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# **Reforming the Defense Acquisition System: This Time Must Be Different!**

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# Some Summary Statements on the Environment

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- ➔ Perhaps the biggest national security concern is the U.S. economy – former Chairman Joint Chiefs of Staff: “America’s #1 national security threat is the deficit.”
- ➔ Regarding the Security Environment – Former Director of National Intelligence: “More challenges today than we’ve had in the last 50 years.”
- ➔ In terms of the combined economic and security environment – a senior military officer in the intelligence field: “the controlling concern we have today is uncertainty.”



## The needs, therefore, are:

- ➔ **Do more with less** – and recognize that “even how much less” is uncertain
- ➔ **Respond much faster** – to the rapidly-changing, and uncertain, threat environment
- ➔ **Maintain technological leadership** – in all areas (e.g. in cybersecurity, and in intelligence from Big Data Analytics); while recognizing that technology, industry, and labor today are globalized (and, in many areas, the technological leadership exists in commercial or foreign firms -- not in DoD)



# Background

- ➔ Reforms over the past five decades used differing strategies to change and improve components of the Defense Acquisition System

Focus	Strategy
Cutting Waste, Fraud, and Abuse	Altering Phases, Milestones, and Requirements
Increasing Efficiency	Restructuring the DoD Management Structure and Chain of Command and Promoting Commercial Products
Improving Quality of the DoD Acquisition Workforce	Training, Education, and Experience Requirements for Program Managers

**Meaningful reform and successful implementation are more important now than ever before to provide the required systems affordably**



# Early Acquisition Reforms

## ➔ **1961-1968: McNamara Innovations**

- Centralized planning and management, by developing the Planning, Programming, and Budgeting System (PPBS)
- Introduced and promoted Total Package Procurement (TPP)
- Created Defense Contract Administration Service and Defense Contract Audit Agency to oversee contractors

## ➔ **1969: Blue Ribbon Defense Panel**

- Placed greater emphasis on prototype testing to reduce technical risk

## ➔ **1969-1972: David Packard Reforms**

- Management through Defense Systems Acquisition Review Council (DSARC) - limited oversight at 3 decision milestones, guided by Development Concepts Paper (DCP)
- Emphasized improved cost and schedule estimates, better system definition, and earlier identification of risk factors



# 1970-80's Reform

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- ➔ **1972: Congressional Commission on Government Procurement**
  - Main focus: relationship between government and industry, and timely payments to contractors
  - Recommended the creation of the Office of Federal Procurement Policy, acquisition of more commercial products, and simplifying acquisition processes and regulations
- ➔ **1981: Acquisition Improvement Plan: decentralized approach**
  - Increased role for the Services in PPBS
  - Promoted multi-year procurement to stabilize programs in the face of budget fluctuations and advocated for “more realistic” budgeting
- ➔ **1982: Nunn-McCurdy Amendment**
  - Congressional notification of 15% unit cost growth and cancellation (unless OSD waiver) for 25% unit cost growth
- ➔ **1983: Carlucci Initiatives**
  - 32 initiatives focused on streamlining the acquisition process and achieving greater efficiency by removing regulations
  - Streamlined DSARC, only two Milestones: requirements and production



# Packard Commission and Defense Reorganization Act of 1986

- ➔ **1986: Packard Commission** – many of its recommendations enacted in Defense Reorganization Act of 1986 (Goldwater-Nichols Act)
  - Created a clear chain of command
    - USD for Acquisition to serve as the Defense Acquisition Executive
    - Each service/component would have a component acquisition executive (CAE) to report to the USD (as well as to the Service Secretary)
    - Within DoD components, Program Managers report to Program Executive Officers appointed by the component executive
  - Recommended revamped Joint Resources Management Board for requirements generation, co-chaired by USD (A) and a newly-created position, vice-chairman of the JCS [implementation dropped the USD(A)]
  - Advocated for commercial purchases, multiyear procurement, competitive prototyping, enhanced long-term DoD budgetary planning, and two-year appropriations bills from Congress
- ➔ **Bill Perry as Secretary of Defense**
  - Pushed for Commercial specs and standards
  - Put out a DoD Directive (June 29, 1994) - - known as the “Perry Memo” (titled “ A New Way of Doing Business”)



