US Strategy and Force Plans:

The Bottom Up Review to the FY1999 Budget Submission

Anthony H. Cordesman

CSIS

April, 1998
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Part One

The Bottom Up Review (BUR)
Comparing the Bush Base Force and the Original Clinton Force Plans

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<td>211</td>
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Source: Annual reports of the Secretary of Defense, and Base Force and Bottom Up Review briefings to the Senate Armed Services Committee by the Secretary of Defense and Chairman of the Joint Chiefs of Staff.
**BUR Recommended US Force Levels for FY1998/99 to "Win in 2 Nearly Simultaneous Major Regional Conflicts**

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Details of the Outcome of the
Clinton/Aspin Bottom Up Review (BUR)

Uses of US Military Forces

The Bottom Up Review (BUR) develops four broad categories where US military forces can be used:

"Dangers posed by nuclear weapons & other weapons of mass destruction, including dangers associated with the proliferation of nuclear, biological, & chemical weapons."

"Regional dangers, posed primarily by the threat of large-scale aggression by major regional powers with interests antithetical to our own, but also by the potential for smaller, often internal, conflicts based on ethnic, or religious animosities, state-sponsored terrorism, and subversion of friendly governments."

"Dangers to democracy & reform, in the former Soviet Union, Eastern Europe, and elsewhere."

"Economic dangers to our national security, which could result if we fail to build a strong, competitive and growing economy."

Major Regional Contingencies

The most critical aspect of US force planning is the ability to fight two major regional conflicts (MRCs) near simultaneously:

The United States does not have to plan to fight a major conflict with Russia.

The United States does have to plan to deal nearly simultaneously with a major threat like North Korea and a Gulf nation like Iran and Iraq.

Planning for only one major regional conflict would leave the US vulnerable to a threat in another part of the world. Planning to fight such conflicts in sequence would allow the second aggressor to firmly establish itself in defensive positions and greatly increase the forces the US would need to win and the cost of a US victory.

North Korea and the Gulf are the most likely major regional conflicts, but the US cannot rely on the ability to predict where it will have to fight.

The US must plan to meet potential regional aggressors capable of fielding forces of 400,000-700,000 men, 2,000-4,000 tanks, 3,000-5,000 armored fighting vehicles, 2,000-3,000 artillery pieces, 500-1,000 combat aircraft, 100-200 naval vessels (primarily patrol craft armed with surface to surface missiles) and up to 50 submarines, and 100-1,000 Scud class missiles (possibly armed with nuclear chemical, and/or biological warheads).

The US will seek to fight any such conflict as part of a cooperative effort with its allies, the UN, and/or other friendly states.

The US must prepare for four phases of conflict: (1) Halt the invasion, (2) build-up US combat power in the theater while reducing the enemy’s, (3) decisively defeat the enemy, and (4) provide for post-war stability.
To execute this strategy, the US must improve its strategic airlift, provide rapid sealift for heavy ground and air forces, and preposition heavy combat equipment on land and afloat. It must improve its battlefield surveillance, command, control, and communications capabilities with advanced systems like the MILSTAR satellite, an improved AWACS, and JSTARS. It must also acquire a large number of more advanced "smart" and "brilliant" munitions, and maintain large aerial refueling capabilities.

The basic building block or force structure necessary to execute the strategy for a single Major Regional Contingency (MRC) is:

- 4-5 Army divisions
- 4-5 Marine Expeditionary Brigades
- 10 Air Force fighter wings
- 100 Air Force heavy bombers
- 4-5 Navy aircraft carrier battle groups
- Special Operations forces

The force requirements to execute a two nearly simultaneous major regional conflicts is twice the requirement for one major regional conflict.

Additional forces may be needed for any one major regional conflict, including at least two additional US Army divisions.

**Major Force Enhancements**

Developing an adequate capability to fight two nearly simultaneous major regional contingencies (MRCs) requires the US to make major enhancements in its forces.

**Strategic Mobility**

- Continue to purchase C-17's
- Keep an Army brigade set of heavy armor afloat on ships
- Increase capacity of surge sealift by purchasing additional roll on-roll off (RO-RO) ships
- Improve readiness and responsiveness of Ready Reserve Force (RRF) ships
- Fund additional measures to improve fort-to-port flow of personnel, equipment, and supplies

**Naval Strike Aircraft**

- Fund a precision ground-attack capability for F-14's
- Navy will develop a plan to surge additional F/A-18's to forward-deployed aircraft carriers that would be the first to arrive in response to a regional contingency--goal is to increase the strike power of the CVNs

**Army Firepower**

- Continue to purchase the Apache Longbow, which will increase the effectiveness and survivability of the AH-64 Apache attack helicopter, and give it a fire and forget capability against armor.
Develop new smart submunitions that can be delivered by ATACMS, the Multiple-Launch Rocket System (MLRS), the Tri-Service Stand off Attack Missile (TSSAM), & by standard tube artillery

Preposition ATACMS, MLRS, and Apaches so they can self-deploy from their overseas bases for quick response

**Reserve Component Forces**

Change role of combat Army National Guard units to be prepared to deter or fight a second major regional conflict while the actives are engaged in first major regional conflict

Increase the capability and effectiveness of its Navy/Marine Corps Reserve Air Wing through the introduction of a reserve/training aircraft carrier.

**Peace Enforcement and Intervention Operations**

The US must also plan for peace enforcement and intervention.

Typical operations include:

- Forced entry into defended airfields, ports, and other facilities and seizing and holding these facilities;
- Controlling the movement of troops and supplies across borders and within a target country and enforcing a blockade or quarantine of maritime commerce;
- Establishing and defending zones in which civilians are protected from external attacks;
- Securing protected areas from internal threats such as snipers, terrorist attacks, and sabotage;
- And turning over responsibility for security to peacekeeping units and/or a reconstituted administrative authority.

The BUR recommends the following force structure to execute the strategy for a major intervention or peace enforcement operation:

- 1 air assault or airborne division
- 1 light infantry division
- 1 Marine Expeditionary Brigade
- 1-2 carrier battle groups
- 1-2 composite wings of Air Force aircraft
- Special Operations Forces
- Civil affairs units
- Airlift and sealift force
- Combat support and service support units
- 50,000 total combat and support personnel

These capabilities for peace enforcement will be provided largely by the same collection of general purpose forces needed for the single major regional conflict--so long as those forces had the appropriate training needed for peacekeeping or peace enforcement.
Future US Military Presence Overseas

**In Europe**

US will continue to provide leadership in a reinvigorated NATO.

Maintain about 100,000 troops in Europe.

Maintain 2 1/3 wings of Air Force fighters in Europe.

Maintain substantial elements of 2 Army divisions, along with corps headquarters and other supporting elements. Equipment to bring these in-place divisions to full strength will remain prepositioned in Europe, along with the equipment of one additional division that would deploy to the region in the event of a conflict.

US Army forces will participate in two multi-national corps with German forces. Their training will focus on rapid deployments to conflicts outside of Europe and non-traditional operations such as peace enforcement, in addition to the long-standing mission of stabilization of central Europe. Their equipment and configuration may change over time.

US Air Force will continue to provide unique theater intelligence, lift, and all-weather precision strike capabilities.

US Navy will continue to patrol the Mediterranean Sea and other waters surrounding Europe.

