Required "National Security/Business" Actions in the Wake of September 11, 2001 Acts-of-War

By:

James McAleese, Esq.

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McAleese & Associates, P.C.
7901 Jones Branch Drive, Suite 310
McLean, VA 22102
Tel: (703) 917-8900/Fax: (703)-917-8911
jmcaleese@mcaleese.com

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Agenda

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

2. **The high cost of waging the global war against terrorism must also be supported by Wall Street**

3. **Use both risk-reduction and prioritized funding to convert "Committed Contractors" into "Super T-Bills"**

4. **Five distinct "Epochs" in defense in the 1990s**

5. **What has changed after September 11, 2001 Acts-of-War**

6. **Major challenges face DoD and its contractors**

7. **Two resounding McAleese messages to Stakeholders/Shareholders since January 2001**

<u>Agenda (Cont.)</u>

8. **"Full Subsystem Capability" Model drives "leap-ahead" technologies for DoD & earnings for Shareholders**

9. **Four McAleese Recommendations**

10. **DoD must aggressively drive technical innovation in "emerging technologies" to maximize weapon systems' <u>lethality</u>, <u>survivability</u> and <u>combat capability</u>**

11. **Specific McAleese examples of "emerging technologies" that will increase <u>lethality</u>, <u>survivability</u>, and <u>combat capability</u>**

12. **To defeat terrorism, advances in weapon systems must be "rapidly-deployable" onto the battlefield**

13. **Specific procurement strategies to accelerate rapidly-deployable increases in lethality and combat capability (McAleese Categories I, II, and III)**

14. **McAleese Recommended National Security/Business Actions**

1. 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 to:

    1) Drive offensive "leap-ahead" technologies to maximize lethality, survivability, and combat capability at subsystems-level, and

    2) Assume major technical/schedule/financial risks to develop/field "rapidly-deployable" advances in short-term (18-24 months).

- **Surge in defense funding is desperately-needed, BUT TOTAL AMOUNT, AND DURATION is unclear ($13.7B in FY01; $3.5B as part of FY02 DoD Authorization Act, $14B Emergency Supp. pending; plus $379B requested for FY03).**

- Contractors must **raise capital by issuing stock or bonds** (to unilaterally develop/acquire 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 $31B total emergency national defense surge, plus vast majority of $379B requested for FY03 will be consumed by O&M, Personnel** (Reserve/Guard for Homeland Defense) **and Readiness** (spares, training, force protection, and replenishment of war reserves).

2. The High Cost of Waging The Global War Against Terrorism Must Also Be Supported By Wall Street

Cost of Operation Desert Storm/Desert Shield:

- **Total cost** of the operation was **$61.1B.**[1]
- **After foreign contributions**, the total cost to the **U.S. was $7.3B**.[2]
- **Tonnage of bombs dropped was 60,624.** (85% bomb tonnage dropped by U.S. during entire WWII).[3]
- A total of **109,876 sorties flown**.[4]
- 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**.[5]
- Examples of Sortie Costs for Operation Desert Storm:[6]
  - 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 ($2K each).**
  - 9,342 **guided bombs** for a total cost of **$298.2M ($31K each).**
  - 332 **Cruise Missiles** for a total cost of **$913.8M ($2.7M each).**

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[1] www.sci.fi/ufta/stats.htm
[2] www.sci.fi/ufta/stats.htm
[3] www.fas.org/man/dod_101/ops/desert_storm.htm
[4] Id.
[5] www.fas.org/man/GAO/NSIA97134/letter.htm
[6] www.FAS.org/man/gao/nsiad97134/APP_o4.htm

Emergency Funding To Fight War Against Terrorism (Billions)

	FY01	**FY02**
Combating Terrorism	5.2	6.7
FY01 Supplemental (Sept. 01)	**13.7**	
FY02 Anti-Terrorism Amend.		**3.5**
FY02 Supplemental (Mar. 02)		**27.1****
TOTAL	**$18.9B**	**$37.3B**

