



The Ship Acquisition Process: Status and Opportunities

*NDIA Expeditionary Warfare
Conference
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*RDML Chuck Goddard
Program Executive Officer, Ships*

Tomorrow's Navy in design and construction



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Concept Refinement	Technology Development	System Development & Demonstration	Production & Deployment	Operations & Support
<p>JHSS</p>  <p>JMAC</p>  <p>CG(X)</p> <p>JCC(X)</p>	<p>MPF(F)</p>       <p>JHSV</p> 	<p>LCS</p>   <p>DDG 1000</p>  <p>LHA 6</p> 	<p>LPD 17</p>  <p>T-AKE</p>  <p>LHD 8</p>  <p>LCAC SLEP</p> 	<p>Small Boats</p>   <p>FFG 7</p>  <p>CG 47</p>  <p>DDG 51</p> 

ZUMWALT (DDG 1000) Class Today



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- Designated DDG 1000 ZUMWALT Class Apr 06
- Detail design contracts awarded in Aug 06 to NGSS and BIW
- Construction contracts to be awarded 2008 to NGSS and BIW
- Mission System Equipment contacts awarded to Raytheon (Jan 07) and BAE (Jun 07)
- Navy is planning to re-sequence first ship set of Mission Systems Equipment to BIW



FREEDOM (LCS 1) Class Today



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- **Navy Program Review**

- Both design approaches satisfy validated need
- For a 55-ship class, the critical issue is cost of production
- Need to converge to one configuration to maximize efficiencies in production and minimize operation and maintenance costs

- **Way Ahead**

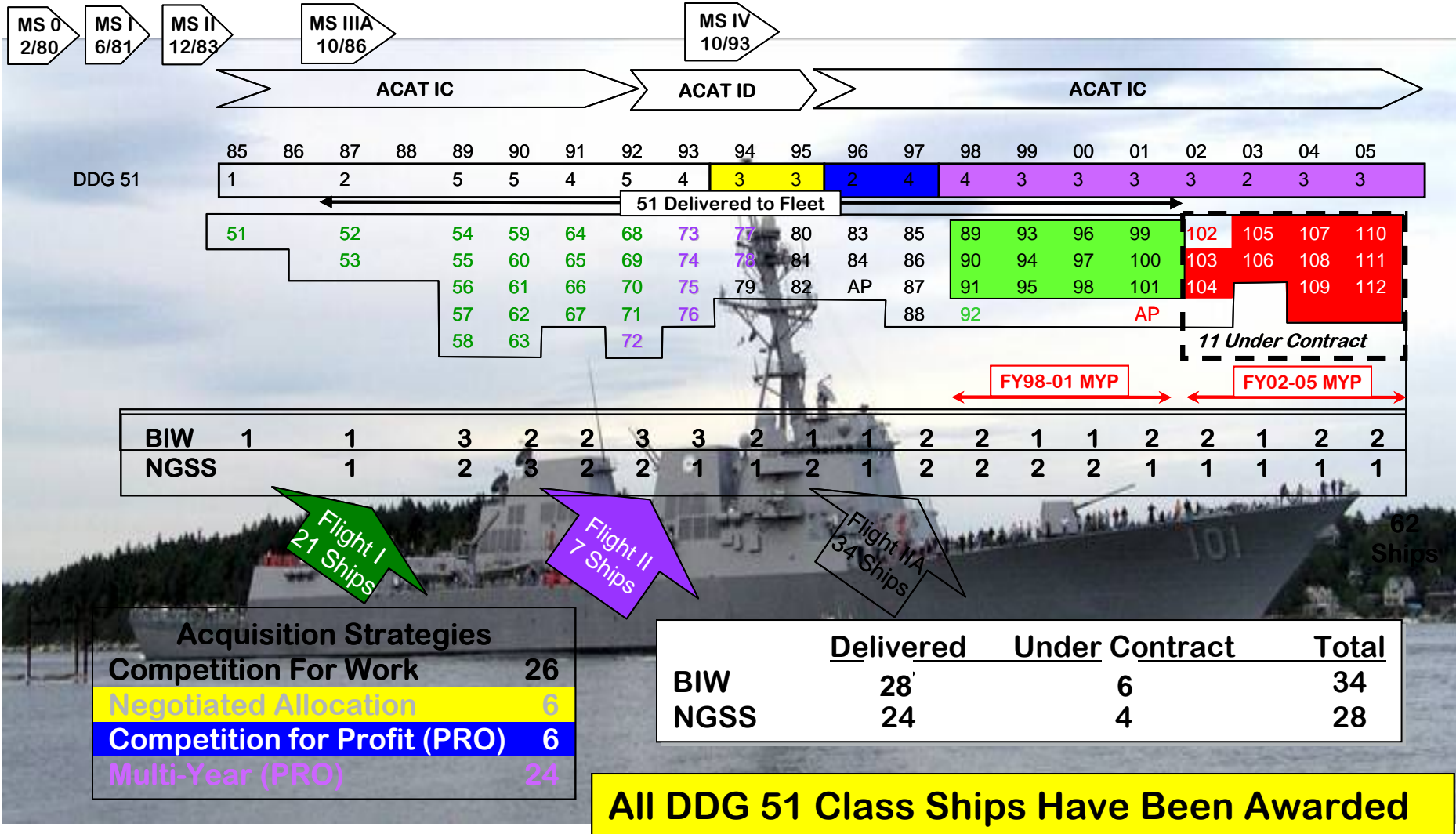
- Deliver LCS 1 and 2
- Contain cost growth the budget
- Keep the momentum
 - Continue Flight 0 in FY 08 and 09
- Build to the future – Flight 1