**In Northeast Asia**

Maintain close to 100,000 troops.

Commitment to South Korea's security undiminished.

Maintain 1 wing of Air Force fighters in Korea.

Keep one two-brigade division in South Korea, with prepositioned equipment for third brigade, but eventually redeploy 1 of 2 Army brigades out of South Korea.

Maintain 1 Marine Expeditionary Force (MEF) with brigade-sized amphibious force and Marine Air Wing in Okinawa.

Maintain 1 Army Special Forces battalion in Okinawa.

Continue to home port carrier Independence, amphibious assault ship Bellau Wood, and supporting ships in Japan.

Maintain 1 1/2 wings of Air Force fighters in Japan and Okinawa.

Preposition one added brigade set ashore in Korea, if the US chooses to withdraw one brigade from the division currently in Korea, and add one prepositioned brigade set afloat that can "swing" between Asia and the Gulf.

US 7th Fleet to routinely patrol West Pacific.

Increase early-arriving land-based and carrier aircraft and long-range bombers.
Enhance air, land, and sea anti-armor capability.

Improve anti-tactical ballistic missile capability.

Upgrade airlift and sealift to support rapid closure of heavy forces.

**In SW Asia and the Gulf**

Local sensitivities to a large-scale Western military presence require heavier reliance on periodic deployment of forces.

Maintain a presence of 4-6 Navy combatants in Middle East Force.

Maintain maritime prepositioning ship squadron at Diego Garcia with seven ships.

Increase level of prepositioned equipment on land from one brigade in Kuwait by adding a brigade set in another country.

Preposition one "swing" brigade set afloat near the Gulf that could also go to Asia or elsewhere in the world.

Increase early arriving land-based and carrier aircraft, and long-range bombers.

Enhance air, land, and sea anti-armor capability.

Improve anti-tactical ballistic missile capability.

Upgrade airlift and sealift to support rapid closure of heavy forces.

**Future US Naval Presence**

The flexibility of aircraft carriers to operate effectively with relative independence from shore bases, makes them well suited to overseas presence operations especially where land-based military infrastructure is relatively underdeveloped.

Because of this, the strategy has set ship force structure levels at levels higher than those needed to fight two major regional conflicts. However, the Clinton/Aspin plan is willing to limit the carrier battle groups to 11 active and 1 reserve unit, and gap the presence of carriers in SW Asia, NE Asia, and the Mediterranean for Navy personnel reasons.

The US will make up for gaps in carrier coverage without a degradation of US maritime presence by deploying:

Large deck amphibious assault ship with AV-8B Harriers and Cobra attack helicopters and 2,000 man Marine Expeditionary Brigade

Tomahawk sea launched cruise missile-equipped Aegis cruiser/destroyer, a guided missile destroyer, attack subs, and P-3 land-based maritime patrol aircraft

Implement strategy of "Adaptive Joint Force Packages" in maritime deployments

**Strategic Nuclear Forces**

Changing strategic environment makes it impossible to set firm requirements.

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Cannot ignore threat posed by instability in former Soviet Union.

Many obstacles must be overcome before ratification of START II, and Ukrainian ratification of START I, and full reductions will not be implemented for 10 years.

US must maintain significant strategic forces.

18 Trident subs with C-4 & D-5 missiles
500 Minuteman II missiles, each carrying a single warhead
94 B-52H bombers equipped with air launched cruise missiles
20 B-2 bombers

**Total US Force Requirements**

**In Army**

10 divisions (active)
5+ divisions (reserve)

**In Navy**

11 aircraft carriers (active)
1 aircraft carrier (reserve)
45-55 attack subs
346 ships

**In Air Force**

13 fighter wings (active)
7 fighter wings (reserve)
Up to 184 bombers *

**In Marine Corps**

3 Marine Expeditionary Forces
174,000 personnel end strength (active)
42,000 personnel end strength (reserve)
Develop the V-22 Osprey hybrid transport plane

**In Strategic Nuclear Forces**

18 ballistic missile subs
Up to 94 B-52 bombers
20 B-2 bombers *
500 Minuteman III ICBMs (single RV)

**Decisions on Core Procurement Programs**

**Theater Missile Defense (TMD)** = $12B for FY1995-99

Develop an enhanced version of land-based Patriot

Develop Sea-based Aegis/Standard Missile Block IV

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Develop land-based Theater High-Altitude Area Defense (THAAD)

Develop Sea-based Upper Tier System

National Missile Defense (NMD) = $ 2-3 Billion for FY1995-99

Develop Brilliant Eyes

Integrate ground-based radar technology wrapped into THAAD

Integrate ground based interceptor (GBI) technology into THAAD & Sea-based Upper Tier

Theater Air Forces

Proceed with the development & procurement of F/A-18E/F

Retire all A-6 aircraft by 1998 (before production of E/F)

Proceed with the development & procurement of F-22 (incorporate a limited air-to-ground capability from outset)

Cancel the A/F-X and MRF, and F-16 production after FY1994

Launch a Joint Advanced Strike Technology Program

Aircraft Carriers

Proceed with construction of CVN-76 beginning in FY1995

Delay advance procurement for CVN-77 until after FY1999

Maintain a naval force structure built around 11 active aircraft carriers, 10 Navy active air wings, and one composite Navy-Marine Corps reserve air wing.

Proceed to establish a reserve/training carrier to provide Navy and Marine pilots their initial carrier training, to train Navy & Marine Reserve pilots, and for occasional forward deployments, to give more realistic training to reserve air crews while filling gaps in overseas presence.

Attack Submarines

Maintain a force of 45-55 attack subs

Produce a second and third Seawolf attack sub & direct production to Groton, Connecticut, shipyard to try to bridge the projected gap in sub production & mitigate the risk to the industrial base. (This decision does not allow Tenneco, Newport News shipyard to compete for SSN-23).

* Totals differed according to date of briefing charts. Some charts only refer to "up to 100 bombers."

Source: Based on a combination of the tables and text provided by Secretary of Defense Aspin to the House and Senate Armed Services Committees while presenting the results of the Bottom Up Review in September, 1993. Although dated September 1, 1993, several tables were revised, added, or deleted during September 1st through September 14th.

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Force Improvements Required in the Bottom Up Review (BUR) Force

