Fleet Capabilities Based Assessment (CBA)

ASNE DAY
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Motivation – Recent AoAs

• LHA(R) and MPFF
  – Final acquisition alternative implemented (after delay) was not part of the recommended solution set from the AoA

• CG(X)
  – Final acquisition alternative not selected over a year after the originally scheduled completion date
SECNAVINST 5000.2D
2 Pass 6 Gate Process

Pre-AOA
AOA
Pre-PD
PD
CD
DD & C

AOA = Analysis of Alternatives
PD = Preliminary Design
CD = Contract Design
DD&C = Detail Design and Construction

Requirements - design
Requirements - DESIGN
Proposed Implementation of SECNAVINST 5000.2D
PASS 1: SYSCOM LEAD

JROC Approved
ICD + AOA Plan

Fleet Level CBA **
ICD(s) Dev

Note: Fleet Level CBA conducted on a continuous basis, independent of individual programs

Pre-AOA Process

CONCEPT REFINEMENT

Requirements, Preferred Solution, Risks, and Tech Dev Strategy Known

1. Navy Approved ICD & AOA Plan
2. Navy Selected Alternative & Approval of Risk Mitigation
3. Approved CDD, CONOPS & SDS Plan

Methods / Activities

** New Process

- Concept Formulation Program / Design Space Exploration **
- Risk Identification
- Risk Management & Mitigation
- Response Surface Dev
- Set Based Design
- Business Case Analysis
- SDS Plan Dev
- Tech. Dev. Strategy Dev

New Process
Current Pre-AOA Process

National Military Strategy
Strategic Planning Guidance
Contingency Planning Guidance
Quadrennial Defense Review Report

CBA
Functional Area Analysis
Functional Needs Analysis
Functional Solutions Analysis

ICD
Initial Capabilities Document

FLEET DESIGNED ONE AOA AT A TIME

Each Capability treated Independently

Note: Most Recent JCIDS instruction (March 2009) eliminates the terms FAA, FNA, and FSA
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Proposed Process

National Military Strategy
Strategic Planning Guidance
Contingency Planning Guidance
Quadrennial Defense Review Report

FUTURE FLEET Architecture
FLEET Level CBA
CBA
CBA
CBA

Functional Area Analysis
Functional Needs Analysis
Functional Solutions Analysis

ICD
ICD
ICD

Initial Capabilities Document

Capabilities treated holistically

Note: Most Recent JCIDS instruction (March 2009) eliminates the terms FAA, FNA, and FSA
CBA Time Horizons

- Long Range Planning: 15 to 40 years in the future
  - Use methods such as Future Force Formulation
  - Input to 30-year shipbuilding plan
  - Provide Science & Technology / Discovery & Invention guidance
  - Recommend Modernization and Service Life Extensions (SLEP)

- Mid Term Planning: FYDP to 15 years in the future
  - Produce ICDs to enter the Acquisition Process
  - Input to 30-year shipbuilding plan
  - Inform technology development roadmaps

- Near Term Planning: within FYDP
  - Concentrates on the number of ships/aircraft/systems to acquire, modernize, and retire from service to meet affordability goals while best meeting Navy and Joint Force Operational Requirements.

FYDP = Future Year Defense Plan -> 5 to 6 years
• Future is hard to predict
• Analyze multiple futures
  – Identify common solution elements
  – Identify when one has to decide on which future to prepare for
• Develop Draft ICDs for elements of proposed fleets
Mid Term Planning

- FYDP to 15 years in the future
- Alternate Futures necked down to one
- Analysis uses physics based models
- Trade Industrial Base, Cost, Capability, and CONOPS to optimize Navy Capability
- Develop ICDs to enter acquisition.
- Fund work to “get ready” for acquisition
  - Risk Reduction
  - Technology Transition
  - Tool Development

Table 3. Navy FY2009 30-Year Shipbuilding Plan (including FY2009-FY2013 FYDP)

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RL32665
Short Term Planning

- Optimize fleet with the Future Year Defense Plan
- Force Structure Dominated by ships and systems that already exist
- Generally dealing with determining the number of ships/systems to acquire, modernize, and retire to produce best capability within cost constraints.

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Source: Navy FY2009 budget submission.
Fleet Level CBA Organizational Structure

- Senior Navy Leadership
  Meets ~ every 6 months

- Fleet CBA OIPT
- Fleet CBA IIPT
  - Leaders of IPTs
    Meets ~ every 3 months
    Keeps three IPTs aligned
    Knowledge Management

- Fleet Long Range Planning IPT
  Updates Long-Range Architecture ~ every 4 years

- Mid-Term Fleet Architecture IPT
  Updates Mid-Term Architecture ~ every 2 years

- Near-Term Fleet Architecture IPT
  Updates Near-Term Architecture ~ every year

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Organizational Contributions

Operational Expertise
- Office of the Chief of Naval Operations (OPNAV)
- Fleet Representatives
- Naval Warfare Development Command (NWDC)
- Military Sealift Command (MSC)

System Cost and Performance
- Naval Sea Systems Command (NAVSEA)
- Naval Air Systems Command (NAVAIR)
- Naval Facilities Command (NAVFAC)
- Space & Naval Warfare Systems Command (SPAWAR)
- Naval Surface Warfare Center (NSWC)
- Naval Undersea Warfare Center (NUWC)
- Navy Center for Cost Analysis (NCCA)

Operational Analysis
- OPNAV N81, Navy QDR Office
- Naval Postgraduate School (NPS)
- Naval War College (NWC)
- Center for Naval Analysis (CNA)
- Applied Physics Laboratory (APL)

Technology Development
- Office of Naval Research (ONR)
- Naval Research Laboratory (NRL)
- Naval Surface Warfare Center (NSWC)
- Naval Undersea Warfare Center (NUWC)
- DARPA
- UARCS

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Summary

- A Fleet CBA provides a holistic fleet architecture to base investment decisions.

- Three Time Horizons
  - Long Range
  - Mid Term
  - Near Term

- Development of these architectures need to involve the intellectual capability of the entire Navy.

QUESTIONS?