# 1990's - Faster, Better, Cheaper

## ➔ **1993 Section 800 Report**

- Proposed more commercial integration and expanded exemptions for the Truth in Negotiations Act
- Many recommendations were adopted during the 1990's

## ➔ **1993 H.R. 2238 Federal Acquisition Improvement Act**

- Encouraged commercial product acquisition, strengthened the bid protest process, and streamlined small purchases

## ➔ **1994 S. 1587 Federal Acquisition Streamlining Act**

- Accepted many Section 800 Report recommendations
- Emphasized commercial acquisition and major system statutes

## ➔ **1995 Defense Standards Improvement Council – USD(A) formed Tiger Team on Metrics**

- Proposed strategic outcome metrics for measuring the impact of acquisition reform (initial metrics covered cost, acquisition performance, schedule, and commercial practices)



# Recent Reforms

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## ➔ 1995 Clinger-Cohen Act

- Imposed increased milspec requirements on new contracts (reversed Perry Initiative to use commercial specs and standards)
- Single Process Initiative allowed each facility to shift to one format
- Created the CIO position, and resulted in ambiguity in IT acquisition responsibility
- Urged use of commercial I.T.

## ➔ 1997 Defense Reform Initiative

- Emphasized adopting modern business practices by streamlining organizations, increasing competition, and eliminating waste

## ➔ 2002 DoDD and DoDI 5000.02 rewritten

- Established milestones and requirements decision points in the Defense Acquisition System

## ➔ 2008 FY07 John Warner National Defense Act

- Required DoD to update Congress biannually on implementation of acquisition reform



## **Recent Reforms (cont.)**

- ➔ **2009 Joint Capabilities and Integration Development System Introduced**
  - Enhanced methodology to identify and describe capabilities gaps
  - Engaged the acquisition community earlier
  - Better defined non-materiel aspects of materiel solutions
  - Helped to prioritize capability gaps and proposals
- ➔ **2009 FY08 H.R. 4986 National Defense Authorization Act**
  - Established the Defense Acquisition Workforce Development Fund
  - Created the Defense Materiel Readiness Board
- ➔ **2009 S. 454 Weapon System Acquisition Reform Act**
  - Required periodical assessments and MDAP prototyping
  - Established requirement for Director of Cost Assessment and Program Evaluation (CAPE) to provide independent cost analysis to SecDef
- ➔ **2010 Better Buying Power 1.0**
  - Aimed to deliver warfighting capabilities with a constrained budget
- ➔ **2012 Better Buying Power 2.0**
  - 36 initiatives, revising BBP 1.0, that focus on affordability and cost control, increased productivity, effective competition, and professionalism



# Historical Cost and Schedule Growth Studies

Source	Sample	Findings
Fox 2012	38 major programs in '60s	38 ongoing programs in 1969 had cost estimates 50% higher than original
RAND 1979	17 mature programs in '70s	Mean cost growth was 34%, dollar weighted mean cost growth was 20%
RAND 2006	46 completed programs from 1968-2003	Mean total cost growth, adjusted for quantity changes, was 46% from Milestone II baseline
RAND 2008	35 completed programs	Total cost growth was 60%: 12.9% for requirements, 21.9% for quantity, 10.1% for cost estimate, 8.9% for schedule changes
2013 Performance of the Defense Acq System	MDAP Development Contracts (1970-2011)	Total median cost growth is 44% for the Army (97 programs), 30% for the Navy (146), and 31% for the Air Force (179)
2014 Performance of the Defense Acq System	Sampling of Development and Production MDAPs 2001-2013	Mean cost growth for development: 48-87% Mean cost growth for production: 18-30%



# Cost and Schedule Growth

- ➔ From 2000-2012 median cost and schedule growth for MDAPs was 29% and 30 months respectively
- ➔ Caused by **high risk**, **low cost** and **schedule** baselines, optimistic performance standards, uncertain requirements, and other factors (such as **changes** in budgets, quantities, technologies, etc.)
- ➔ Programs vulnerable when concurrency strategy used
  - GAO found that 80% of surveyed programs conducted at least 30% of development testing during production, despite risks
- ➔ Difficult to control cost and schedule as programs become increasingly complex
- ➔ Regulations, reporting, and oversight requirements that add no value to program performance are also factors