ARLEIGH BURKE (DDG 51) Class Today



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SAN ANTONIO (LPD 17) Class Today

- **USS SAN ANTONIO (LPD 17)**
 - Delivered Jul 06
 - Commissioned Jan 06
- **NEW ORLEANS (LPD 18)**
 - Delivered Dec 06
 - Commissioned Mar 07
- **MESA VERDE (LPD 19)**
 - Delivered Sept 07
 - Commissioning scheduled for Dec 07 in Panama City
- **GREEN BAY (LPD 20)**
 - 84% complete
 - Delivery in 2008
- **NEW YORK (LPD 21)**
 - 61% complete
 - Launch in late 2007
- **SAN DIEGO (LPD 22) – Keel laid May 07**
- **ANCHORAGE (LPD 23) – Keel laid Sept 07**
- **ARLINGTON (LPD 24) – Started fab. Aug 07**
- **SOMERSET (LPD 25) – Start fab. 08**



LHD 8 / LHA 6 Today

- LHD 8 under construction
 - Delivers Nov 08
- LHA 6 \$2.4B construction contract awarded 1 Jun 07



LEWIS AND CLARK (T-AKE 1) Class Today



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- **T-AKE 1 USNS *LEWIS AND CLARK***
 - Delivered 20 Jun 06
 - Very successful OPEVAL
- **T-AKE 2 USNS *SACAGAWEA***
 - Delivered 27 Feb 07
- **T-AKE 3 USNS *ALAN SHEPARD***
 - Delivered Jul 07
- **T-AKE 4 USNS *RICHARD E. BYRD***
 - Delivers Nov 07
- **T-AKE 5 USNS *ROBERT E. PEARY***
 - Ship is 41% complete
 - Delivers Jun 08
- **T-AKE 6 USNS *AMELIA EARHART***
 - Delivers Nov 08
- **T-AKE 7**
 - Keel laying 7 Nov
- **T-AKE 8-10**
 - Material ordered



Maritime Prepositioning Force (Future) MPF(F)

• Program Capability

- To provide Combatant/Joint Force Commanders a highly flexible operational and logistics support capability
- Meet widely varied expeditionary missions ranging from delivering combat ready personnel ashore in support of an Expeditionary Strike Force (ESF)
- Conduct independent operations in a permissive environment for Humanitarian Assistance, Global War on Terrorism (GWOT) or other smaller scale contingency ops.

