

Revised “National Security/Business” Model **Recommendations in the Wake of** **September 11, 2001 Acts-of-War**

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This Briefing was triggered by the urgent need for a clear National Security focus in the wake of the despicable September 11, 2001 Acts-of-War. Previously, McAleese & Associates, P.C. had published a 102-page pre-QDR Report entitled: “A Compelling National Security/Business Restructuring Model is Critical to Long-Term U.S. National Security.” That “National Security/Business Model” Report was drafted and circulated at the sole expense of McAleese & Associates, P.C., as a National Security investment into the Quadrennial Defense Review (QDR). That “National Security/Business Model” Report was then distilled into Briefing Charts in April 2001 for circulation to key National Security Stakeholders and to the financial community. In the aftermath of September 11, 2001, and the subsequent issuance of the formal QDR by DoD, this “QDR II Briefing” refines the need for a concentrated focus on those key defense-unique/R&D-intensive technologies, where breakthroughs in offensive capabilities will directly save American lives in combat. Please contact McAleese & Associates, P.C. for free copies of this QDR II Briefing Paper and for permission to distribute copies to others.

Agenda

- I. There is a direct correlation of defense contractors' health to long-term U.S. National Security**
- II. Use both risk-reduction and prioritized funding to convert "Responsive Contractors" into "Super T-Bills"**
- III. Five distinct "Epochs" in defense in the 1990s**
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XV. National Security/Business Model Recommendations

I. There is a direct correlation of defense contractors' health to long-term U.S. National Security

- Today, the aerospace & defense industry serves two masters:
 - 1) **Long-term National Security**, with all of its key “Stakeholders,”
and
 - 2) **Shorter-term Shareholders on Wall Street.**
- That “**National Security/Business**” Model must integrate both long-term National Security and shorter-term Shareholder drivers.
- This is particularly true to enable contractors to:
 - 1) Drive offensive “leap-ahead” technologies at subsystems-level,
and
 - 2) Assume major technical/schedule/financial risks to develop/field rapidly-deployable platforms in short-term (18-24 months).

- **Surge in defense funding is desperately-needed, BUT TOTAL AMOUNT, AND DURATION is unclear (\$10B in FY01 Emergency Supplemental; plus up to \$325B in FY02).**
- Contractors must **raise capital by issuing stock or bonds** (to unilaterally develop new R&D expertise or even finance major production).
- **“Value Investors” will commit to lower-profit/lower-growth defense so long as there is strong cash-flow, reasonable profit, and “controlled-risk.”**
- **But, bulk of \$17B-\$20B total emergency national defense surge, plus vast majority of \$317B in FY02 will be consumed by Personnel (Reserve/Guard for Homeland Defense) and Readiness (spares, training, force protection, and replenishment of war reserves (PGM))**
- \$5.1B of FY01 Emerg. Supp. released (as of Sept. 21, 2001) with \$2.5B defense. (Intelligence, security, force protection, command & control, readiness).

- **Also, expect surge in “rapidly-deployable technologies” (UAVs, Battle Management, special ops commo, etc.), but not enough to recapitalize legacy platforms.**
- **\$343B FY02 Defense Authorization Bill is currently structured as follows: (approx. \$317B before MILCON and nuclear weapons)**
 - **\$48B RDT&E (\$37B in FY01) (\$11B increase),**
 - **\$62B Procurement (\$60B in FY01) (\$2B increase),**
 - **\$82B Military Personnel,**
 - **\$125B Operation & Maintenance,**
 - **\$10B MILCON, and**
 - **\$14B Nuclear Weapons, plus**
 - **\$17B-\$20B Emergency Funding (Subject to change).**
- **However, major increases in duration of Anti-Terrorism Campaign could add strain of additional \$60B-\$100B per year for next 2-3 years.**
- **If long-term top-line growth is only modest, then reduce performance risk to partially finance that defense-funding shortfall by attracting investment capital from Wall Street.**

II. Use both risk-reduction and prioritized funding to convert “Responsive Contractors” into “Super T-Bills”

- **“Responsive contractors” must assume aggressive technical/schedule/financial risks to drive “leap-ahead” technologies.**
- **We must re-dedicate ourselves to ensure all actions have both a compelling “National Security Case” and a compelling “Business Case:”**
 - 1) **Complete long-overdue consolidation of excess capacity in mid-tier defense industrial base. (Number of robust contractors in **defense-unique/R&D-intensive subsystems** is largely-dictated by number of platform primes),**
 - 2) **Establish clear “risk-to-reward” relationships with “responsive contractors,” to generate reasonable RoI with controlled-risk, and**
 - 3) **Enable responsive contractors in defense-unique/R&D-intensive subsystems to raise capital to partially-offset long-term defense funding shortfalls, while driving breakthroughs in “leap-ahead” technologies at the subsystems-level.**

III. Five distinct “Epochs” in defense in the 1990s

- First, the mergers of the U.S. “Big 3” were driven heavily by DoD following the defense budget “implosion” after the fall of the Berlin Wall.
- Second, Acquisition Reforms were incrementally undertaken by DoD, which had the effect of delegating program management to platform primes.
- Third, mergers and Acquisition Reforms collectively triggered “Vertical Integration” concerns. (Leading to a philosophical collision during the attempted Lockheed/Northrop merger).
- Fourth, DoD encouraged Trans-Atlantic defense mergers to integrate the dual directives of coalition warfare and real-time use of “smart weapons.”
- Fifth, stark abandonment of historic “Military/Industrial Complex” by Wall Street last year ultimately triggered recent action by key National Security Stakeholders for long-term preservation of defense industrial base.