**In spite of all of the reform initiatives, cost and schedule growth has seen little improvement.**



# Challenges to Defense Acquisition System

- I. What is Acquired
- II. How Goods and Services are Acquired
- III. From Whom Goods and Services are Acquired
- IV. Who is Responsible for Acquisition, and who does the Acquisition
- V. How systems are supported (Logistics is highest cost area, but not “world class”)

**All five areas are critical – and currently have problems**



# Summary : To Successfully respond to the 21<sup>st</sup> Century Environment

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- ➔ 20<sup>th</sup> Century policies, assumptions, laws, structures, acquisition practices, must change!
- ➔ Requires a focus on:
  - Affordability (in “requirements;” equipment and services selection; design; force structure, etc.)
  - Changes to resource allocations and structures (dollars; people; organizations; industry; globalization; education and training; etc.)
  - Flexibility and responsiveness
  - Staying ahead
  - The importance of the acquisition workforce

**“Smart Competition” - - effectively applied - - can provide the required higher performance, lower costs, higher quality, flexibility, and responsiveness for 21<sup>st</sup> Century Security needs**



# The Issue

**What specific reforms are needed now, and how should they be implemented?**

- ➔ Legislative**
- ➔ Regulatory**
- ➔ Organizational**
- ➔ Cultural**
- ➔ Other**



# Acquisition Reform Suggestions

- ➔ Stable (e.g. multi-year) and realistic budgeting, and scheduling
- ➔ Realistic and affordable requirements; include cost as a requirement
- ➔ Remove barriers to civil/military industrial integration
- ➔ Use appropriate contract structure to incentivize contractors
  - Streamlining and training on “buying commercial” (goods and services)
  - Move to “Performance Based Logistics”
- ➔ Reduce the regulatory and reporting burden
- ➔ Gain the economic and military benefits of globalization (reduce the barriers)
- ➔ New 5000 series for services and I.T.
- ➔ Leverage the benefits of Public-Private Partnerships
- ➔ Reintroduce Public/Private competitions for non-inherently governmental work
- ➔ Reduce focus on compliance and incentivize program performance (shift balance of power from contracting to program management)
- ➔ Improve government/industry interchanges (on personnel and policy development)



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# Backups



# I. What is Acquired (Planning)

- ➔ Long-term and strategic planning is hindered by changing budget priorities
  - DoD shapes its priorities by issuing a Future Years Defense Program that analyzes expectations for the next five years
  - However, most DoD spending is discretionary, and Congress debates it each year
- ➔ DoD is limited by Congressional appropriations subject to fluctuations on a yearly basis
  - Budget Control Act sequester cuts beginning in FY2016 will make long-term planning even more challenging
  - Different priorities lead to different funding plans
  - Appropriations to DoD can be very different from the initial budget request
- ➔ More realistic budgets and stable estimates in the planning stages would prevent many future issues

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# I. What is Acquired (Requirements)

- ➔ A large part of the decision-making process is determining the requirements for the development and production of the weapon system
- ➔ Requirements generation and resource allocation are often not coordinated
  - Too many programs are started given limited resources -- causes DoD to ask for additional funds or cut other programs
- ➔ The Joint Requirements Oversight Council lacks consistent and standardized metrics to inform decisions between competing programs and capabilities within them
- ➔ OSD, the Services, and the JROC do not have an adequate modeling capability to assist in determining program tradeoffs
  - Analysis of Alternatives, Initial Capability Document, and Capability Development Document are the major reviews
  - Cost is not considered a “requirement” (but, it does drive quantity – which is a “requirement”)

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# I. What is Acquired (Technological Maturity)

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- ➔ There is often little coordination between the military services regarding which technology should be the priority in research and development
- ➔ The maturity of technology is hard to assess in programs suffering ‘requirements creep’
- ➔ Each time a new technology is incorporated, re-baselining of the weapon system occurs; which in turn leads to cost and schedule growth
  - Technology that is immature, according to the Technology Readiness Assessment, can be incorporated past Milestone B
  - Leads to problems later on if the technology is not ready when it needs to be
- ➔ Without leveraging private sector innovations and global commercial technologies, DoD’s technical lead could diminish