****March 21, 2002 Presidential Request For Emergency Funding of $27.1B is broken down as follows:(pending before Congress)**

- **War On Terror ($14B) ($6.7B operations; $4.1B Guard/Reserve emergency pay; $1.4B C4ISR; $500M PGMs; etc.)**
- **Homeland Security ($5.2B) (DoT, USCG, FEMA)**
- **International Assistance and Embassy Protection ($1.7B)**
- **Economic Recovery for Dislocated Workers ($750M)**
- **Assistance to New York ($5.5B)**

<u>DoD FY03 Budget Request By Service (Billions)</u>

	FY02	FY03	%Change
ARMY	80.9B	**90.9B**	+10B
NAVY/MARINE CORPS	98.8B	**108.3B**	+9.5B
AIR FORCE	94.3B	**107.0B**	+12.7B
DEFENSE WIDE [7]	53.7B	**52.9B**	-0.8B
DEFENSE EMERGENCY RESPONSE FUND [8]	3.5B	**20.6B**	**+17.1B** [contingency]
TOTAL	**$331.2B**	**$379.3B**	**$48.1B**

[7] Includes Defense Health Program
[8] Contingency Fund

FY03 Defense Budget Request of $379B Is:

- **$53.9B RDT&E** ($5.5B increase from FY02),
- **$69B Procurement** ($4.7B increase from FY02),
- **$94.3B Military Personnel** ($12B increase from FY02),
- **$150.2B O&M** ($25.2B increase from FY02 **(includes $20.1B DERF)),**
- **$4.2B MILCON** ($6B less from FY02).

  $379B: Total

- Major increases in scope of Anti-Terrorism Campaign could add strain of additional $60B-$100B per year for next 2-3 years.

- If long-term defense top-line growth is only modest, then reduce performance risk to partially finance that defense-funding shortfall by attracting investment capital from Wall Street.

National Defense Toplines FY03 Þ FY07 ($Billions)

	FY03	FY04	FY05	FY06	FY07
FY02 Baseline	314.4	323.2	332.2	341.5	351.1
FY03 Budget	**379.3**	**387.9**	**408.8**	**429.6**	**451.4**
Dollar Change	**$64.9B**	**$64.7B**	**$76.6B**	**$88.1B**	**$100.3B**
% Change	**20.6%**	**20%**	**23.1%**	**25.8%**	**28.6%**

Source: DoD Press Briefing 2002. Based On Current Dollars.

3. Use Both Risk-Reduction And Prioritized Funding To Convert "Committed Contractors" Into "Super T-Bills"

- **"Committed contractors"** must assume **major technical/schedule/financial risks** to aggressively 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 "committed contractors,"** to generate reasonable Return-on-Investment with controlled-risk, and

  3) **Enable "committed 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.**

4. 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 in 1999-2000 ultimately triggered actions by key National Security Stakeholders for long-term preservation of defense industrial base.

5. <u>What Has Changed After September 11, 2001 Acts-of-War?</u>

- Suddenly, the **Administration has global directive to combat terrorism**.
- **Creates major surge in <u>O&M</u>, <u>Personnel</u>** (Reserve/Guard) **and <u>Readiness</u> costs** (spares, training, force protection, and war reserves).
- **Accelerates limited "<u>Transformation</u>,"** in those offensive capabilities that can be "**rapidly-deployed"** (18-24 months).
- **Triggers major costs for <u>Homeland Defense</u>, that strain FY02 defense top-line**, where bulk of **extra $19B President requested in FY02** ($32B total increase) was already primarily allocated to **Personnel** (pay 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.** (Political patience will be tested).

6. Major Challenges Face DoD And Its Contractors

Constant infusion of capital is critical for contractors to develop or acquire 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.

6. Major Challenges Face DoD And Its Contractors (Cont.)

Institutional Investors have currently "parked" investment funds in defense stocks as a "defensive measure," but unclear how long defense funding surge will last.