Providing precision strike capabilities for the F-14, F-22, B-1, and B-2.
Establishing a Joint Advanced Strike Technology Program for next generation aircraft which mixes new joint munitions, technology demonstrators, and advances in critical components.
Providing additional Army prepositioned equipment. Improving prepositioning for heavy armored divisions in South Korea and Southwest Asia, and prepositioning one heavy armored brigade set afloat.
Providing a new generation of far more advanced battlefield surveillance, command, control, and communications systems including JSTARS, an upgraded AWACS, the MILSTAR satellite communications system, new damage assessment and identification of friend and foe systems.
Providing greatly improved anti-armor systems and ordnance, including all-weather anti-armor submunitions for air delivery, and other new “smart” and “brilliant” munitions.
Enhancing aerial refueling capabilities to improve power projection capabilities, extend strike and air defense ranges, and increase the tempo and intensity of air operations.
Buying additional Army firepower in the form of ATACMS, the multiple launch rocket system (MLRS), and the Tri-Service Standoff Attack Missile (TSSAM). Buying the Longbow, fire and forget stand-off anti-tank missile for the AH-64 Apache attack helicopter. Prepositioning more of these systems overseas.
Enhancing the readiness of Army National Guard combat brigades so they can deploy in 90, rather than 180 days.
Adding additional Marine Corps end strength, and providing equipment and sustainability improvements to keep all three full time active Marine Expeditionary Forces (MEFs) -- which are division sized land-air amphibious strike forces -- combat ready.
Developing and deploying the V-22.
Compensating for cuts in carrier battle groups, and limitations in future deployment capabilities, by deploying enhanced amphibious assault groups built around large-deck amphibious assault ships with AV-8Bs and Cobra attack helicopters, and a 2,000 man Marine Expeditionary Unit (MEU), or a naval task force built around the Aegis guided-missile cruiser, the Tomahawk sea-launched cruise missile, attack submarines, and land-based P-3 maritime patrol aircraft.
Improving mine counter-measure and missile defense capabilities.
Developing the organization, tactics, training, and equipment to deploy “Adaptive Force Packages” that contain joint force packages of air, land, special operations, and maritime forces tailored to meet a theater commander's power projection needs.
Providing additional strategic airlift, including the C-17 or a similar capability, and additional rapid sealift and roll-on roll-off ships. Improving the readiness of the Ready Reserve Force (RRF) for rapid deployment of maritime supply capability, and restructuring basing and infrastructure to improve “fort to port” capabilities.
Preserving the carrier industrial base.
Preserving the submarine industrial base.
Restructuring the Ballistic Missile Defense Program and providing new theater missile defenses. Developing and deploying a mix of improved Patriot PAC-3, THAAD land-based anti-theater ballistic missile, and AEGIS SM-2 Block IVA anti-theater ballistic missile defenses.
Developing and possibly deploying new targeting and attack systems to find and kill mobile missiles and missile launchers.
Improving transfer of key weapons and equipment to critical regional allies like South Korea, Saudi Arabia, and Kuwait.

Source: Based on a combination of the tables and text provided by Secretary of Defense Aspin to the House and Senate Armed Services Committees while presenting the results of the Bottom Up Review in September, 1993. Although dated September 1, 1993, several tables were revised, added, or deleted during September 1st through September 14th.
Part Two

The Quadrennial Defense Review (QDR)
# Evolving US Force Plans and the QDR - Part One

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### Evolving US Force Plans and the QDR - Part Two

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* An approximate equivalent and numbers are not comparable in the outyears. The BUR plan calls for 15 enhanced readiness brigades, a goal that DoD will begin to reach in FY1996. Backing up this force will be an Army National Guard strategic reserve of eight divisions (24 brigades), two separate brigade equivalents, and a scout group. ** A MEF includes a Marine division, air wing, and force service support group. *** Numbers differ from the BUR. They only include primary aircraft inventory and exclude aircraft in depot maintenance.

The Impact of the Quadrennial Defense Review (May 1997) on US Strategy

Implement Joint Vision 2010 through:

**Information Superiority**
- Robust multi-sensor information grid providing dominant awareness of the battlespace to commanders and forces.
- Advance battle management capabilities that allow global deployment faster and more flexibly than potential enemies.
- Information operations capability to penetrate, manipulate or deny an adversaryís battlespace awareness and unimpeded use of his own forces.
- Joint communications grid with adequate capacity, resilience, and network management capabilities.
- An information defense system.

**Dominant Maneuver**
- Implement Armyís strategic meeting engagement and USMC operational maneuver from the sea concepts.
- Provide advanced strategic and theater lift systems like C-17, LMSR, MV-22/CV-22, AAV.

**Precision Engagement**
- Precision engagement form the joint to the soldier level.
- Procure F/A-18E/F, F-22, Joint Strike Fighter, Comanche and Apache Longbow and Crusader artillery system.
- Develop a common C4I/SR (Strategic Reconnaissance) backbone.
- SC-21 family of new surface combatants.
- Improved stand-off weapons like the JASAM and JSAW, JDAM, and new generation of brilliant anti-armor weapons like the Brilliant Anti-Tank and Skeet submunitions.

**Full Dimensional Protection**
- Provide advanced sensors and C4I/BM systems for all levels of warfare.
- Improve biological and chemical protection.
- Develop and deploy a multi-tiered protection system.
- BMD systems range from local defenses such as PAC-3 Upgrade and Navy Area Defense to THAAD, Airborne Laser, and Aegis-based Navy Theater-Wide System.

**Focused Logistics**
- Restructure system to use radically more efficient integrated and service systems.
- Possible elements include:
  - Joint Total Asset Visibility.
  - Global Combat Support System.
  - Air Expeditionary Force package.
  - Marine Corps Asset Tracking Logistics and Supply System.
The Quadrennial Defense and Service Strategic Concepts

US Army

“Force XXI:” Enabling soldiers with information technology. Experimental Force (EXFOR) acts as test bed.

“The Army After Next:” Test concepts for army 30 years from now through annual war games and workshops to determine research concepts for increased mobility, lethality and maneuver, leveraging radical advances in information technology, weapons, and platform speeds.

“Future Combat System:” Leap-ahead concepts for a ground combat vehicle.

US Air Force

“Global Engagement:” Build on six core competencies.

Integrated global battle space awareness and advanced command and control.

Air and space superiority to allow freed from attack and freedom to attack.

Rapid global mobility.

Ability to attack anywhere in the world.

Precision engagement competency to reliably apply selective force against specific targets simultaneously to achieve desired results with minimal risk and collateral damage.

Air and space assets for information superiority.

Agile combat support.

Six battle laboratories to focus on UAVs, information warfare, air expeditionary forces, space capabilities, battle management command and control, and force protection.

US Navy

“From the Sea, Forward From the Sea, Navy Operational Concept” identify five fundamental and enduring roles: Sea control and maritime superiority, power projection from sea to land, strategic deterrence, strategic sealift, and force naval presence.

“Network-centric warfare:” The ability of widely dispersed, but robustly networked sensors, command centers, and forces to have significantly massed effects. Close timelines, decisively alter initial conditions, and seek to head off undesired events before they start.

Precision engagement, full-dimensional protection, sea-based focus logistics.

Sea-Based combined joint task forces using advanced C4ISR.

US Marine Corps

“Marine Corps Operational Maneuver from the Sea:” Tactical adaptive, technologically agile, opportunistic and exploitative forces; Joint Warfighting Center, Joint C4ISR Battle Center.

Marine Corps Combat Development System

“Hunter Warrior:” Examine naval power projection in a disperse, non-contiguous littoral battlespace, enhanced fires and targeting, C4I, and “single battle.”

“Urban Warrior:” Explore operations in urban, near urban, and close terrain.

“Capable Warrior:” virtual and live forces using operational level deception and maneuver in response to crisis to contain or obviate a major theater war.
The Impact of the Quadrennial Defense Review on US Force Structure - Part One

Force-Wide

Must continue to prepare for two nearly simultaneous theater wars

Still require 10 active army divisions and 20 air force fighter wing equivalents to execute two nearly simultaneous theater wars with moderate risk.

Active duty end strength will be reduced to 1,360,000 (down 36% from 1989), with 835,000 in the reserve force (down 29% from 1989). Civilian Personnel will decline to 640,000 (down 42% from 1989.)