## II. How Goods and Services are Acquired (Contracting Strategies)

- ➔ Appropriate contract type must be used to promote effective competition and incentivize high contractor performance
- ➔ Often reforms promote contract types as universal fixes
  - Periodic use of fixed price contracts in development have failed
    - 1960s: TPP resulted in cost overruns for major programs: Lockheed C-5A, General Dynamics F-111, and Grumman F-14A
    - 1991: McDonnell-Douglas A-12 Avenger cancelled because of extreme costs overruns ~ \$2 billion, and 1 year delay for first flight
  - Short-term contracts with frequent competitions for services contracts
  - Lowest Price Technically Acceptable used on non-commodities and complex goods or services – often leads to “race to the bottom”
  - Overuse and inappropriate use of ID/IQ contracts
- ➔ Competition often confined to development, with sole source production
  - e.g. cancellation of F-35 alternate engine program (in spite of results of “great engine war”)

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## II. How Goods and Services are Acquired (Program Management)

- ➔ Programs start with unstable requirements or lack sufficient Key Performance Parameters – difficult to assess performance and leads to changes in requirements, causing schedule delays and cost growth
- ➔ Program Managers have limited control over critical aspects of programs: funding, requirements, and staff; limiting their ability to effectively “lead” or “manage”
- ➔ Best opportunity for risk reduction is Technology Development phase, however this is before System Requirements Review
  - Immature technologies are incorporated and it is too early to predict the risk of disrupting the program goals
- ➔ The milestone requirements that a weapon system must comply with creates a significant burden for both government and contractors
  - Compliance often adds to cost and schedule growth, without having a positive effect on performance or development
- ➔ Developing system-of-systems compounds the management challenges; but makes sense to plan for (vs. sole focus on individual platforms)

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## **II. How Goods and Services are Acquired (Cost and Schedule Estimates)**

- ➔ Misleading and poor estimation of cost and schedule in initial planning stages is a major contributor to overruns
- ➔ Perverse incentives exist for industry and military services to provide unrealistic cost, schedule, and risk estimates for program approval
- ➔ Difficult to provide estimates for:
  - High-risk development programs
  - Programs relying on technologies to mature
  - System-of-systems programs (impact individual weapon requirements)
- ➔ Level of funding is hard to predict on year-to-year basis
  - Program managers struggle to achieve planned efficient production rates



# III. From whom Goods and Services are Acquired (Defense Industrial Base)

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- ➔ Profit margins are lowest in defense, compared to other major sectors
  - Guidelines issued encouraging vertical integration, with less competition
- ➔ Excessive regulations deter entry into the defense marketplace and limit competition due to compliance costs
- ➔ Legal and regulatory barriers preclude DoD from gaining the full benefits of globalization
- ➔ DoD often unable to access cutting-edge technologies driving commercial markets
- ➔ Commercial firms are hurt by regulatory creep
  - Government-unique standards are requested too often
  - Information other than pricing for commercial items is requested (e.g. cost)
  - Cost and pricing requirements for modifications to commercial items must be provided
  - Unfavorable intellectual property regulations deter entry by commercial firms
- ➔ Small and midsize businesses are not always appropriately utilized