- But, **bulk of immediate defense funding surge is required for:**
  - **O&M,**
  - **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.**

- **This will lead to major Budget/Procurement collision in FY07-09.**

- **Enable "committed 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 **"committed" contractors with program workshare** and **clear "risk-to-reward" relationships**.

7. Two Resounding McAleese Messages <u>To Stakeholders/Shareholders Since January 2001:</u>

1) **DoD** **<u>must have robust long-term defense industrial base to achieve</u>** the Administration's strategic objectives of:

a) **<u>Missile Defense</u>, (QDR)**
b) Cost-effective, **<u>tactical air superiority</u>**, such as the F-22, **(QDR)**
c) Real-time, **<u>precision-strike</u>** capabilities, **(QDR)**
d) **<u>Deep-strike</u>** capabilities, e.g., **bombers**, **UCAVs,** etc., **(QDR)**
e) Strengthened **<u>tactical airlift</u>** (lightning-strike), **(QDR)**
f) Survivable, **<u>netted-C4ISR</u>** capability, **(QDR)** and
g) Vital **<u>special-mission aircraft</u>** for airborne surveillance and jamming, i.e., **high-demand/low-density** assets. **(QDR).**

2) **Defense industrial base** **<u>must be well-capitalized</u>** by shorter-term **"<u>Value Investors</u>,"** who will accept **<u>limited profit percentages</u>** and **<u>limited long-term top-line</u>** defense growth in exchange for **<u>strong "Cash-Flow-Return-on-Investment</u>"** (CFROI) and **"<u>controlled risk</u>."**

8. "Full Subsystem Capability" Model Drives "Leap-Ahead" Technologies For DoD & Earnings For Shareholders

- Collectively, Acquisition Reforms have largely **delegated traditional DoD subsystem authority to primes.** (e.g., TSPR).

- 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 had 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” Model Drives “Leap-Ahead” Technologies For DoD & Earnings For Shareholders (Cont.)

- **“Full Subsystem Capability”** means the ability to **design, manufacture, integrate and maintain 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,
  5) Production (function of hardware, electronics, or software),
  6) Life-cycle support to sustain on-board subsystems in field.

- **While the <u>primes have consolidated to two houses for most platforms,</u> suppliers have yet to consolidate in many <u>defense-unique/R&D-intensive</u> subsystems.**

- **<u>For each of the two competing platforms, there is only one of each major on-board subsystem</u> (e.g., ECM, IFF, fire control radar), and only one after "winner-take-all" downselect.**

- However, in many cases, there are **still four-to-six independent subsystem houses** that produce each **defense-unique/R&D-intensive subsystem.**
- Consequently, **"<u>committed" contractors must develop "Full Subsystem Capability</u>**" to become #1 or #2 in their core defense subsystem to:

    1) **<u>Manage the greater technical/schedule/financial risks</u>** in driving offensive "leap-ahead" technologies, and

    2) **Accelerate deployment of asymmetric technologies**. (UAVs, commo, sensors).

9. <u>Four McAleese Recommendations</u>

1) **Break-out work to commercial firms that is not defense-unique**.

2) **Consolidate redundant <u>defense-unique/non-R&D-intensive</u>** houses to drive down cost. (to two-three).

3) **<u>Reprioritize funding</u>** and **<u>grant favored treatment</u>** to committed **<u>defense-unique/R&D-intensive</u>** contractors to drive offensive “leap-ahead” technologies at subsystems-level.

4) **<u>Direct program workshare</u>** and establish **<u>clear risk-to-reward-relationships</u>** with “committed contractors” in exchange for **<u>increased technical/schedule/financial risks</u>** of accelerating development/fielding of offensive technologies.