IV. What has changed after September 11, 2001 Acts-of-War?

- Suddenly, the **Administration has singular directive to combat terrorism.**
- **Creates major surge in Personnel (Reserve/Guard) and Readiness costs** (spares, training, force protection, and replenishment of war reserves).
- **Accelerates limited “Transformation,”** in those offensive capabilities that can be **rapidly-deployed** (18-24 months).
- **Triggers major costs for Homeland Defense, that strain FY02 defense top-line,** where bulk of **extra \$19B requested in FY02** (\$32B total increase) was already primarily allocated to **Personnel** (raises/quality of life) and **Readiness**.
- **Most Transformation and Procurement was already pushed out to FY03 before September 11, 2001 Acts-of-War.**
- **Sustained Anti-Terrorism Campaign could add as much as \$60B-\$100B per year for next 2-3 years.** (Budget caps are off, but political patience will be tested, e.g. Federal Budget implosion; airline loan guarantees; economic stimulus package; \$17B-\$20B emergency defense funding in FY01-FY02).

V. Two major challenges face DoD and its contractors

- **First**, a **constant infusion of capital is critical** for contractors to unilaterally develop new technical expertise, or even to finance major production programs.
- **Ability to raise capital is a direct function of investors'/lenders' perceptions of reasonable RoI, with controlled-risk.**
- While **Congress** provides funding which **generates short-term profit**,
- It is the **fresh capital from investors that incentivizes Contractors in defense-unique/R&D-intensive areas to drive "leap-ahead" technologies so critical to directly saving American lives on the battlefield.**
- **Second**, **Institutional Investors have currently "parked" investment funds in defense stocks as a "defensive measure," but unclear how long defense funding surge will last** (\$19B proposed DoD increase (\$32B total) from FY01 to FY02 paid primarily for salaries and readiness, even before \$17B-\$20B total national security emergency funding).

- **But, bulk of immediate defense funding surge is required for:**
 - **Personnel** (Reserve/Guard)
 - **Readiness** (spares, training, force protection, war reserves),
 - **Rapidly-deployable “leap-ahead” technologies** (special operations, UAVs, SSGNs), while
 - **Leaving major platform recapitalization hole.**
- Sustained defense funding of **at least \$365B (\$345B total plus extra \$20B per year, for at least 4-6 years**, would be required to sizably-close gap.
- **Enable “responsive” contractors** to manage greater **technical/schedule/financial risk** of driving “leap-ahead” technologies by **partially-offsetting funding gap** with investment capital in short-term (2-3 years).
- But **“Value Investors” will only commit billions** of investment capital **on a long-term basis** (3-4 years) if **DoD will reward** those **“responsive” contractors with program workshare** and clear **“risk-to-reward” relationships**.

VI. Two resounding McAleese messages to Stakeholders/Shareholders since January 2001:

- 1) DoD must have robust long-term defense industrial base to achieve the Administration's strategic objectives of:
 - a) **National Missile Defense**,
 - b) Cost-effective, **tactical air superiority**, such as the F-22,
 - c) Real-time, **precision-strike** capabilities,
 - d) **Deep-strike** capabilities, e.g. **bombers, UCAVs**, etc.,
 - e) Strengthened **tactical airlift** (lightning-strike),
 - f) Survivable, **netted-C4ISR** capability, and
 - g) Vital **special-mission aircraft** for airborne surveillance and jamming, i.e., **“low-density-high-demand”** assets.
- 2) **Defense industrial base must be well-capitalized by shorter-term “Value Investors,” who will accept limited profit percentages and limited top-line defense growth in exchange for strong “Cash-Flow-Return-on-Investment” (CFROI) and “controlled risk.”**

VII. “Full Subsystem Capability” Model drives “leap-ahead” technologies for DoD & RoI for Shareholders

- Collectively, Acquisition Reforms have largely **delegated traditional DoD subsystem authority to primes.** (e.g. TSPR). (13K more RIFs in FY02 House bill/moratorium on RIFs in Senate bill).
- This shift away from DoD subsystem development means **subsystem selection is now “make-or-buy” decision** by the platform prime.
- Supplier’s primary Customer is now no longer DoD, but platform prime. (Particularly in **defense-unique/R&D-intensive subsystems**).
- Shrinking R&D budgets have also driven platform primes to encourage suppliers to aggressively “invest” in the “front-end” of RDT&E programs.
- Creates **enormous pressure** for “black box” houses to develop **“Full Subsystem Capability,”** to hold program workshare, let alone marketshare.

