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# Acquisition Needs and Trends for the Coming Decade

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*April 13, 2006*



## Some Broad Trends

- High, and growing unit costs
- Longer product realization cycles
- Non-state-of-the-art logistics
- Non-state-of-the-art business systems
- Cost for services are very high
- Inadequate military equipment reliability
- Large, and growing, operations and maintenance costs



# Changes that are Driving Acquisition Reform Today

- Domestic Economics
  - Debt, Medicare, Social Security, Supplementals
- Threat Changes
  - Asymmetric warfare (bio, cyber, IEDs); world-wide terrorism; pandemics; weapons proliferation; rogue nuclear states
- New Missions
  - Homeland defense; missile defense; counterinsurgency; stability and reconstruction
- Warfighting Changes
  - Netcentric Warfare; Systems-of-Systems; Joint and coalition operations
- Intelligence Changes
  - Integrated data; open-sources; Language and culture understanding
- China
  - Future adversary or Econ. Competitor
- Technological Changes
  - Infor., bio, nano, robotics, high-energy lasers, etc.
- Industrial Changes
  - Horizontal & vertical integration; commercial high-tech advances
- Globalization
  - Rapid spread of Technology; multinational firms; foreign sourcing
- Government Workforce
  - Aging; wrong skill mix; judgment vs. rules; managers vs. doers
- Recent “Scandals”
  - Druyun, Cunningham, Abramoff, etc.
- Isolationist Moves
  - “Buy-American”; discourage foreign scholars; energy “intependence”



## Congress and DoD reacting: Some Current Activities

- Quadrennial Defense Review (February 6 -- Follow-ups initiated)
  - What we buy; how we allocate resources; how we buy
  
- Defense Acquisition Performance Assessment (report out in February)
  - Greater role for COCOMS, Service Chiefs; acquisition workforce development; focus on cycle time; etc.
  
- SARA, Sect. 1423 Acquisition Advisory Panel (report out in March)
  - “Reviewing all laws, regulations, and Government Policies”
  
- Defense Science Board Task Forces (reports coming out)
  - Summer Study on “Transformation”; others on Technology, ManTech, etc.
  
- Congressional Legislation (lots of proposals)
  - From “waste, fraud, and abuse” to “Buy American”



## My “Top 8” Acquisition Reforms for the coming decade

1. Lower Cost Weapons
2. Speed from Demo. to Field
3. Continuous Option of Competition
4. Performance-Based Acquisitions
5. Modern Logistics
6. More Focus on Research
7. Enterprise Integration I.T. Systems
8. Transformation of the Government Workforce



# 1. Lower Cost Weapons

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- Lower production and support costs are an R&D issue (they are “designed” in)
- Low-cost weapons must be part of the weapon’s “requirements”
- Likely smaller quantities require process innovation (e.g. multiproduct and/or dual use)
- Maximum use must be made of commercial subsystems, parts, software, etc.
- Platforms as “nodes” in net-centric operations (vs. platform-centric systems)
- Unmanned systems are much cheaper
- Use “force multipliers” for greater overall force effectiveness (e.g. distributed sensors, precision weapons, robotics)

**The Unit Costs of current ships, planes, tanks, missiles, etc. is simply unaffordable in the quantities required -- Low cost weapons are the future!**



## 2. Speed from Demo. to Field

- Adversaries rapidly get commercial stuff off the world market
- Must use “spiral development” (prove the technology, then rapidly apply it)
- Do prototyping to: 1) prove it works, 2) show it is useful, and 3) show it is produceable and affordable
- Limit Development to 5 years

**We can not be “technologically superior” militarily, nor can we afford developments that take one to two decades.**

### 3. Continuous Option of Competition

- Design teams are the critical elements of the defense industrial base
- Competition creates innovation while lowering costs (monopoly doesn't)
- An option needed at all levels (primes and critical subs.)
- A growing concern is vertical integration -- especially regarding systems-integration contracts (government needs to be involved in "make or buy")
- The credible option of competition (e.g. with an R&D award) is inexpensive and effective