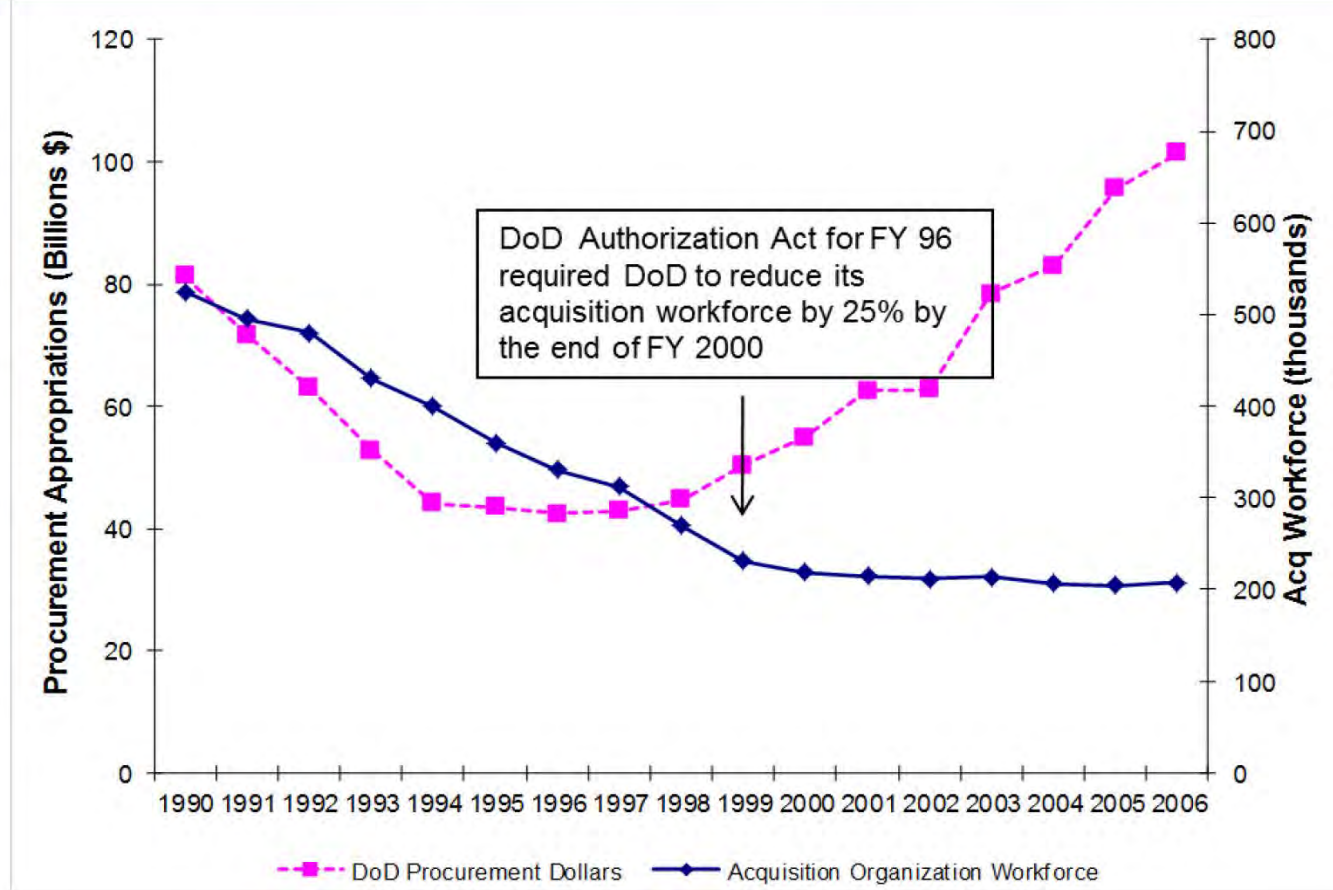


## IV. Who is Responsible for Acquisition

- ➔ High turnover in senior level management makes long-term planning challenging
  - SecDef has a tenure averaging 30 months while the DepSecDef has an average tenure of 23 months
  - Average tenure for other senior DoD officials is 11 – 20 months
- ➔ Size and demographics of the acquisition workforce
  - DoD acquisition workforce is too small, and often with the wrong skill mix – the workforce is now half of what it was in the 1990's (and 55% have less than 5 years experience)
- ➔ Training, motivating, and maintaining a skilled acquisition workforce is incredibly challenging
  - Failure to do this can result in an inefficient process and inadequate weapon systems being fielded
- ➔ There are many barriers that prevent these employees from performing their job to the best of their abilities – these include: burdensome requirements; overwhelming oversight measures; and an acquisition culture that values compliance and cost savings, over efficiency, innovation, and risk-taking

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# Example of the “Crisis” in the Public Sector Workforce



Source of workforce data: DoD IG Report D-2000-088 Feb 29, 2000 & DoD IG Report D-2006-073 April 17, 2006

Source of budget data: Annual Defense Reports, available at [http://www.dod.mil/execsec/adr\\_intro.html](http://www.dod.mil/execsec/adr_intro.html). Procurement supplementals for FY2005 and FY2006 not yet reflected in Annual Defense Reports were obtained from Congressional Research Service Reports. (Defense Science Board, 2008)