“Full Subsystem Capability”

- **“Full Subsystem Capability”** means the ability to **design, manufacture, integrate and sustain entire defense-unique/R&D-intensive subsystem.**
- Cannot be grown organically overnight, and includes:
 - 1) Development cost,
 - 2) Integration cost,
 - 3) Quality assurance,
 - 4) Marketing, lobbying, contracts/subcontracts growth to Overhead,
 - 5) Production (function of hardware, electronics, or software),
 - 6) Life-cycle support to sustain on-board subsystems in field.
- **While the primes have consolidated to two houses for most platforms, suppliers have yet to consolidate in many defense-unique/R&D-intensive subsystems.**
- **For each of the two competing platforms, there is only one of each major on-board subsystem (e.g. ECM, IFF, fire control radar), and only one after “winner-take-all” downselect at EMD.**

- However, in many cases, there are **still four-to-six independent subsystem houses** that produce each **defense-unique/R&D-intensive subsystem**.
- Consequently, **“responsive” contractors must develop “Full Subsystem Capability”** to become #1 or #2 in their core defense subsystem to:
 - 1) **Manage the greater technical/schedule/financial risks** in driving offensive “leap-ahead” technologies, and
 - 2) **Accelerate deployment of asymmetric technologies**. (UAVs, comms, sensors).
- The evolution to a **true “Full Subsystem Capability”** requires:
 - 1) Strong **corporate resolve**,
 - 2) A **strategic plan** of action,
 - 3) **Shrewd legal fencing** of financial/contractual risk,
 - 4) **Integrating acquisitions** to manage increased program risks, and
 - 5) **Restructuring troubled “legacy” programs** to allocate additional resources to meet Customer’s true long-term requirements.

VIII. FOUR MCALEESE RECOMMENDATIONS

- 1) **Break-out work to commercial firms that is not defense-unique.**
- 2) Consolidate redundant **defense-unique/non-R&D-intensive** houses to **drive down cost.** (to two).
- 3) **Reprioritize funding and grant favored treatment** to responsive **defense-unique/R&D-intensive** contractors to drive offensive “leap-ahead” technologies at subsystems-level.
- 4) **Direct program workshare** and establish **clear risk-to-reward-relationships** with responsive contractors in exchange for **increased technical/schedule/financial risks** of accelerating development/fielding of offensive technologies.

IX. The Current Budget Still Shows a Huge Procurement “Train Wreck” Coming

- President Bush’s election platform focused on:
 - 1) Restoring the **morale** of our Armed Forces,
 - 2) Insisting that **deployments have well-defined objectives**,
 - 3) Defending the American homeland with a **NMD**,
 - 4) Preparing for the information age, and
 - 5) **“Skipping a generation of weapons”**
- Proposed \$317.5B FY02 Defense Bill only funded salary increases and readiness short-falls even before September 11, 2001 Acts-of-war.
- **Explosion of homeland defense, surprise deficit, damages/compensation, and op-tempo requirements for sustained Anti-Terrorism Campaign dwarf \$40B FY01 Emergency Supplemental (\$20B authorized, plus \$17B-\$20B rolled into FY02 appropriations cycle.**

X. Cost of Operation “Enduring Freedom” projected from past operations

I. Operation Desert Storm/Desert Shield:

- **Total cost of the operation was \$61.1B.**¹
- **HR 1282** appropriated approximately **\$42.6B** to fund Desert Storm.²
- **After foreign contributions**, the total cost to the **U.S. was \$7.3B**.³
- **Tonnage of bombs dropped was 60,624.** (85% of average daily bomb tonnage dropped by U.S. during entire WWII).⁴
- A total of **109,876 sorties flown**.⁵
- 92% of the munitions expended were unguided.
- **But cost of the PGMs represented 84% of the total cost of the munitions used in Desert Storm.**⁶

¹ www.sci.fi/ufta/stats.htm

² www.senate.gov/arp/rua/1021/102131.htm

³ www.sci.fi/ufta/stats.htm

⁴ www.fas.org/man/dod_101/ops/desert_storm.htm

⁵ Id.

- Examples of Sortie Costs for Operation Desert Storm:⁷
 - F-117: **\$15,700** per typical sortie.
 - F/A-18: **\$17,200** per typical sortie.
 - 210,004 **unguided bombs** for a total cost of **\$432M.**
 - 9,342 **guided bombs** for a total cost of **\$298.2M.**
 - 332 **Cruise Missiles** for a total cost of **\$913.8M.**

II. Operation Allied Force (Kosovo)

- **Total cost range debated \$1.8B-\$3B.**
- 78 days of continuous operations from March-June 1999.⁸
- **38,000 sorties flown.**⁹
- Weapons used: Predator, **cruise missiles, JDAMs, JSOW,** and the **AGM-130.**¹⁰
- **In conjunction with Homeland Defense, extended Anti-Terrorism Campaign will likely run well beyond \$17B-\$20B FY01-FY02 emergency national defense supplemental.**

⁶ www.fas.org/man/GAO/NSIA97134/letter.htm

⁷ www.FAS.org/man/gao/nsiad97134/APP_o4.htm

⁸ DoD Kosovo Operation Allied Force After Action Rep. (January 31, 2000).

⁹ Id.

¹⁰ Id.