10. DoD Must Aggressively Drive Technical Innovation in "Emerging Technologies" to Maximize Weapon Systems' Lethality, Survivability and Combat Capability [9]

- If a technology is defense-unique, then a careful evaluation must be made to determine whether the product is "defense-unique/R&D intensive," or "defense-unique/non-R&D-intensive."
- In defense-unique/non-R&D-intensive areas, most probable discriminator is cost, with limited potential for major breakthroughs in offensive technologies. **(mature markets).**
- Conversely, if a product or technology is defense-unique/R&D-intensive, then the DoD must take two specific actions:
  - **First, DoD must fully fund procurement of rapidly-deployable, improved sensor/kill technologies and improved Command & Control for existing platforms, coupled with procurement of additional "high-demand/low-density" platforms,**
  - **Second, DoD must foster aggressive competition between at least 2-3 "committed contractors" in each emerging technology to drive the technical innovation so critical to lethality, survivability and combat capability.**

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[9] Source: Written Testimony of James McAleese on March 19, 2002 before The House Committee On Armed Services, Subcommittee On Military Procurement.

11. Specific McAleese Examples of "Emerging Technologies" That Will Increase Lethality, Survivability, And Combat Capability

Specifically, key emerging technologies (in varying stages of deployability) are critical to providing the United States total battlespace dominance:

1) **Automatic Target Recognition** -- to defeat stealthy and camouflaged targets;

2) **Laser Communications** -- to maximize situational awareness and enable time-sensitive kills;

3) **Robotic Suppression of Enemy Air Defenses** (SEAD) -- to enable close-in helicopter troop transport and strikes;

4) **Robust Interlocking Bandwidth** -- of Ultra-High Frequency, laser, satellite and acoustic media;

5) **Data Fusion** -- to maximize situational awareness at all levels;

6) **Unmanned Combat Aerial Vehicles** (time-sensitive strike)/unmanned ground combat vehicles (scout and close-quarters combat)/unmanned underwater vehicles (mine counter-measures);

7) **Advanced Antennae & Sensors** -- to increase communication data-rates, as well as detect camouflaged targets by co-boresighting multi-spectral media;

8) **Directed Energy Weapons** -- to maximize lethality and stealth/survivability of light/airliftable forces;

9) **Data Mining Technologies** -- to avoid warfighter "overload at lower levels;"

10) **Fully-Integrated Battle Management Command, Control & Communications** (BMC3) -- to provide real-time "kill data" beyond line-of-sight with minimal risk of fratricide;

Specific McAleese Examples of "Emerging Technologies" That Will Increase Lethality, Survivability, And Combat Capability (Cont.)

11) **Miniaturized computing capability** -- to distribute processing power down to individual combat units to maximize situational awareness and enable high-speed maneuver strike;

12) **Improved Gas Turbine Technology** -- to simplify engines, maintenance, and minimize logistics footprint in long-strike or extended small unit operations;

13) **Standardized Military Communication Systems Technology** -- to provide military Services communication commonality (common user Information Management System);

14) **VTOL Aircraft and Rotorcraft Technology** -- to provide an order-of-magnitude advance in platform performance, such as speed, range, endurance, payload, and hover capability;

15) **Embedded Diagnostics Technology** -- to provide common diagnostic systems (e.g., Health-Usage-Maintenance or "HUMs") for surface and air platforms with dramatic improvements in front-line maintenance with minimal logistical support during combat;

16) **Software Technology** -- to simplify the integration of subsystems on both air and surface weapon systems - benefits include increased combat capability through fused sensors and platform weight reduction, as well as improved system support and reduced logistics footprint;

17) **Hybrid/Full Cell Propulsion Technology** -- to enable extended operations, and simple, supportable vehicle propulsion systems in areas of austere logistics support;

18) **High Power Microwave** -- to provide area-denial (non-lethal/variable lethality) technology;

12. To Defeat Terrorism, Advances Must Be "Rapidly Deployable"[10]

To maximize lethality, survivability, and combat capability on the battlefield, DoD must take immediate steps to field emerging technologies in three key categories:

Category I: Modification of new and existing platforms with "rapidly-deployable" advanced **sensor/kill technologies** and **improved command & control**;

Category II: Accelerated acquisition of "**high-demand/low-density" sensor/control** platforms; and

Category III: **Block upgrades** of rapidly-deployable offensive "leap-ahead" technologies, such as directed-energy weapons, as well as systems to provide adequate electrical power, and architecture to truly integrate the "digitized battle-space."