# Three Important Considerations (regarding who does the work)

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1. **The Government is still responsible for the overall management, oversight, and source selection**
2. **Higher performance, at lower costs, can be achieved if competitive source selection is based on “best value”**
3. **The Government must do the inherently-governmental work (e.g. war-fighting, budgeting, source selection, etc.)**

**But, for non-inherently-governmental work being done by government employees, why not have public/private competitions**



## Results of DoD Public/Private Competitions: 1978 - 1994

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

*Defense Reform Initiative Report,  
Nov 1997*



# DoD “Competitive Sourcing” (A-76) Demonstrated Results 1994 – 2003

Winning Bidder	Number of Competitions Won	Civilian Positions Competed (Excluding Direct Conversions)	MEO FTEs* (Excluding Direct Conversions)	% Decrease from Civilian Authorizations to Government MEO FTEs
In-House	525 (44%)	41,793	23,253	44%
Contractor	667 (56%)	23,364	16,848	28%**
Total	1,192	65,157	40,101	38%***

\* MEO= Most Efficient Organization (as proposed by government workers)

\*\* Even for the competitions won by the contractor, the MEOs proposed decreases of 28% in the FTE headcount

\*\*\*No matter who won, the involuntary terminations of government workers (RIFs) averaged only 5% <sup>1)</sup>

**But Congress has  
“outlawed” A-76  
competitions!**

Source: *Competitive Sourcing: What Happens to Federal Employees?* Jacques S. Gansler and William Lucyshyn, October 2004



# Results comparisons in Availability and Response Time (PBL is “Performance Based Logistics”)\*

## Material Availability

## Logistics Response Time

### Navy Program

### Pre-PBL

### Post-PBL\*

### Pre-PBL

### Post-PBL\*



**73%      90%**

**56.9 Days      5 Days**



**71%      85%**

**52.7 Days      8 Days**



F/A-18 Stores Mgmt System (SMS)