XI. FY96-FY01 RDT&E and Procurement

NATIONAL DEFENSE BUDGET SUMMARY FY 2001 (\$ MILLIONS)¹¹

<u>Unadjusted Dollars</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
<u>DoD Budget Authority</u>	\$266,007	\$270,298	\$271,254	\$292,147	\$293,283	\$305,421
RDT&E	\$34,971	\$36,404	\$37,089	\$38,290	\$38,356	\$37,862
Procurement	\$42,417	\$42,930	\$44,772	\$50,920	\$54,208	\$60,270

NATIONAL DEFENSE BUDGET SUMMARY FY 2001 (\$ MILLIONS)¹²

<u>Constant FY 2001 Dollars</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
<u>DoD Budget Authority</u>	\$	\$	\$290,818	\$307,004	\$301,593	\$305,421
RDT&E	\$	\$	\$38,733	\$39,563	\$39,024	\$37,862
Procurement	\$	\$	\$46,707	\$52,470	\$55,074	\$60,270

¹¹ OFFICE OF THE UNDER SECRETARY OF DEFENSE, DEP'T OF DEFENSE, NATIONAL DEFENSE BUDGET ESTIMATES FOR FY2001 1-16 (2000).

¹² OFFICE OF THE UNDER SECRETARY OF DEFENSE, DEP'T OF DEFENSE, NATIONAL DEFENSE BUDGET ESTIMATES FOR FY2001 1-16 (2000).

Several budget trends are obvious:¹³

- 1) **R&D funding has been basically flat** from FY 1996 through FY 2001.
- 2) **Procurement funding has finally increased** from \$42 billion in FY 1996 to **\$60B in FY 2001.**
- 3) The Clinton “Place-Holder” **FYDP forecasted DoD Procurement increasing,** from approximately \$60 billion in FY 2001 to **\$71 billion by FY 2005.**
- 4) **Previously, Procurement increase was to be funded at the expense of R&D funding,** but reverse is coming true (**FY02 \$48B RDT&E v. \$62B Procurement**)
- 5) The **Navy R&D has been fairly constant,** with \$10 billion **growth in Procurement** (F/A – 18E/F; V-22; CVN-77-carrier year).
- 6) The **U.S. Air Force** has suffered from a **decline in R&D** since FY 1998, but that has been **amply offset by Procurement growth** (F-22; C-17).
- 7) And the **U.S. Army** has suffered from a **decline in R&D** in inflation adjusted-dollars and a **largely-suppressed Procurement budget.**

¹³ Individual Service Budgets for FY96-FY01 are listed in Supplemental Charts.

XII. Long-term Fiscal constraints will likely force hard decisions between some platforms versus networked-sensors

- Even before the September 11, 2001 Acts-of-War, bulk of \$19B defense increase requested in FY02 (\$32B total) was consumed primarily by:
 - **Personnel** (raises/quality-of-life),
 - **Readiness** (spares, training, replenishment of PGM war reserves),
 - **Most Procurement and Transformation was already deferred.**
- **State-of-War could increase requirements by \$60B-\$100B per year for next 2-3 years. (\$317B FY02 plus \$17B-\$20B emergency supp.)**
- Funding surge of 2-3 years may not be sufficient to justify **technical/schedule/financial risks** in critical long-term offensive capabilities.
- So attention must still be **focused on “responsive” contractors in key defense-unique/R&D-intensive capabilities** to drive long-term “leap-ahead” technologies.

XIII. Since January 2001, constant McAleese message to National Security Stakeholders and Shareholders of focused defense growth in:

- 1) **Precision Guided Munitions**. (This has been a constant of both Joint Vision 2010 and new QDR).
- 2) **Command, Control, Communications & Computers (C4)**. (Battlespace Management integration will be at a premium).
- 3) **Intelligence, Surveillance & Reconnaissance (ISR)**. (**Imagery collection, Signals Intelligence, and Electronic Support Measures** from space-based, air, and naval long-dwell platforms).
- 4) **Electronic Warfare**. (Consistent requirements for all tactical force projection, particularly by non-stealthy strike-platforms).
- 5) **Air Transport/Deep-Strike Assets**. (**Transport**; aerial refueling; and deep-strike assets of additional **bombers** or **UCAVs**).

- 6) **Targeting/Sensors.** (Netted-warfare enables the remote firing of Precision-Guided Munitions from manned or unmanned platforms).
- 7) **Robotics/Unmanned Platforms.** (Strike-platforms against heavily-defended/high-risk targets and/or as long-loiter, C4ISR-platforms).
- 8) **Communications/Navigation Subsystems.** (Critical for unmanned platforms, and lightning-strike).
- 9) **Software Development and Information Warfare Architecture.** (Vital to all netted-C4ISR).
- 10) **Theater Missile Defense/National Missile Defense.** (Includes battle management software; hardware development; various payload vehicles; kill vehicles; and radars).

Collectively, Acts-of-War of September 11, 2001, and QDR, are strongly supportive of these “leap-ahead” technologies.