Keep roughly 100,000 active military personnel forward deployed in both Asia and Europe.

US Army

US Army will retain its 10 active, combat ready divisions.

It will accelerate its Force XXI modernization plan to revolutionize combat capability by enhancing battlefield awareness through modern information technology.

It will reduce the army by some 15,000 personnel through deactivation, consolidation, and realignment.

The Army will restructure its reserves to shed combat structure that provided strategic depth in the Cold War, and accelerate conversion of units from combat to combat support and combat service support roles to aid the active forces. It will cut some 45,000 personnel.

Complete and maintain 15 National Guard enhanced separate combat brigades. Convert 12 other National Guard brigades to combat support and service support units before 2013.

US Navy

Retain 12 carrier battle groups and 12 amphibious ready groups.

Reduce attack submarines from 73 to 50.

Reduce procurement of F/A-18E/F aircraft from 1,000 to 548 and transition to Joint Strike Fighter as soon as possible with goal of initial production for Navy in 2008. Raise F-18E/F production to 785 if JSF requires more time.

Transfer some combat logistics ships and functions to Military Sealift Command. Reduce number of tenders and early withdrawal of the SH-2 helicopter from service.

Cut active strength by 27,000 and reserves by 4,100.

US Marine Corps

Maintain a three MEF force capability.

Take modest reductions in end strength.

Procurement V-22 to replace CH-46 medium lift, but reduce number of current aircraft to 360 V-22s.
The Impact of the Quadrennial Defense Review on US Force Structure - Part Two

US Air Force

Force goal of 12 active and 8 reserve fighter wing equivalents, giving all reserve squadrons 15 combat aircraft.
Cut active manning by 27,000
Consolidate fighter and bomber units to streamline command structure.
Shift one active component fighter wing to reserve component.
Outsource more support functions.
Reduce force structure for continental air defense. Convert six air defense squadrons to general purpose squadrons, and retain four. Transfer more modern combat aircraft into these units from active force.
Proceed with the F-22 to replace the F-15. Cut total number of F-22s to be procured from 438 to 339.

Strategic and Nuclear

Maintain Congressional mandated force of 18 Trident SSBNs, 50 Peacekeeper ICBMs, 500 Minuteman III ICBMs, 71 B-52H bombers, and 21 B-2 bombers through FY 1999 at cost of additional $64 million.
Begin to reduce to START II levels when Russian Duma ratifies and aggressively seek to negotiate START III.

Theater and National Missile Defense

Slow deployment of THAAD because of technical problems from 2204 to 2006
National missile defense remains a high priority. Prepare for deployment decision as early as FY2000.

Counterproliferation and Anti-Terrorism

Improve defense against asymmetric threats like chemical and biological warfare.
Improve defense against terrorism and information warfare.

Mobility Forces

Reach an airlift capability of 50 million ton-miles per day.
Reach a sealift surge capacity of 10 million square feet, made up of fast sealift ships, large medium-speed roll-off (LMSR) vessels and Ready Reserve Force.
Four million square feet of prepositioned cargo capacity for Army and Marine Corps.
Six sets of prepositioned equipment (three in Europe, one in Korea, two in Southwest Asia, plus Marine Corps Brigade in Norway.)

Force Readiness

High OPTEMPO rates will continue and the US must prepare for them.
Tiered readiness does not work and is not cost effective. Facilities are not designed to surge readiness, and cost savings are limited, while penalty in effectiveness and contingency capability is high.

Infrastructure

Force structure has dropped 33% and will drop by 36% by 2003. Domestic infrastructure will only drop 21% by 2003 under past plan.
Must make major additional cuts to bring back in balance.
Key Procurement Impacts of the Quadrennial Defense Review

C4ISR: joint Global Command and Control System (GCCS) and decisive information superiority from NCA to unit level.

JSTARS (Joint Surveillance and Target Attack Radar System): Reduce procurement goal from 19 to 13, to provide fleet for continuous coverage on one theater-sized war. Fund 4-6 aircraft for US share of proposed force of 30 aircraft for NATO.


F/A-18E/F: Navy's principal fighter. Will procure 548 instead of 1,000, with a maximum annual production rate of 48, rather than 60. Will try to accelerate the JSF, but can procure 785 F/A-18E/Fs as alternative. May configure the aircraft to replace the EA-6B electronic warfare aircraft.


V-22/MV-22 Osprey Tiltrotor Aircraft: Accelerate procurement to 30 aircraft a year in 2004. Reduce program objective from 425 to 360. Save $3 billion in program cost.

B-2 Bomber: Cap force at present 21 aircraft. The Deep Attack Study concluded it lacked the range and carrying capacity to replace the forces that would have to be retired.

Deep Strike/Anti-Armor Weapons and Munitions: Will actively pursue advanced systems.

- For the “deep battle” procure Wind-Corrected Munitions Dispenser carrying Combined effects Bomblets or Brilliant Skeet anti-armor submunition; US Army Tactical Missile Systems with Brilliant Anti-Armor Submunitions (ATACMS, BAT/BAT Product Improvement); product-improved version of Sensor-Fuzed Weapon, and Joint Stand-Off Weapon (JSOW) with unitary warhead. Consider reducing JSOW buy for more Joint Air-to-Surface Stand-Off Missiles (JASOM) and laser-guided bombs. Procure Apache Longbow and Hellfire missiles.

- For “close battle” procure follow-on to TOW and M829E armor piercing anti-tank round.

Ship Modernization: Procure CVN-77, the 10th Nimitz-class carrier. Procure submarines at rate of 1-1.5 per year to reach target force level of 50 submarines.

Army Ground Combat: Emphasize “digitization” to use modern communications capabilities and computers to enable commanders, planners, and shooters to rapidly acquire and share information and revolutionizes the conduct and tempt of all combat operations. Test first digitized Corps in 2004, not 2006.

- Procure RAH-66 Comanche and Crusader self-propelled howitzer in middle of next decade.

- Alter equipment mix in National Guard to suit focus on combat support and service support roles.


National Missile Defense: Seek deployment decision as early as 2000, if threat warrants. Be able to then deploy within three years. Will need $2 billion in additional funds.


Navigation: Upgrade GPS and comply with Global Air Traffic Management rules. Protect access to GPS data.

Counterproliferation: Emphasize theater missile defense programs, development of a capability to defeat hard and/or deeply buried targets; biological weapon detection and emergency response programs; chemical detection protection, and decontamination; and increase funding for special operations force counterproliferation activities.

Part Three


December, 1997
Recommendations of the National Defense Panel on Strategy

Two MRC strategy is suitable for force-sizing only. Need to shift to more flexible strategy for wide range of smaller contingencies.

Maintaining regional stability is probably the foremost mission.

Need to foster a stable international system through full interaction with regional partners and alliances through diplomatic activities as well as the full integration of US diplomatic, economic, and military activities.

Need larger homeland defense by 2010-2020. Threats include attacks by super power with weapons of mass destruction, terrorism, information warfare, ballistic and cruise missiles from smaller powers, transnational threats, and attacks on critical infrastructure.

Deterrence of nuclear attack must be supplemented by ability to manage -- identify, account for, and safeguard against -- proliferation and possible use of weapons of mass destruction.

On the cusp of a military revolution stimulated by rapid advances in information and information-related technologies with growing potential to detect, identify, and track far greater numbers of targets over a larger area for a longer time, and provide information much more quickly and effectively than ever before, dissipating the “fog of war.”