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[10] Source: Written Testimony of James McAleese on March 19, 2002 before The House Committee On Armed Services, Subcommittee On Military Procurement.

13) McAleese Category I
Rapidly-Deployable Sensor/Kill Technologies and Command & Control

The following are examples of some of the unfunded programs that are McAleese candidates for insertion of sensor/kill technologies (selected from Unfunded Priority Lists of Services):

- **DDG-51** Insertion of improved C4ISR suites will enable DDG-51s to operate as independent Command & Control ships at remote “hot spots,” relieving some of the burden of CVN Battle Groups);

- **SSN ERO** Critical for undetected, long-loiter signals intelligence and time-sensitive tactical strike;

- **LPD** Provides forward presence and capabilities for expeditionary and special operations forces;

- **CG-47 Conversion Program** Critical warfighting improvements to the Area Air Defense, and Force Protection capabilities of the CG-47 cruisers. Part of Single Integrated Air Picture and enabler of Sea-Based Missile Defense;

- **FA-18E/F** Accelerate procurement with updated suites of sensors, targeting, and communications equipment to provide combat bridge until full fielding of JSF); and

- **MH-60** Provide the Navy with next-generation mine hunting equipment to defeat littoral anti-area denial strategies critical to next stage of campaign against terrorist regimes.

McAleese Category II
Accelerated Acquisition Of "High-Demand/Low-Density" Sensor/Control Platforms

Several emerging programs have proven so valuable in recent combat operations that accelerated acquisition is recommended. These include such platforms as:

- **Unmanned Aerial Vehicles (UAVs):** (To allow for unmanned reconnaissance and surveillance, C4ISR linking capability, and long-range hunter/killer capabilities).

  - Hunter and Shadow TUAV for Army/Marine Corps,
  - Global Hawk,
  - Accelerated production of interim armed UAVs and Accelerated UCAV-USAF/UCAV-Navy production.

- **Specialty C4ISR Aircraft** are playing an enormous role in Afghanistan, and as such continue to be in high demand. These include:

  - JSTARS,
  - EA-6B upgrades.

- **UUV Technology Acceleration** ($66M) -- Accelerates production of Unmanned Underwater Vehicles (UUV) to provide enhanced reconnaissance capabilities by extending sensors off-hull.

McAleese Category III
Block Upgrades of Offensive "Leap-Ahead" Technologies

Block Upgrade strategies should then be pursued as significant improvements in lethality and combat capability are matured. These will include evolutionary weapons systems development such as:

- **DDX and CVN-X series** (Spiral development programs for the DDG-51 and CVN replacements. The DDX program will act as the development test-bed for other classes of surface combatants);
- **Airborne Laser Program** (Prototype airborne missile defense interceptor utilizing laser weapons. Will be the platform for leap-ahead developments in other laser applications such as ground and sea-based lasers);
- **Consolidated C4ISR Wide-bodied Aircraft** (clear preference for 767s if reasonable price can be obtained) (Next-generation C4ISR to supplement/replace JSTARS and AWACs. Provide next-generation C4ISR airborne platform to integrate battlefield information grid);
- **Minesweeping UAVs and airships** (Using specialty aircraft and remote airships to ensure location and demolition of land and sea-based mines);
- **Stealthy long-range UAVs** (UAVs for ultra-distance, deep target surveillance, reconnaissance, and strike missions); and
- **Hybrid-Electric Weapon Systems** (DoD's development of new, electrical weapons will require new classes of hybrid-electric (HE) power systems.