Excerpts from 2001 QDR-“DoD Transformation Initiatives:”

- **Achieve six operational goals:**
 - 1) **Protect bases, defeat the threat of CBRNE weapons, (develop missile defenses).**
 - 2) **Assure information systems and conduct effective information operations.**
 - 3) **Project and sustain U.S. forces in distant anti-access and area-denial environments.**
 - **Accelerating development of the Army Objective Force. (Army FCS),**
 - **Enhancing power projection and forcible entry capabilities.**
 - **Defeating long-range means of detection.**
 - **Enabling long-range attack capabilities.**
 - **Enhancing protection measures for strategic transport aircraft (LAIRCM).**
 - **Ensuring U.S. forces can sustain operations under chemical or biological attack.**
 - 4) **Deny enemies sanctuary by persistent surveillance, tracking, and rapid engagement.**

- **Manned and unmanned long-range precision strike assets.**
- **Related initiatives for new small munitions. (small diameter bomb).**
- **Ability to defeat hard and deeply buried targets, (PGM).**
- **Accelerate the conversion of 4 SSBNs to SSGNs.**
- **Procure unmanned UAV/UCAVs.**
- **Increase procurement of precision weapons.**
- **Special Operations Forces with enhanced C4ISR capabilities.**

5) Enhance the capability and survivability of space systems.

- **Develop interoperable Joint C4ISR.**

6) Fund end-to-end Command, Control, Communication, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities.

Residual: DoD will selectively recapitalize legacy forces of:

- **Abrams tanks, (GDLS)**
- **B-1 bombers, (Boeing)**
- **Navy ship self-defense (LMNESS, Raytheon, NOC), and**
- **Amphibious assault vehicles (GDLS)¹⁴**

¹⁴ 2001 DoD QUADRENNIAL DEFENSE REV. REP. 30

XV. National Security/Business Model Recommendations

- 1) **Reassess Acquisition Strategies** in selective “winner-take-all” competitions, to rejuvenate the anemic industrial base.
- 2) **Suppliers must adopt “Full Subsystem Capability” Model** to guard against “Reverse Vertical Integration” in **defense-unique/R&D intensive** subsystems.
- 3) **Reshape antitrust evaluations** to the realities of the “Full Subsystem Capability” Model, and to DoD’s integrated U.S./NATO defense base. (See Supplemental Charts).
- 4) **Negotiate Capital Leases and/or Operating Leases for platforms,** coupled with bundled Operations & Maintenance/Logistics Contracts, to enable Customers to leverage current shortfalls in Procurement.

- 5) National Security Stakeholders must work hand-in-hand with Industry Management to **restructure troubled “legacy” programs to develop clear risk-to-reward relationships**, e.g.:
- (a) **Recapture schedule** slippages.
 - (b) **Restructure scope**.
 - (c) Negotiate “technology work-arounds” via **Engineering Change Proposals (ECP)** or **Pre-Planned-Product-Improvements (P3I)**.
 - (d) Convert contract to a **lower-risk type**.
- 6) **Expand use of multi-year contracts** to at least one per major contractor and at least three per Service, since multi-year contracts create investor perception of controlled-risk.
- 7) **Award “Emergency Preparedness” contracts** to sustain contingency/emergency capacity in those heavy-industrial areas where crisis/war could trigger need. (But segregate “leap-ahead” technologies for separate development from long-lead, emergency-capability that is defense-unique, but not R&D-intensive such as foundry, armor, etc.)

- 8) **Revise Cost Principles** in Federal Acquisition Regulations (FAR) Part 31, plus other regulations, **to maximize the profitability of R&D**, particularly where “leap-ahead” technology risks are abnormally-high, with limited production, if any.
- 9) **Revise Cost Principles** of FAR Part 31 to finally allow for contractor **recovery of various indirect costs** that are an inherent part of any business. (Such as interest, recruitment/employee retention, goodwill from corporate acquisitions).

This consensus will enable “responsive” contractors to commit to the aggressive technical/schedule/financial risks to drive leap-ahead technologies to directly save American lives in combat.

Supplemental Chart

FY02 USAF Budget example of funding Shortfall

- USAF top-line in **FY02 is up to \$80.5B**, from \$72B in FY01 (\$8B increase from FY01),
 - **87% Readiness + Personnel, and**
 - **13% everything else (including Procurement and Transformation).**

- **Primary FY02 priority is Personnel and Readiness, with Modernization & Transformation largely deferred to FY03.**
 - FY02 increase of **\$4.3B Operations & Readiness** from FY01,
 - FY02 increase of **\$2.8B Personnel from FY01** (pay increased 5-10%),
 - **FY02 increase of \$700M Modernization** (\$24B in FY02), and
 - FY02 increase of **\$100M physical plant from FY01**.

- Combat mission capable rates at 69%, instead of 92% requirement.
- Problem areas remain in munitions replenishment (\$2B short) and aging aircraft fleet cost growth.

SUPPLEMENTAL CHART/DEPARTMENT OF THE NAVY¹⁵

FY 1997/1998/1999/2000/2001 Budget Summary (Dollars in Millions)

DESCRIPTION	FY1997	FY1998	FY1999	FY2000	FY2001
Research, Development, Test and Evaluation, Navy	\$7,884	\$7,879	\$8,942	\$9,057	\$8,477
Aircraft Procurement, Navy	6,715	6,287	7,549	8,823	7,964
Weapons Procurement, Navy	1,332	1,087	1,608	1,402	1,434
Shipbuilding and Conversion, Navy	5,466	8,085	5,937	7,017	12,297
Other Procurements, Navy	2,838	2,988	4,047	4,302	3,335
Procurement, Marine Corps	580	473	857	1,294	1,172
Procurement of Ammunition, Navy and Marine Corps	276	381	467	588	430
Totals	25,091	27,180	29,407	32,483	35,109

¹⁵ OFFICIAL WEBSITE OF THE DEP'T OF THE NAVY, OFFICE OF BUDGET, BUDGET RESOURCES DIRECTORY (visited Jan. 10, 2001) <<http://navweb.secnav.navy.mil/budget>>.

