  - Notification of 15 / 25% cost growth
- **2009 Weapons Systems Acquisition Reform Act**
- **Increased COCOM Involvement**
  - Ensure complete understanding of trade-offs
- **Navy Gate Review Process**
  - Review points through the life of program

Sen McCain: “No amount of legislation can substitute for a true commitment to acquisition reform within the Pentagon.”
“Big A” Acquisition Process
DoD Acquisition System + JCIDS + Gate Process

Pass 1 – Gates 1, 2 & 3
(OPNAV/HQMC)

Pass 2 – Gates 4, 5 & 6
(ASN(RDA))

Material Solution Analysis
Technology Development
Engineering & Manufacturing Development
Production & Deployment
Operations & Support

Pre-Systems Acquisition
Systems Acquisition
Sustainment

Guided by ICD
Guided by CDD
Guided by CPD

Sources: CJCSI 3170.01G
DoDI 5000.02
SECNAVINST 5000.2D (GATE Process) – Oct 2008
Other Cost Drivers

- **CONOPS** –
  - Using things in different ways can raise and lower cost.

- **Architecture**
  - How things fit together

- **Employment options**
  - Can something else do this?

Getting cost under control is more than better cost estimation….it means thinking in terms of things foregone in different scenarios.
Joint Requirements Review
Observations

• R&D and Procurement funding are reviewed carefully
• Operations & Sustainment have not been scrutinized in the past
• Derived requirements add cost
  – KPPs versus KSAs
• Tough choices need to be made
Other Acquisition Reform Initiatives

- Early systems engineering
  - Competitive prototyping
- Technology Readiness Levels assessments
- Early Cost Estimates
- Elevated Role of Independent Cost Estimates
- Requirements Manager Certification for all people involved in requirements documents

Goal: Replace risk with knowledge.

Source: GAO
Summary

• Most agree requirements definition needs improvement
• Better requirements and early consideration of cost and trade-offs
• Injection points (gates) exist to look at cost throughout the life of a program
• Accurate cost estimates are key to making good decisions and trades
Discussion