Must adopt a “transformation strategy” with a much greater emphasis on jointness, new approach to alliances, reorganization of intelligence.

Focus on coalition operations and reinforce alliances through cooperative relationships, free market arrangements, free flow of information, and interoperability.

US information superiority is a critical national priority.

The defense of information systems is also a critical national priority requiring the redefinition of alliances and both national and international action.

Transnational threats such as state and non-state terrorists present major new problems such as environmental disruptions, pandemics and mass migrations. Threat includes criminal enterprises such as drug trade.

Must prepare for the steady erosion of traditional national borders.

The Department of Defense must be prepare to provide support in anti-terrorism.

Must prepare for sustained urban operations and warfare in built-up areas.

Requires preparation for urban control, urban defense, eviction operations, and targeting and strikes.

Special conditions include noncombatants, skyscraper jungles, vital infrastructure, and government institutions.
Recommendations of the National Defense Panel for Force-Wide Change

Must be able to project military power and conduct combat operations into areas where do not have forward-deployed forces or forward bases; be able to put capable, agile, and highly effective shore-based land and air forces in place with a vastly decreased logistic footprint.

Smaller force structures will be the norm.

Maintain information superiority and lead in space by deploying new systems while exploiting commercial technology.

Need new Unified Command Plan:

   Americas Command to meet challenges of homeland defense and Western Hemisphere.
   Joint Forces Command to be force provider to regional CINCs, address standardization, overseas joint training, and manage networked service battle labs.
   Logistics Command to merge service and agency support functions.
   Space command to absorb the domain of information.

Greatly expand joint field testing, create Joint Forces Battle Lab, Joint Urban Warfare Center, Joint Doctrine Center, Joint Warfare Analysis Center, Joint Concept Development Center, integrate service battle labs, establish joint national training centers, and place under Joint Forces Command.

US forces must prepare for homeland defense. Army Reserve and National Guard must prepare to find weapons of mass destruction and deal with consequences, Coast Guard and Department of Defense must reconfigure new classes of cutters to deal with transnational threats, and possibly cruise missile defense.

Restructure forces for alliances and regional warfare:

   Restructure some forces for smaller operations such as stability operations. Seek to prevent crisis escalation.
   Seek broader interoperability in R&D, training, doctrine, and operational techniques, incorporate Coast Guard into regional security planning, develop integrated inter-agency approaches.

Urban warfare requires new specialized weapons, tailored intelligence and communications, new operational concepts, civil-military and interagency coordination and joint and allied force integration. Need dedicated R&D effort.

Adapt space operations to emphasize civil-military coordination, add commercial practices and use commercial assets, improve surveillance of other’s space assets, protect US space assets, develop robust new R&D program, train commanders and decision makers to use space assets.

Improve intelligence to emphasize both integration of space-based systems and greatly strengthen HUMINT.

Greatly strengthen integration of interagency activity and provide joint training and exercise, fully integrated national crisis center, unified multi-media communication system.

Procurement and Defense Spending

Need an annual budget wedge of $5 to $10 billion to fund a true transformation strategy with initiatives in intelligence, space, urban warfare, joint experimentation, and information operations.

Fund through infrastructure and acquisition reform, and if this is not possible, cut OPTEMPOs, reduce force structure, and cut other procurement programs.


Recommendations of the National Defense Panel on Individual Services

US Army

Become more expeditionary, fast, shock-exploiting forces with greater urban operations capability.

Move beyond Force XXI to incorporate concepts in Army After Next.

Evolve smaller operational elements with equivalent or greater lethality.

Destructive disunity among components, specifically regular army and National Guard.

Need integrated structure emphasizing support functions and convert some Guard units to support functions. Make other National Guard combat and combat support elements part of Active Army combat units. Reorganize Guard units for Army After Next.

Create enhanced Guard brigades reporting directly to an active Army command with early deploying units built around line-of-sight anti-tank, high mobility, and artillery rocket forces.

Reorganize other Guard elements for homeland defense and transnational defense, including WMD and information warfare roles.

Create smaller Strategic Reserve out of regular Army reserve with clear peacetime missiles and slower modernization than active units. Reduce PERSTEMPO problem for more active units.

US Navy and US Marine Corps

Go to CVX-class carriers versus more Nimitz-class. Create follow-on carriers with STOL, UAV, and UCV capabilities to reduce size and personnel requirements.

Consider sea-based mobile off-shore bases.

Provide insertion vehicles with latest technologies to extend range.

US Air Force

Ensure proper mix of short and long-range forces for strike operations.
Recommendations of the National Defense Panel on Strategic, Nuclear, BMD, Counterproliferation and Power projection Forces

Strategic and Nuclear

Key tasks are support further strategic arms reductions and deter use of nuclear weapons by other powers.

Unlikely that nuclear forces can deter non-state actors and may fail to deter rogue states. Consider potential of non-nuclear weapons to deter non-state actors.

Maintain support for cooperative threat reduction programs.

Move to START III as soon as possible.

Sustain stockpile stewardship with arms control agreements.

Theater and National Missile Defense

Provide homeland defense.

Coupled defensive systems with arms control agreements to limit offensive capabilities.

Integrate ballistic and cruise missile defenses.

Counterproliferation and Anti-Terrorism

Restructure forces to deal with weapons of mass destruction:

Prepare for real-world use of such weapons and consequence management.

Need organic defense measures for deployed forces.

Give highest priority to detection capability.

Provide a conventional, non-nuclear deterrent capability against the use of weapons of mass destruction.

Power Projection and Mobility Forces

Restructure power projection forces to react more rapidly, not rely on forward access to bases, use smaller units with less support and supply, and increase strike lethality.

Be able to insert and extract forces without access to forward bases.

Be able to deploy prior to actual conflict.

Use distributed and networked battle fleets.

Extend range of aircraft and unmanned air systems.

Add offensive and defensive capabilities to deal with WMD threat.

Use high speed ground units with special forces and deep reconnaissance elements using rocket artillery, unmanned combat aerial vehicles, and attack helicopters.

Strike strategically at enemy centers of gravity.

Resupply forward forces by airlift and sealift when bases are at hazard.

Force Readiness

Alter role of National Guard and Army Reserve. Reduce readiness of some units.
Recommendations of the National Defense Panel on Infrastructure

Reorganize infrastructure and support base; cutback on surplus facilities in US with at least two more BRAC rounds of cuts, compete 6000,000 military and civilian positions performing commercially oriented support tasks, rather than just the 150,000 mentioned in the Defense Reform Initiative.

Cut base size by paying military personnel more, rather than maintaining on base services.

Create an industrial mobilization program.

Development new management systems to improve cost visibility and accuracy, competition, and civil/military integration.

Privatize depot maintenance.