• Way Ahead

- Issue RFP to accomplish Phase One preliminary design in FY 08



Joint High Speed Vessel (JHSV) Today

- **Program Capability**

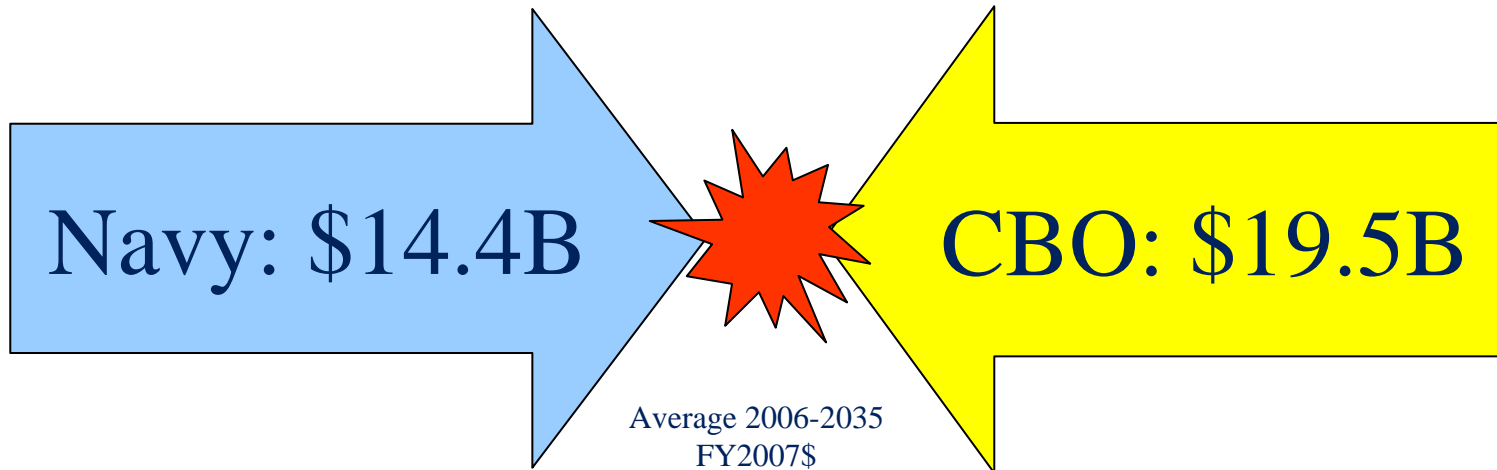
- High speed lift ship capable of transporting cargo and personnel across intratheater distances
- Can transport combat ready personnel and equipment
- Can offload in austere ports without reliance on infrastructure

- **Way Ahead**

- Award Phase One preliminary design contracts in early FY 08, and detail design and construction contract in late FY 08



313-Ship Navy: Navy estimate vs. CBO estimate



The question is *not* who is right or wrong...

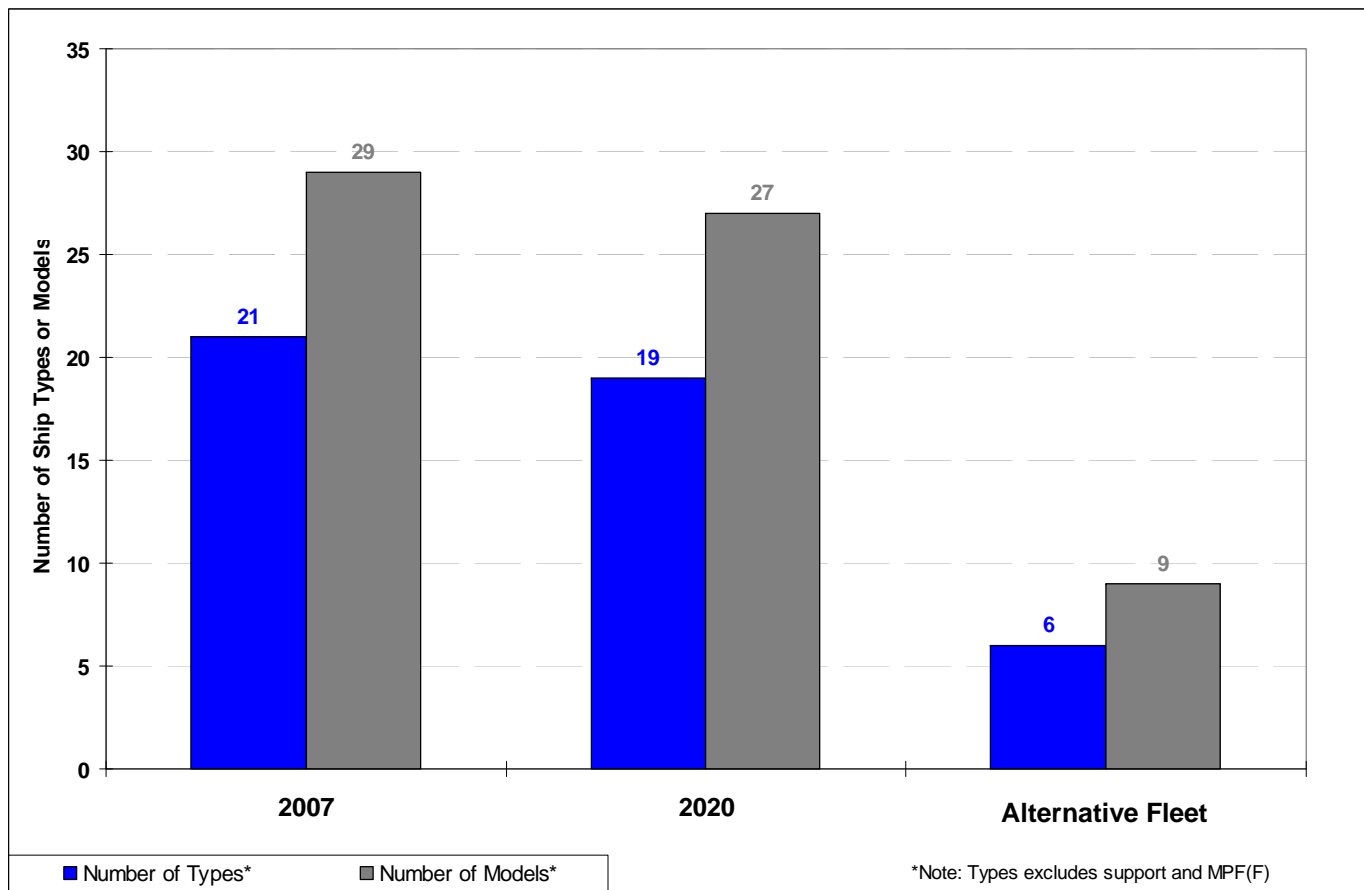
...the question is how will the Navy and industry change historical cost behavior.