**The data on the benefits of competition are overwhelming -- in obtaining higher performance at lower costs, due to product and process innovation.**



## 4. Performance-Based Acquisitions






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- Performance-based “requirements” (vs. design-based) and performance-based contracts (vs. compliance-based) give the contractor the opportunity to innovate
- Applies to products, services, and logistics
- Lots of “barriers” exist, and must be overcome (from cultural, to regulatory, to training)
- Incentives are the key to performance-based acquisitions

**The data (in improved performance at lower costs) are overwhelming.**

# Performance Based Logistics Availability and Response Time

| <u>Navy Program</u>  | Material Availability |                 | Logistics Response Time |                               |
|--|-----------------------|-----------------|-------------------------|-------------------------------|
|  | <u>Pre-PBL</u>        | <u>Post-PBL</u> | <u>Pre-PBL</u>          | <u>Post-PBL</u>               |
|  <p>F-14 LANTIRN</p>                        | 73%                   | 90%             | 56.9 Days               | 5 Days                        |
|  <p>H-60 Avionics</p>                       | 71%                   | 85%             | 52.7 Days               | 8 Days                        |
|  <p>F/A-18 Stores<br/>Mgmt System (SMS)</p> | 65%                   | 98%             | 42.6 Days               | 2 Days CONUS<br>7 Days OCONUS |
|  <p>Tires</p>                              | 70%                   | 85%             | 28.9 Days               | 2 Days CONUS<br>4 Days OCONUS |
|  <p>APU</p>                               | 65%                   | 90%             | 35 Days                 | 6.5 Days                      |



## 5. Modern Logistics

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- Spend over \$90 Billion/year; employ over 1 Million government people; have an inventory of approximately \$67 Billion -- but do not do a world-class job, by any measure (response time, flexibility, cost, etc.)
- Logistics has been a major problem in Iraq (it is critical to 21<sup>st</sup> Century warfighting)
- The commercial world has integrated logistics data systems (DoD has over 600 non-inoperable systems; that also don't link to finance, personnel, etc.)

**The potential for dramatic improvement in performance with billions of dollars of savings must be realized -- and soon.**



## *Large Opportunity for Improved Performance at Lower Cost*

| <b>Process</b>                            | <b>DoD</b>                     | <b>Commercial Companies</b> |                                 |                                  |
|---|--------------------------------|-----------------------------|---------------------------------|----------------------------------|
| Distribution<br>(for in-stock items)      | 21 days<br>(DoD average)       | 1 day<br>(Motorola)         | 3 days<br>(Boeing)              | 2 days<br>(Caterpillar)          |
| Repair<br>(cycle time)                    | 4-144 days<br>(DoD average)    | 3 days<br>(Compaq)          | 14 days<br>(Boeing electronics) | 14 days<br>(Detroit Diesel)      |
| Repair<br>(shop time)                     | 8-35 days<br>(Army tank/truck) | 1 day<br>(Compaq)           | 10 days<br>(Boeing electronics) | 5 days<br>(Detroit Diesel)       |
| Procurement<br>(administrative lead time) | 88 days<br>(DLA)               | 4 days<br>(Texas Inst.)     | 0.5 days<br>(Portland General)  | Minutes<br>(Boeing, Caterpillar) |

Some of this data re from 1996 DSB report.