SUPPLEMENTAL CHART/DEPARTMENT OF THE AIR FORCE¹⁶

FY 1998/1999/2000/2001 Budget Summary (Dollars in Millions)

DESCRIPTION	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>
Research, Development, Test and Evaluation	\$14,278	\$13,731	\$14,286	\$13,685
Aircraft Procurement	\$6,112	\$8,235	\$8,533	\$9,539
Missile Procurement	\$2,273	\$2,091	\$2,200	\$3,061
Other Procurement	\$1,494	\$1,589	\$1,808	\$1,865
Ammunition Procurement	\$372	\$411	\$583	\$638
Totals	\$24,529	\$26,058	\$27,412	\$28,791

¹⁶ OFFICIAL WEBSITE OF THE DEP'T OF THE AIR FORCE, OFFICE OF THE ASSISTANT SECRETARY, AIR FORCE PRESIDENT'S BUDGET (visited Jan. 10, 2001) <<http://www.saffm.hq.af.mil>>.

SUPPLEMENTAL CHART/DEPARTMENT OF THE ARMY¹⁷

FY 1997/1998/1999/2000/2001 Budget Summary (Dollars in Millions)

DESCRIPTION	FY1997	FY1998	FY1999	FY2000	FY2001
Research, Development, Test and Evaluation	\$4,916	\$5,025	\$5,033	\$4,426	\$4,751
Aircraft Procurement	1,329	1,323	1,384	1,230	1,312
Missile Procurement	1,003	744	1,222	1,358	1,413
WTCV Procurement	1,419	1,291	1,544	1,417	1,500
Ammunition Procurement	1,143	1,020	1,013	1,141	1,257
Other Procurement	3,178	2,563	3,296	3,424	4,050
Totals	12,988	11,966	13,492	12,996	14,283

¹⁷ OFFICIAL WEBSITE OF THE OFFICE OF THE UNDER SECRETARY OF DEFENSE, DEFENSE BUDGET MATERIALS (visited Jan. 10, 2001)
<<http://dtic.mil/comptroller>>.

SUPPLEMENTAL CHART/Excerpts of 2001 QDR- “Paradigm Shift in Force Planning:”

The new force-sizing construct shapes forces to:

- **Defend the United States,**
- **Deter aggression and coercion forward in critical regions,**
- **Swiftly defeat aggression in overlapping major conflicts while preserving for the President the option to call for a decisive victory in one of those conflicts – including the possibility of regime change or occupation, and**
- **Conduct a limited number of smaller-scale contingency operations.¹⁸**

¹⁸ 2001 DOD QUADRENNIAL DEFENSE REV. REP. 17

SUPPLEMENTAL CHART/Excerpts from 2001 QDR-“Current Forces:”

• Army	
➤ Divisions (Active/National Guard)	10/8
➤ Active Armored Cavalry/Light Cavalry Regiments	1/1
➤ Enhanced Separate Brigades (National Guard)	15
• Navy	
➤ Aircraft Carriers	12
➤ Air Wings (Active/Reserve)	10/1
➤ Amphibious Ready Groups	12
➤ Attack Submarines	55
➤ Surface Combatants (Active/Reserve)	108/8
• Air Force	
➤ Active Fighter Squadrons	46
➤ Reserve Fighter Squadrons	38
➤ Reserve Air Defense Squadrons	4
➤ Bombers (Combat-Coded)	112
• Marine Corps (3 Marine Expeditionary Forces)	
➤ Divisions (Active/Reserve)	3/1
➤ Air Wings (Active/Reserve)	3/1
➤ Force Service Support Groups (Active/Reserve)	3/1¹⁹

¹⁹ DOD QUADRENNIAL DEFENSE REV. REP 22

SUPPLEMENTAL CHART/Excerpts from 2001 QDR-“Global Intelligence”

- **Human Intelligence.** Performance of HUMINT must be optimized to gain access to terrorist cells, buried targets, closed regimes, and CBRNE weapons development and deployment plans.
- **Emerging Technologies.** Some of the most promising include:
 - **Low-observable technologies** that may be applied to collection platforms;
 - **Nanotechnology** that may result in miniature, mobile, autonomous sensors that could penetrate the secure and remote facilities of an adversary;
 - **Advanced parallel processing and quantum computing** to provide real-time processes, decryption, translation, and transcription of communications;
 - **Biometrics** for tracking adversaries and providing secure authentication of individuals seeking network of facility access;
 - **Commercial imagery** for remote sensing of the earth.²⁰

²⁰ DOD QUADRENNIAL DEFENSE REV. REP 38-40

SUPPLEMENTAL CHART

Several defense-unique technologies must be consolidated to drive “leap-ahead” technologies.