14. 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,

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 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,

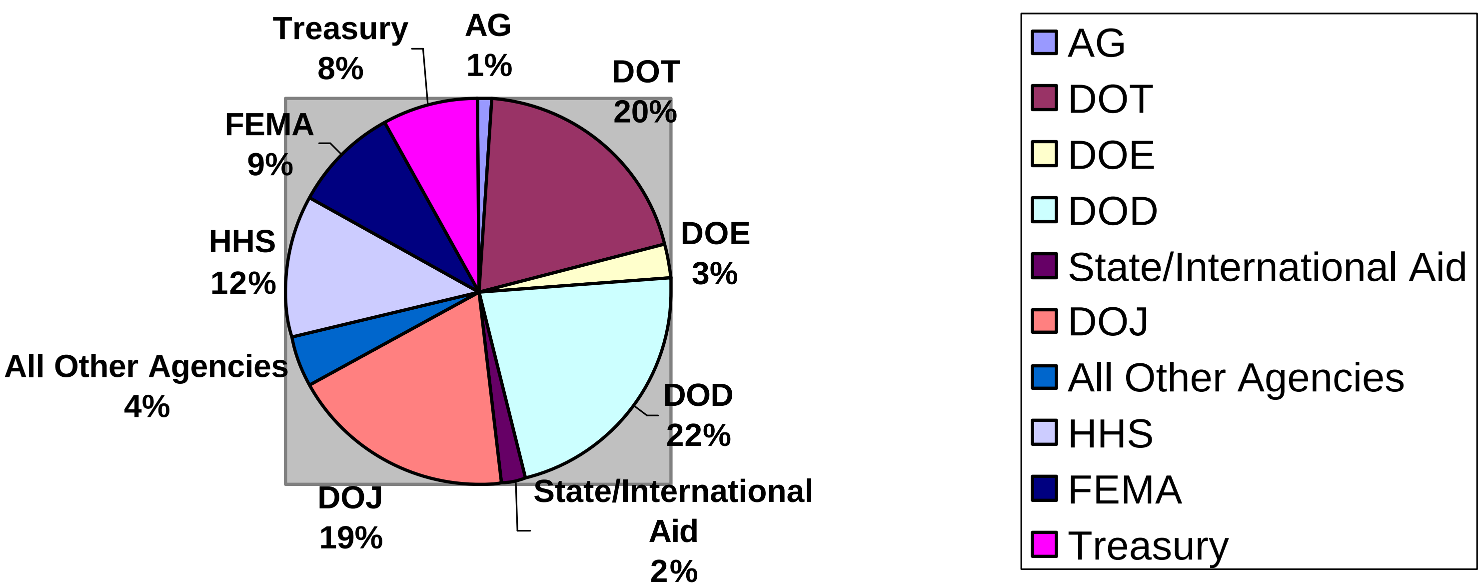
9) **Revise Cost Principles** of FAR Part 31 to finally allow for contractor **recovery of various indirect costs** that are an inherent part of any business. (Such as interest, recruitment/employee retention, goodwill from corporate acquisitions).

This consensus will enable "committed contractors" to assume the aggressive technical/schedule/financial risks to drive leap-ahead technologies to directly save American lives in combat.

SUPPLEMENTAL CHARTS

Homeland Security Funding ($37.6B)

<u>of FY03 Request Distribution By Agency</u>[11]



[11] Information Source: *Securing the Homeland Strengthening The Nation,* President George W. Bush, www.homeland/homeland_security_book.html

Excerpts from 2001 QDR-"State of the U.S. Military"

- **DoD will 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.**

Excerpts from 2001 QDR-"State of the U.S. Military" (Cont.)

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 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)**[12]

[12] 2001 DoD Quadrennial Defense Rev. Rep. 30

Excerpts From 2001 QDR-"Current Forces:"

• Army	
➢ Divisions (Active/National Guard)	**10/8**
➢ Active Armored Cavalry/Light Calvary 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)	**3/1**[13]

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