The CNO and CBO plans *both* state the need to control costs

Vision – Fewer Ship Types and Models



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Potential to neck down to 9 ship models

Potential Amphibious Strategy

Today's Fleet



LHA 1



LHD



LSD 41



LSD 49



LPD 4



LPD 17

Next Fleet



LHD 8



LHA 6



LPD 17



Future Fleet



L (X)

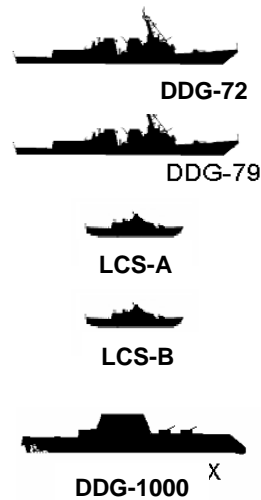
We can reduce to one ship type

Potential Surface Combatant Strategy

Today's Fleet



Next Fleet



Future Fleet



We can maximize reuse

Unique HM&E Varieties in the Fleet

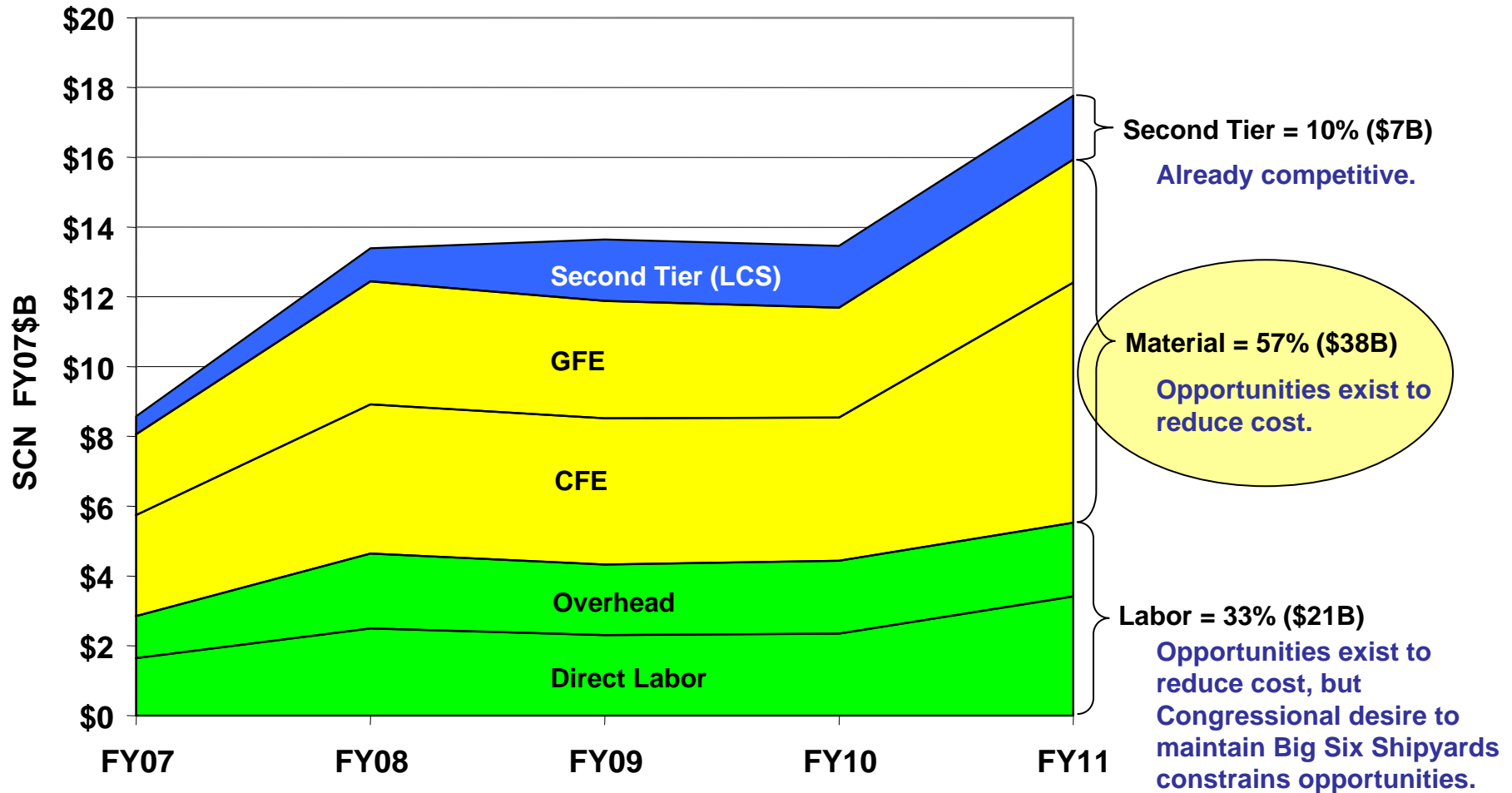


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- Masts & Kingposts - 47
- Diesel Engine - 187
- Gas Turbine Engine - 30
- Reduction Gear - 641
- Clutches & Couplings – 1,113
- Shaftings - 141
- Bearings - 383
- Propulsors - 125
- Rudder - 34
- Motors – 7,125
- Ship Service Generators - 57
- Emergency Generators - 53
- Frequency Converters - 52
- Pumps – 4,171
- Valves – 37,709
- A/C units - 123
- Distilling Plants - 82
- Air Compressors - 203

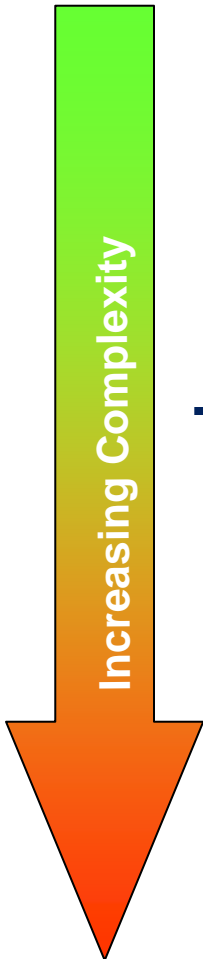
We need more commonality to reduce total cost

SCN Labor and Material Cost Breakout



Material cost offers most cost reduction opportunity

Alternative Contracting Strategies

- 
- ✓ Develop “A-Teams” for ship negotiation
 - ✓ Emphasize contract clauses for cost visibility
 - ✓ Separate risk-laden work packages from ship construction scope

Achievable

-
- Adopt corporate procurement practices *Increasingly Difficult*
 - Encourage industry to operate as a joint venture
 - Realign Navy to maximize leverage as one buyer

And more...

Change the Status Quo

- **We can reduce the types/models of ships and warfare systems baselines resulting in much lower costs**
 - Program Level AoA guidance should emphasize re-use
- **The majority of the shipbuilding costs over FYDP is material we procure on a program basis with each contractor**
 - Change our contracting strategy to a “portfolio basis”
 - Reduce number of components and standardize
- **Modularity offers the ability to reconfigure our ships and potential to reduce integration and modernization costs**
 - Focus our systems engineering on cross platform modularity

Building Tomorrow's Fleet

- Relative stability key to OUR future
- Affordability is paramount
 - Commonality
 - Minimal Changes
 - Portfolio Management