- Contractors that develop #1 or #2 in “Full Subsystems Capability” can consistently command program workshare and premium RoI.
- Consolidation of the defense mid-tier is entirely consistent with DoD’s staunch position to maintain at least two strong suppliers for each defense-unique subsystem. (Outsource non-defense-unique subsystems to commercial market under Civil/Military Integration Doctrine).
- This is vital to generate R&D critical mass to drive “leap-ahead” technologies and innovation for lightning-strike warfare.
- DoD has committed to alter Acquisition Strategies where necessary to protect vital defense-unique subsystems from the risk of Vertical Integration.²¹ (But beware of “Reverse Vertical Integration”).

²¹ U.S. DEP’T OF DEFENSE, DIRECTIVE 5000.2, § 4.7.1.4 (Oct. 23, 2000). *See also* Memorandum from the Principal Deputy Under Secretary of Defense, U.S. Dep’t of Defense, to the Secretaries of the Military Departments on Subcontractor Competition (May 5, 1999); Memorandum from the Under Secretary of Defense, U.S. Dep’t of Defense, to the Secretaries of the Military Departments on Future Competition for Defense Products (Jul. 7, 2000); Memorandum from the Under Secretary of Defense, U.S. Dep’t of Defense, to the Secretaries of the Military Departments on Anticompetitive Teaming (Oct. 5, 1999).

- “Reverse Vertical Integration” is where under-utilized subsystem suppliers atrophy, ultimately resulting in “make” decisions by default at the platform-level, from loss of technical expertise and exploding Overhead.
- Examples where a compelling National Security/Business Case for additional mid-tier consolidation can be most strongly made are listed below:

(Some areas are **defense-unique/R&D-intensive**, where offensive “leap-ahead” technologies must be driven. Others are **defense-unique/non-R&D-intensive**, where immediate driver is cost reduction).

- 1) PROPELLANTS/MOTORS
- 2) UNMANNED AERIAL VEHICLES AND DRONES (R&D-intensive)
- 3) COMMUNICATION/NAVIGATION (R&D-intensive)
- 4) SIGINT SYSTEMS (R&D-intensive)
- 5) ELECTRONIC COMBAT (R&D-intensive)
- 6) AIR DEFENSE
- 7) ANTENNAS (R&D-intensive)
- 8) AUTOMATIC TEST EQUIPMENT

- 9) C4ISR (R&D-intensive)
- 10) ELECTRO-OPTICS (R&D-intensive)
- 11) GUIDANCE SYSTEMS/SEEKERS (R&D-intensive)
- 12) IMAGE EXPLOITATION/PROCESSING SYSTEMS (R&D-intensive)
- 13) INFRARED SYSTEMS (R&D-intensive)
- 14) LASER SYSTEMS
- 15) LOW OBSERVABLES (R&D-intensive)
- 16) SENSORS (R&D-intensive)
- 17) SIMULATION AND MODELING
- 18) SPACE SUBSYSTEMS
- 19) DISPLAYS & INSTRUMENTS
- 20) ELECTRONIC WARFARE SYSTEMS (R&D-intensive)
- 21) RADARS (R&D-intensive)
- 22) WEAPONS CONTROL & TARGETING SYSTEMS (R&D-intensive)

Supplemental Chart

Antitrust evaluations must be scoped to support “Full Subsystems Capability” Model, and integrated U.S./NATO defense industrial base

- Either the Department of Justice (DoJ) or the Federal Trade Commission (FTC) will, in conjunction with DoD, standardly perform a five-part test to ensure that a proposed merger or acquisition will not create or enhance “market power:”
 - 1) Designate the “relevant markets” that will be impacted.
 - 2) Identify the “geographic market” (multiple DoD/State Dept. Initiatives broaden the geographic review to US/NATO).
 - 3) Identify “market participants” in the relevant market for that geographic area.
 - 4) Identify potential alternative competitors likely to enter the market in response to an exercise of “market power.”
 - 5) Evaluate whether likely post-merger “efficiencies” outweigh potential anti-competitive risk.

- Bottom line is whether a hypothetical monopolist could raise its prices by an arbitrary 5% for at least 1-2 years without an influx of competition.
- Consistent with DoD Directives,²² mid-tier contractors in defense-unique/R&D-intensive subsystems must be allowed to consolidate to develop true Full Subsystem Capability to drive break-throughs in “leap-ahead” technologies; defenses against WMD; and lightning-strike warfare. (to two).
- Moreover, recent DoD/State coalition warfare Initiatives compel the inclusion of strong NATO competitors such as BAE SYSTEMS, EADS, and Thales (formerly Thomson-CSF) in antitrust analysis (see, *FTC v. Imo Industries, Inc.*; *Grumman Corporation v. LTV Corporation*; and *AlliedSignal, Inc. v. B.F Goodrich Co.*).

²² See Memorandum from the Principal Deputy Under Secretary of Defense, U.S. Dep’t of Defense, to the Secretaries of the Military Departments on Subcontractor Competition (May 5, 1999); Memorandum from the Under Secretary of Defense, U.S. Dep’t of Defense, to the Secretaries of the Military Departments on Future Competition for Defense Products (Jul. 7, 2000); Memorandum from the Under Secretary of Defense, U.S. Dep’t of Defense, to the Secretaries of the Military Departments on Anticompetitive Teaming (Oct. 5, 1999).