**65%      98%**

**42.6 Days      2 Days CONUS  
7 Days OCONUS**



Tires

**70%      85%**

**28.9 Days      2 Days CONUS  
4 Days OCONUS**



APU

**65%      90%**

**35 Days      6.5 Days**

**\* PBL is contractor-based [an AIA study said PBL could save \$25-\$30 billion per year]**

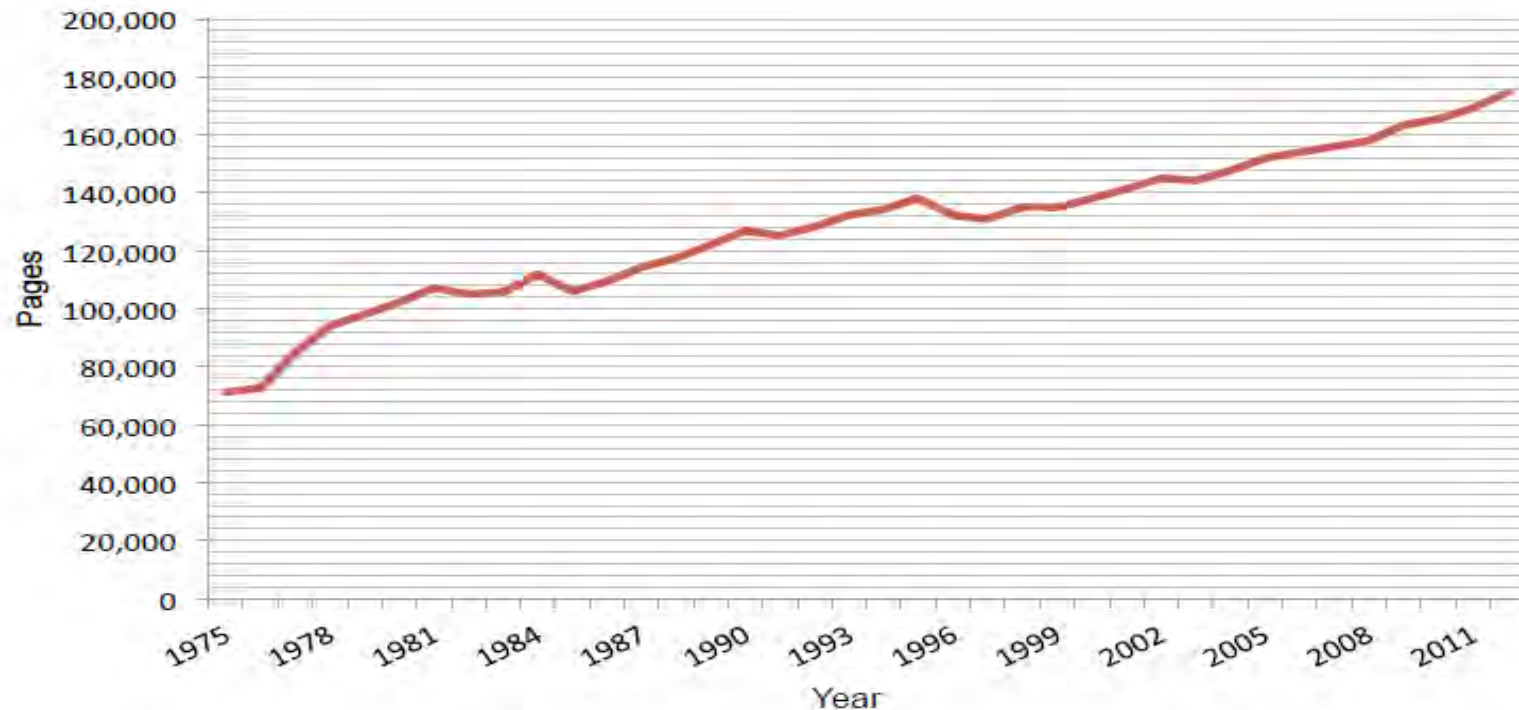


# Barriers to Comprehensive Reform

- ➔ Congress is an incredibly influential actor
  - The nature of legislation and current trends indicate that major change will take time
  - Even with considerations of DoD's budget given the upcoming sequester cuts imposed by the Budget Control Act, there is no consensus on what should be cut or preserved
  - Measures to increase flexibility and decrease oversight will be resisted
- ➔ The existing system of regulations is the result of decades of reform
  - Regulations are dense and come from a variety of sources that are not easily reconciled – acquisition officer handbook is 960 pp., DFARS is 1,903 pp., and FAR is 2,014 pp., Federal regulatory code 180,000 pp.
  - Will be incredibly challenging to overhaul or edit – adding on is easier than taking away or completely redoing
- ➔ It is often difficult to identify problem areas in the system and fix them
  - This leads to broad reforms that target the issues of one program, but impede progress on all others in the system
- ➔ Strong cultural resistance to change (from Services, Unions, Incumbent Firms, etc.)



# Total Number of Pages in the Code of Federal Regulations\*



**OMB and SBA estimated Regulatory Compliance costs of \$1.752 trillion in 2008 (up from \$1.1 trillion in 2005 and \$843 billion in 2001)\*\***

**Note 1: That the sum of corp. tax and individual taxes in 2011 was \$1.402 trillion (far less than the estimated regulatory compliance costs).**

**Note 2: The TASC/Coopers and Lybrand study of the 18% “regulatory cost impact on DoD purchases” was done in 1994. A 2014 Air Force report said the regulatory cost increase is now 25%.**

# A Success Story

## Joint Direct Attack Munitions (JDAM) Program

- ➔ The JDAM System is a tail kit for converting gravity guided munitions to GPS or computer-guided munitions (i.e. converting “dumb” bombs to “smart” bombs)
- ➔ A key “pilot program” in DoD’s push for using commercial acquisition strategies – granted expedited waiver status (25 in total)
- ➔ Program cost figures:
  - Historical system price estimate: \$68,000 (i.e. “ICA”)
  - **Price requirement**: \$40,000
  - **Realized system price**: \$18,000

### ➔ Requirements (per CSAF)

1. “Hit the target”
2. “Work”
3. “Cost under \$40,000”



### ➔ Strategy

- Continuous competition
- Max. commercial
- Warranties
- “Best value” selection
- Experienced PM