Sharply reduce defense labs.
Warning That New Asymmetric Threats where Adversary will seek to Exploit Own Strengths and US Weaknesses

Attack will to fight. seek high US military civilian casualties.
Employ imaginative tactics and techniques.
Deny access to forward locations,
Exploit weapons of mass destruction.
Target fixed installations and massed formations -- ports, bases, prepositioned assets, coalition and allied forces and assets. Use stand-off weapons and weapons of mass destruction.
Use terror as a weapon to deter, limit, and terminate US operations.
Attack information systems.
Move the fight to urban areas.
Counter control of sea by seeding key straits and littorals with mines and attacking with missile salvos.
Seek speed of light anti-air weapons and deploy massive air defenses.
Combine approaches for greater synergy.
No Solutions in Sight: The “Smoke and Mirrors” Impact of the Quadrennial Defense Review (May 1997) on US Procurement Strategy

Broad goal is set of increasing procurement funded to $60 billion in FY2001. First formal statement that this has been the OJCS goal all along.

A legacy for the next President. Procurement funding goals are $49 billion for FY1999 and $54 billion for FY2000.

QDRT states “Each new defense program since the completion of the Bottom Up Review in 1993 has had to postpone the previous year’s plan to begin increasing defense procurement spending. As a result with each successive budget, through in the Department's procurement plans has shifted one year into the future and the cumulative amount of the procurement planned in each program has declined. For example, whereas the FYDP associated with the FY1995 budget developed after the Bottom-Up Review had planned an increase to procurement in FY1998 to $54 billion, the budget submitted in February of this year requests procurement funding of $42.6 billion. In addition, in the budgets for FY1996-1998, there was a cumulative loss of $18 billion in procurement funding relative to the BUR plan.”

No details are provided on shifts in RDT&E and Procurement program.

There are major cuts in past procurement plans that seem to involve trade-offs in accelerating other programs. None are defined in cost and timing.

Reduce JSTARS procurement goal from 19 to 13.
Cut F-22 goal from 438 to 339 aircraft with maximum production rate of 36, rather than 48.
Procure 548 F/A-18E/Fs instead of 1,000, with a maximum annual production rate of 48, rather than 60.
Reduce V-22 program objective from 425 to 360.
Cut JSF goal from 2,978 to 2,852 aircraft. Reach maximum annual production rate of 194 in 2012, rather than 2010.
Delay THAAD deployment date to after 2004.

No details on US Army, USM and USMC land and sea procurement plans.

Key slogans are:

Pursue a focused modernization effort.
Exploit the revolution in military affairs.
Exploit the revolution in business affairs.
Insure against will card scenarios.

Need an annual budget increase of $5 to $10 billion to fund a true transformation strategy with initiatives in intelligence, space, urban warfare, joint experimentation, and information operations.

**All Forces**

Emphasize joint systems architectures, information systems protection, information operations, automation, small logistic footprint, mobility, stealth, speed, increased operational and strike range, and precision strike capabilities.

Shift funds from legacy systems to new systems for 2010-2020.

Put more emphasis on directed energy, electromagnetic energy, and cyber weapons.

Greater speed and penetration capability for special forces.

Near-zero miss, long-range stealthy cruise missiles, brilliant munitions and submunitions in place of dumb weapons.

Integrate ballistic and cruise missile defense.

Distributed, user-friendly global information system with broadcast architecture.

Distributed in-theater logistics structure in place of large stockpiles.

Provide ability to forward deploy in hours or days, rather than weeks or months. Employ new airlift and sealift concepts emerging in commercial world.

Accelerate network centric operations linking sensors and weapons.

Replace service unique systems with integrated joint command, control, communications, computers, intelligence, surveillance, and reconnaissance systems.

Create highly networked forces able to see the battlespace in near real time and dynamically control and task forces.

**Land Forces**

Value of M-1 Upgrade, Commanche, and Crusader programs uncertain.

Reduce systems difficult to move and support, shift to lighter, more agile systems.

Develop 21st Century tank with 30-35 ton weight, hypervelocity gun, and new speed and agility.

Buy advanced vertical lift systems versus service-life extensions of existing rotary wing aircraft.

**Sea Forces**

Small-signature ships with sustained, long-range precision firepower.

Reexamine cancellation of arsenal ship.

Redesign ships to allow rapid technology updating.

Buy more UUVs to supplement submarines.

Go to CVX-class carriers versus more Nimitz-class. Create follow-on carriers with STOL, UAV, and UCV capabilities to reduce size and personnel requirements.

Consider sea-based mobile off-shore bases.

Provide insertion vehicles with latest technologies to extend range.

**Aerospace Forces**

- Question reduction of JSTARS buy.
- Emphasize longer-range JSF over F-18E/F.
- Question value of F-18E/F, JSF, and F-22 force mix, and lack of clear operational concepts.
- Buy fewer short-range aircraft, expand range of munitions, explore new approaches to long-range, precision delivery.
- Buy more distributed satellite systems to provide redundancy and survival for C4I/SR systems.
- Expand STOL capabilities.
- Increase ground surveillance capability.
Part Four

The FY1999 Defense Program and Revised US Strategy and Force Improvement Doctrine
Evolving US Force Plans and the FY1999 Budget Submission - Part One

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### Evolving US Force Plans and the FY1999 Budget Submission - Part Two

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* An approximate equivalent and numbers are not comparable in the outyears. The BUR plan calls for 15 enhanced readiness brigades, a goal that DoD will begin to reach in FY1996. Backing up this force will be an Army National Guard strategic reserve of eight divisions (24 brigades), two separate brigade equivalents, and a scout group.** A MEF includes a Marine division, air wing, and force service support group.*** Numbers differ from the BUR. They only include primary aircraft inventory and exclude aircraft in depot maintenance.

** The BUR force goals in the FY1999 budget submission do not track in detail with the actual content of the BUR report. Some goals are added that are not in the original report and some manpower goals are cut.

*** New, unexplained category in Appendix D to FY1999 Annual Report to the President

**** Primary active inventory excluding backup and attrition reserves and aircraft in depot maintenance

*****Reflects major unexplained cuts in ships and aircraft relative to previous force plans

## Strategic Nuclear Forces

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* Excludes five decommissioned submarines and their associated missiles and warheads that were still START accountables.

** Excludes two Poseidon submarines converted to Special Operations Forces that are still START accountable.

*** Excludes FB-111s

**** Excludes 94 B-1s converted entirely to conventional missions. The free fall bombs for aircraft not using ALCMs are being modernized to use the B61-11, which is spin stabilized and can be delivered with accuracies of 100 meters and which can penetrate from 2-15 meters. Yields are variable in five steps from 300 tons to 300 KT, depending on the amount of Tritium injected into the warhead.

Projected Security Challenges

- **Large-scale, cross-border aggression.** Some states will continue to threaten the territorial sovereignty of their neighbors. In Southwest Asia, both Iraq and Iran continue to pose threats to the region and to the free flow of oil from the region. In East Asia, North Korea still poses a highly unpredictable threat, due to the continued forward positioning of its offensive military capabilities on South Korea’s border and the enormous pressures imposed by increasingly dire economic and humanitarian conditions. Elsewhere in the region, sovereignty issues and several territorial disputes remain potential sources of conflict.

- **Failed states.** The U.S. intelligence community expects that some nation-states will fail between now and 2015, creating instability, internal conflict, and humanitarian crises. As in the former Yugoslavia, and as today in countries ranging from Albania to the former Zaire, governments will lose their ability to maintain public order or provide for the needs of their people, creating the conditions for civil unrest, famine, massive flows of migrants across international borders, aggressive actions by neighboring states, and even mass killings.