Excerpts from Mid-Session FY02 Budget

- “The current estimate for the **2001 surplus** is **\$158B**²³ ... This is **[\$123B] lower than the \$281B surplus estimated** in the April Budget. **[43% lower]**”
- “**Economic weakness**²⁴, coupled with the tax rebate action ... results in a lower surplus outlook this year and next year.”
- “... The **unified surplus**²⁵ through 2011 is now estimated at \$3,113B, **down [\$320B]** from the \$3,433B estimated in the April FY02 Budget. The largest factor in the reduction is **out year implications of \$18.4B defense amendment** for 2002.”
- “**Economic Assumptions**²⁶: For the past year, economic growth has been sluggish, restrained by slower growth of domestic and foreign demand... The **extent of the slowdown**, however, has been **greater than most forecasters anticipated.**”

²³ 2002 OMB MID-SESSION REV. 1 (Emphasis added)

²⁴ Id. at 4(Emphasis added)

²⁵ Id. (Emphasis added)

²⁶ Id. at 17(Emphasis added)

Excerpts from Mid-Session FY02 Budget

APRIL AND MID-SESSION BUDGET TOTALS²⁷ (\$ Billions)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
April Budget											
[Projected] Surplus	281	231	242	262	269	305	340	373	420	465	526
Mid-Session Review ²⁸ [August 22, 2001]											
[Projected] Surplus	158	173	195	217	254	281	314	350	398	447	484
Surplus [Reductions]	-123	-59	-47	-45	-15	-24	-26	-22	-21	-18	-42

- **Surplus was decreasing before September 11, 2001. Acts-of-War of September 11, 2001 will likely drive Federal deficit until FY05**

²⁷ Spending : (Policy Changes)²⁷ In total, policy changes increase total outlays by \$8.2B and \$8.4B for 2001 and 2002, respectively. Over 10 years, outlay changes resulting from policy differences total \$412.9B.

²⁸ Section 1106 of Title 31, United States Code requires that revised estimates of the budget surplus, receipts, outlays and budget authority be submitted by OMB to Congress in "mid-session;" which occurred on August 22, 2001 for FY02 Budget.

OUTLAYS BY CATEGORY²⁹ (\$ BILLIONS)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
April [2001] Estimates											
Defense	299.6	319.2	322.1	333.5	347.6	354.6	361.0	374.1	384.9	396.0	411.4
Mid-Session³⁰ Estimates [August 22, 2001]											
Defense	304.0	329.9	335.7	357.0	366.6	376.8	385.3	395.8	406.9	418.5	480.5
Difference:											
Defense	4.4	10.7	13.6	23.5	18.9	22.2	24.3	21.7	22.1	22.5	19.1
Non-defense	-2.4	-3.0	-1.9	-2.3	-4.9	-5.7	-6.8	-6.9	-7.1	-7.4	-7.7
Total Outlays	-1.3	1.5	9.2	34.0	39.6	47.7	50.8	49.3	52.3	54.2	54.7

- **Defense Outlays projected to increase, but partially at expense of non-defense areas. Total Outlays increasing as well.**

²⁹ 2002 OMB MID-SESSION REV. 37, Table 12.

³⁰ Section 1106 of Title 31, United States Code requires that revised estimates of the budget surplus, receipts, outlays and budget authority be submitted by OMB to Congress in “mid-session;” which occurred on August 22, 2001 for FY02 Budget.

OUTLAYS BY AGENCY³¹ (\$ BILLIONS)

April Estimates

	2000 Actual	2001	2002	2003	2004	2005	2006
Defense-Military	281.2	283.9	303.4	306.2	317.2	331.0	337.7
Health and Human Service	382.6	430.5	468.8	498.8	532.7	566.7	594.1
Treasury	391.2	388.5	381.5	385.1	388.2	388.9	390.3
Social Security	441.8	463.0	488.2	511.5	537.4	567.7	595.5
Total ³²	1,788.8 (15.7%)	1,856.2 (15.3%)	1,960.6 (15.5%)	2,016.2 (15.2%)	2,076.7 (15.3%)	2,168.7 (15.3%)	2,223.9 (15.2%)

Mid-Session³³

	2001	2002	2003	2004	2005	2006
Defense-Military	288.3	313.9	319.6	340.5	349.8	359.9
Health and Human Service	428.3	457.1	486.7	532.7	574.4	602.1
Treasury	387.0	380.9	388.0	395.2	399.9	406.7
Social Security	462.6	489.2	512.6	537.2	566.6	593.1
Total ³⁴	1,854.9 (15.5%)	1,962.1 (16%)	2,025.4 (15.8%)	2,110.7 (16.1%)	2,208.3 (15.8%)	2,271.6 (15.8%)

³¹ 2002 OMB MID-SESSION REV. 39, Table 14.

³² Total figures represent all outlays, but only largest ones have been listed here for ease of comparison.

³³ Section 1106 of Title 31, United States Code contains that revised estimates of the budget surplus, receipts, outlays and budget authority be submitted by OMB to Congress in "Mid-Session;" which occurred on August 22, 2001 for FY02 Budget.

³⁴ Total figures represent all outlays, but only largest ones have been listed here for ease of comparison.