## 6. More Focus on Research

- R&D resources (in government and industry) have been shifting to Development
- Need far more research in areas of “disruptive” technologies (e.g. high-energy; robotics; advanced kinetics; nanotech; etc.)
- The current moves toward “isolationism” (e.g. “Buy American”; restrictions on non-U.S. scholars doing research in America; increased security restrictions) hurt us far more than we gain
- Serious research on Acquisition Reform is also needed

**This area (research) is America’s long-term military and economic future -- we can not afford to “eat the seed corn”, as we are increasingly doing.**

## 7. Enterprise Integration I.T. Systems

- Most corporations have it today; it is inexcusable that the DoD doesn't (Instead, the DoD currently has 4,700 non-interoperable business systems!)
- Efforts to date have met with huge resistance
- The system must have access to data on: personnel, material, finance, procurement, real property, logistics, supplies, medical
- It must be COTS-based (if DoD processes need to change, so be it)

**A new Agency has been formed to achieve Enterprise Integration – the DoD must join the information age.**

## 8. Transformation of the Government Workforce

- The long-term policy should be:
  - **use military people for military functions only**
  - **use civilian government personnel for inherently-governmental functions only**
  - **use civilian contractors, based on competitive awards, for all other functions**
  
- We need to move quickly in this direction (allowing government civilians to bid competitively on work they are currently doing)
- Skills for government civilians must be more for “managers” than “doers” (lots of near-term retirements represent an opportunity)
- New rules are needed regarding contractors in combat zones
- Military Health Care costs are out of control

21<sup>st</sup> Century DoD operations require a skilled, total workforce – taking advantage of the best in Military, Government Civilians, and Industry.



# Results of A-76 DoD Cost Comparisons: 1978 - 1994

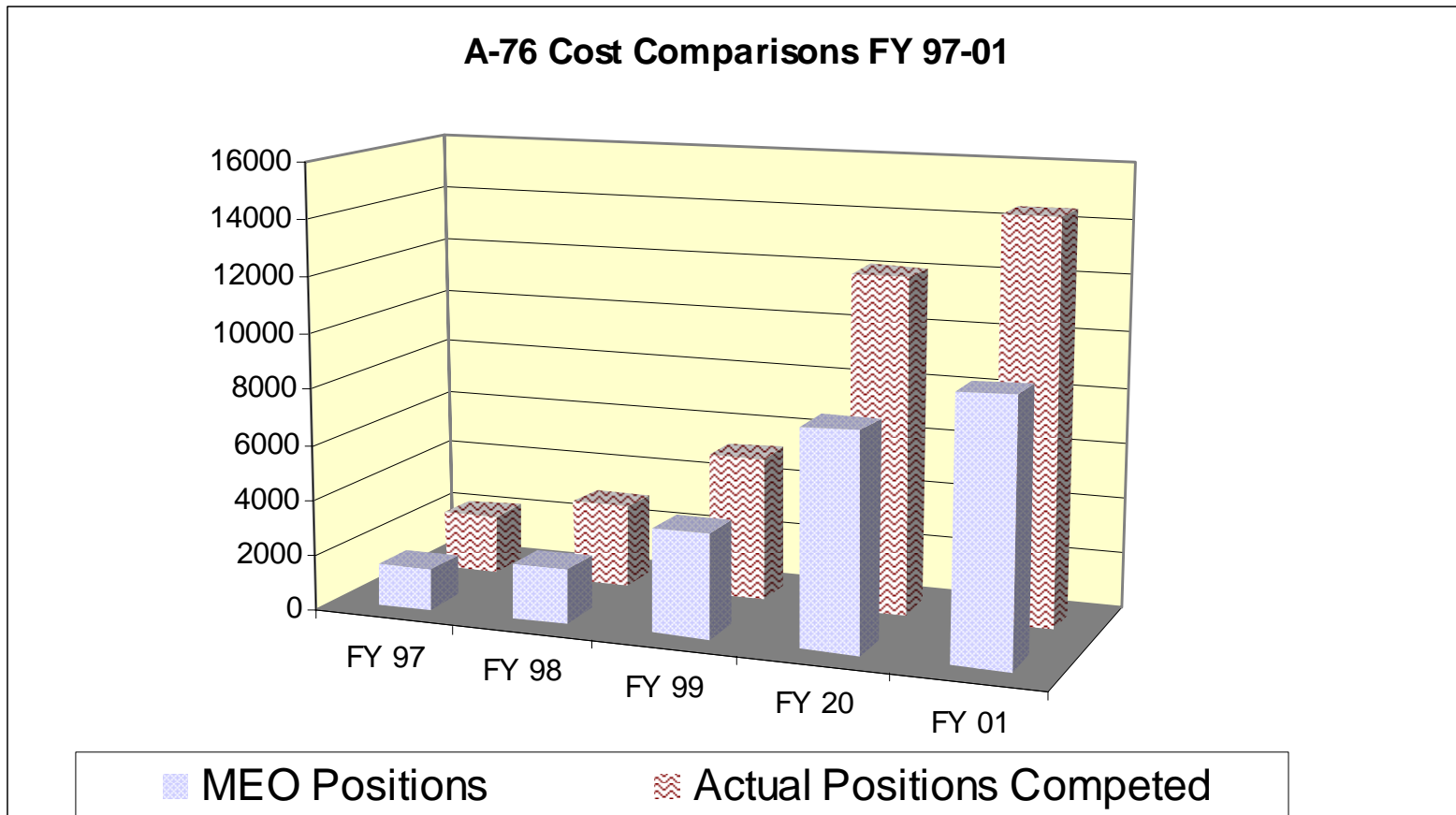
|                  | Competitions Completed |  | Average Annual Savings (\$M) |  | Percent Savings |
|------------------|------------------------|--|------------------------------|--|-----------------|
| Army             | 510                    |  | \$470                        |  | 27%             |
| Air Force        | 733                    |  | \$560                        |  | 36%             |
| Marine Corps     | 39                     |  | \$23                         |  | 34%             |
| Navy             | 806                    |  | \$411                        |  | 30%             |
| Defense Agencies | 50                     |  | \$13                         |  | 28%             |
|                  |                        |  |                              |  |                 |
| Total            | 2,138                  |  | \$1,478                      |  | 31%             |