- **Transnational Dangers.** The variety of sub-state and supra-state actors that can affect the security environment will continue to grow in number and capability. Violent, religiously-motivated terrorist organizations have eclipsed more traditional, politically-motivated movements. The latter often refrained from mass casualty operations for fear of alienating their constituencies and actors who could advance their agendas or for lack of material and technical skill. Religious zealots rarely exhibit such restraint and actively seek to maximize carnage. Also of concern are entrenched ethnic- and nationalist-motivated terrorist organizations, as well as the relatively new phenomenon of ad hoc terrorist groups domestically and abroad. Over the next 15 years, terrorists will become even more sophisticated in their targeting, propaganda, and political action operations. Terrorist state sponsors like Iran will continue to provide vital support to a disparate mix of terrorist groups and movements. The illegal drug trade and other forms of international organized crime, including piracy and the illegal trade in weapons and strategic materials, will also persist, undermining the legitimacy of friendly governments, disrupting key regions and sea lanes, and threatening the safety of U.S. citizens at home and abroad. These transnational challenges penetrate national borders and threaten citizens’ well-being, sometimes through terrorist means. Finally, environmental disasters, uncontrolled flows of migrants, and other human emergencies will sporadically destabilize regions of the world.

- **Flow of potentially dangerous technologies.** The proliferation of advanced weapons and technologies—many of which can have military uses—will continue despite the best efforts of the international community. Of particular concern are the spread of nuclear, biological, and chemical weapons and their means of delivery; information operations capabilities; advanced conventional and evolving advanced technology weapons; stealth capabilities; unmanned aerial vehicles; and capabilities to access or deny access to space. The spread of these technologies could destabilize some regions and increase the number of potential adversaries with significant military capabilities, devolving from nation-states, to organized sub-state actors, to individuals. In particular, the nexus of such lethal knowledge and the emergence of terrorist movements dedicated to massive casualties represents a new paradigm for national security. Zealotry creates the will to carry out mass casualty terrorist attacks; proliferation provides the means.

US Doctrine for Fighting and Winning Major Theater Wars (MTW).

- **Mission is the most stressing requirement for the U.S. military.** To protect American interests around the globe, U.S. forces must continue to be able to overmatch the military power of regional states with interests hostile to the United States. Such states are often capable of fielding sizable military forces that can cause serious imbalances in military power within regions important to the United States. Allies and friendly states often find it difficult to match the power of a potentially aggressive neighbor. To deter aggression, prevent coercion of allied or friendly governments, and defeat aggression should it occur, the Department must prepare U.S. forces to confront this scale of threat far from home, in concert with allies and friends, but unilaterally if necessary. Toward this end, the United States must have jointly trained and interoperable forces that can deploy quickly from a posture of global engagement—across great distances to supplement forward-stationed and forward-deployed U.S. forces—to assist a threatened nation, rapidly stop an enemy invasion, and defeat an aggressor, even in an environment of NBC weapons threat or use.

- **As a global power with worldwide interests, it is imperative that the United States, now and for the foreseeable future, be able to deter and defeat large-scale, cross-border aggression in two distant theaters in overlapping time frames, preferably in concert with regional allies.** Maintaining this core capability is central to credibly deterring opportunism—that is, to avoiding a situation in which an aggressor in one region might be tempted to take advantage when U.S. forces are heavily committed elsewhere—and to ensuring that the United States has sufficient military capabilities to deter or defeat aggression by an adversary that is larger, or under circumstances that are more difficult, than expected. This is particularly important in a highly dynamic and uncertain security environment. One can never know with certainty when or where the next major theater war will occur, who the next adversary will be, how an enemy will fight, who will join the United States in a coalition, or precisely what demands will be placed on U.S. forces. Indeed, history has repeatedly shown the unpredictability of such matters. A force sized, equipped, and sustained for deterring and defeating aggression in more than one theater enhances the United States’ ability to cope with the unpredictable and unexpected. Such a capability is the essential quality of a superpower and is vital to the credibility of the overall U.S. national security strategy. It also supports the Department’s continued engagement in shaping the international environment to reduce the chances that such threats will develop in the first place.

- **If the United States were to forego its ability to defeat aggression in more than one theater at a time, its standing as a global power, as the security partner of choice, and as the leader of the international community would be called into question.** Indeed, some allies would undoubtedly read a one-war capability as a signal that the United States, if heavily engaged elsewhere, would no longer be able to help defend their interests. Such a capability could also inhibit the United States from responding to a crisis promptly enough, or even at all, for fear of committing the bulk of U.S. forces and making itself vulnerable in other regions. This fact is also unlikely to escape the attention of potential adversaries. A one-theater war capacity would risk undermining both deterrence and the credibility of U.S. security commitments in key regions of the world. This, in turn, could cause allies and friends to adopt more divergent defense policies and postures, thereby weakening the web of alliances and coalitions on which the United States relies to protect its interests abroad.

The Revolution in Military Affairs and Joint Vision 2010

- The defense strategy’s fundamental challenge is to ensure that the Department of Defense can effectively shape the international security environment and respond to the full range of military challenges throughout the next 20 years. Timely efforts to prepare now for an uncertain future are essential to fulfilling that challenge. Accordingly, the Department has embarked on a transformation strategy to meet the challenges of the 21st century.

- The process of transformation begins with the defense strategy itself, which is built on an appreciation of the highly dynamic nature of the projected security environment and the challenges this environment poses for the United States. The process continues with an evaluation of the military missions and tasks that are needed to carry out that strategy. Some of these missions are enduring—such as protecting U.S. forces at home and abroad, in peacetime, crisis, and war—while others will emerge as the security environment evolves. There are also missions that, while not new, are being continually reassessed and refined. One example is the attention that the Department is now devoting to the tasks needed to rapidly halt an enemy’s initial attack in a major theater war. DoD continues to identify enduring, refined, and emerging military missions as part of its overall transformation strategy.

- Based on the essential missions and tasks it identifies, the Department may alter U.S. force structure to ensure its suitability. Building an optimal force sometimes requires adjustments to DoD’s use of manpower and resources. It may also require entirely new operational approaches to accomplish tasks, complemented at times by emerging technologies. The Department’s willingness to embrace the Revolution in Military Affairs (RMA)—to harness technology to ultimately bring about fundamental conceptual and organizational change—is critical at this stage of the transformation strategy.

- Today, the world is in the midst of an RMA sparked by leap-ahead advances in information technologies. There is no definitive, linear process by which the Department can take advantage of the information revolution and its attendant RMA. Rather, it requires extensive experimentation both to understand the potential contributions of emerging technologies and to develop innovative operational concepts to harness these new technologies. The marriage of advanced technology and new operational concepts can occur in two distinct yet equally valuable ways. First, a new concept to accomplish a critical operational task may emerge that requires the development and exploitation of a new technology, creating a requirements pull. Second, a promising new technology may spur the development of an operational concept to employ it effectively for one or more tasks, creating a technology push. Mature combinations of advanced technologies and innovative operational concepts result in new military doctrine and organizational reconfigurations that have the potential to transform the military at its core, fundamentally altering the way U.S. forces conduct the full range of military operations.