*Defense Reform Initiative  
Report, Nov. 1997*





# Results of A-76 Cost Comparison: FY 1997 - 2001



Source: DoD CAMIS Data



## Distribution of DoD Workforce (Thousands)

| Occupation                                   | # Civ |      | # Mil      |            | Total |            | %          |            |
|--|-------|------|------------|------------|-------|------------|------------|------------|
|  | 1996  | 2005 | 1996       | 2005       | 1996  | 2005       | 1996       | 2005       |
| Maintenance/Engineers                        | 233   | 198  | <b>445</b> | <b>402</b> | 678   | <b>600</b> | <b>27%</b> | <b>29%</b> |
| Administration                               | 262   | 270  | <b>119</b> | <b>207</b> | 382   | 476        | <b>16%</b> | <b>23%</b> |
| Combat                                       | 12    | 8    | <b>324</b> | <b>296</b> | 336   | 304        | <b>14%</b> | <b>15%</b> |
| Service, Supply, and Procurement (Logistics) | 132   | 92   | <b>152</b> | <b>127</b> | 283   | 218        | <b>12%</b> | <b>11%</b> |
| Health/Medical                               | 28    | 28   | 131        | 112        | 159   | 140        | 6%         | 7%         |
| Technical                                    | 114   | 76   | 91         | 50         | 205   | 128        | 8%         | 6%         |
| Comm/Intelligence                            | 6     | 7    | 137        | 118        | 143   | 125        | 6%         | 6%         |
| Other/Unknown                                | 50    | 8    | 180        | 60         | 229   | 69         | 9%         | 3%         |
| Total  | 874   | 687  | 1,599      | 1,370      | 2,472 | 2,057      | 100%       | 100%       |



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# Summary

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- Change (in the way the DoD does it's business) is both needed and inevitable
- The question is: will it happen rapidly, efficiently, and effectively

OR

slowly, begrudgingly, and with great cost and ineffectiveness?

- We really have no choice – if we are to maintain our military and economic security

**And we need to start now!**