- While exploiting the Revolution in Military Affairs is only one aspect of the Department’s transformation strategy, it is a crucial one and thus constitutes Government Performance and Results Act Corporate-Level Goal 4. The advent of the current RMA provides the Department with a unique opportunity to transform the way in which it conducts the full range of military operations. Chapters 14 and 15 describe DoD’s efforts to vigorously pursue innovation and the RMA. This part of the annual report fulfills the Secretary of Defense’s requirement to provide the Senate Committee on Armed Services and the House of Representatives Committee on National Security a report on emerging operational concepts.

Information Superiority: The Backbone of the Revolution in Military Affairs

- Improved intelligence collection and assessment, as well as modern information processing and command and control capabilities, are at the heart of the military revolution currently under way.

- With the support of an advanced command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) common backbone, the United States will be able to respond rapidly to any conflict; warfighters will be able to dominate any situation; and day-to-day operations will be optimized with accurate, timely, and secure information.

- Just as much of the nondefense world has become increasingly interconnected through the growth of internetted communications, the DoD is working to provide a complementary, secure, open C4ISR network architecture.

- The six principal components of the evolving C4ISR architecture for 2010 and beyond are:
  - A robust multisensor information grid providing dominant awareness of the battlespace to U.S. commanders and forces.
  - Advanced battle-management capabilities that allow employment of globally deployed forces faster and more flexibly than those of potential adversaries.
  - A sensor-to-shooter grid to enable dynamic targeting and cuing of precision-guided weapons, cooperative engagement, integrated air defense, and rapid battle damage assessment and re-strike.
  - An information operations capability able to penetrate, manipulate, or deny an adversary’s battlespace awareness or unimpeded use of his own forces.
  - A joint communications grid with adequate capacity, resilience, and network management capabilities to support the above capabilities as well as the range of communications requirements among commanders and forces.
  - An information defense system to protect globally distributed communications and processing networks from interference or exploitation by an adversary.

Joint Vision 2010 - Part One

- In an effort to channel the vitality and innovation of the Department’s people and leverage technological opportunities in order to achieve new levels of effectiveness in joint military operations, the Chairman of the Joint Chiefs of Staff developed Joint Vision 2010.

- Joint Vision 2010 is a conceptual template that embraces information superiority and the technological advances that will transform traditional operational warfighting concepts into new concepts via changes in weapons systems, doctrine, culture, and organization. Through its focus on four new operational concepts that together aim at achieving full-spectrum dominance—dominant maneuver, precision engagement, full-dimension protection, and focused logistics—Joint Vision 2010 will lead to a more effective joint force.

Dominant Maneuver

- Enabling control of battlespace through the multidimensional application of information, engagement, and mobility capabilities, dominant maneuver allows U.S. forces to position and ultimately employ widely dispersed joint air, land, sea, and space forces. Dominant maneuver will provide U.S. forces with overwhelming and asymmetric advantages to accomplish assigned operational tasks.

- The dominant maneuver concept requires several enhanced capabilities. First, U.S. forces need to be lighter and more versatile. Flexible, responsive logistics and centralized combat service support at higher tactical levels will enable units to maneuver more quickly. Increasing jointness of operations at lower tactical levels will increase the forces’ versatility in achieving their objectives. Second, mobility and lethality must be increased through greater reliance on netted firepower. Third, dominant maneuver requires faster and more flexible strategic and tactical sealift and airlift.

Precision Engagement

- Precision engagement enables joint forces to shape the battlespace through near real-time information on the objective or target, a common awareness of the battlespace for responsive command and control, a greater assurance of generating the desired effect against the objective or target due to more precise delivery and increased survivability for all forces, weapons, and platforms, and the flexibility to rapidly assess the results of the engagement and to reengage with precision when required.

- Precision engagement requires more capable platforms and advanced weapons and munitions, in addition to the enabling support of an advanced C4ISR common backbone. It is based on intelligence about enemy forces and expert judgment regarding the correct force or weapon needed to generate the desired effects. Working together, the Services and DoD combat support agencies are striving to increase battlespace situational awareness and the effectiveness of precision munitions and to ensure that equipment provided to U.S. soldiers, sailors, airmen, and Marines is fully integrated into the advanced systems that support precision engagement. Precision engagement also extends to the full spectrum of operations in which U.S. forces are likely to participate. Precise, nonlethal weapons are currently under development for use in smaller-scale contingencies like noncombatant evacuations and peace operations.
Joint Vision 2010 - Part Two

Full-Dimensional Protection

- Protection for U.S. forces and facilities must be provided across the spectrum, from peacetime through crisis and war and at all levels of conflict. To achieve this goal, full-dimensional protection requires a joint architecture that is built upon information superiority and employs a full array of active and passive measures at multiple echelons. Full-dimensional protection will enable U.S. forces to safely maintain freedom of action during deployment, maneuver, and engagement.

- U.S. efforts to develop and deploy a multi-tiered theater air and missile defense architecture are a prime example of full-dimensional protection. U.S. forces also need improved protection against chemical and biological weapons. New chemical and biological weapons detectors, improved individual protective gear, and a greater emphasis on collective protection are all critical to the Department’s efforts to protect U.S. forces from chemical and biological weapons threats. Finally, full-dimensional protection includes defense against asymmetric attacks on information systems, infrastructure, and other critical areas vulnerable to nontraditional means of attack or disruption.

Focused Logistics

- Focused logistics integrate information superiority and technological innovations to develop state-of-the-art logistics practices and doctrine. This will permit U.S. forces to accurately track and shift assets, even while en route, thus facilitating the delivery of tailored logistics packages and more timely force sustainment. Focused logistics will also reduce the size of logistics support while helping to provide more agile, leaner combat forces that can be rapidly deployed and sustained around the globe.

- Initiatives such as Joint Total Asset Visibility and the Global Combat Support System will provide deployable, automated supply and maintenance information systems for leaner, more responsive logistics. These and other DoD-wide programs, as well as a host of Service initiatives, will be capable of supporting rapid unit deployment and employment and will better support the battlefield commander by eliminating redundant requisitions and reducing delays in the shipment of essential supplies.

US Visions of Future Warfare by Service - Part One

Army
Through Army Vision 2010, the Force XXI process, and the Army After Next process, the Army is identifying new concepts of land warfare that have radical implications for its organization, structure, operations, and support. Lighter, more durable equipment will enhance deployability and sustainability. Advanced information technologies will help the Army conduct rapid, decisive operations. The force will be protected by advanced but easy-to-use sensors, processors, and warfighting systems to ensure freedom of strategic and operational maneuver. A global, distribution-based logistics system will take maximum advantage of technological breakthroughs, substituting velocity of logistics for mass. The Army will require flexible, highly tailorable organizations—from small units to echelons above corps—to meet the diverse needs of future operations and to reduce the lift requirements for deployment.

Navy
The Department of the Navy’s future vision of warfare is delineated in Forward . . . From the Sea. From this is derived the new Navy Operational Concept, which identifies five fundamental and enduring roles: sea control and maritime supremacy, power projection from sea to land, strategic deterrence, strategic sealift, and forward naval presence. In the future, the Navy will fulfill these roles with vastly enhanced capabilities. The Navy has embraced an RMA concept called network-centric warfare. It involves the use of widely dispersed but robustly networked sensors, command centers, and forces to produce significantly enhanced massed effects. Combining forward presence with network-centric combat power, the Navy will reduce timelines, decisively alter initial conditions, and seek to head off undesired events before they start. In short, the Navy will have the ability to influence events ashore from the sea, quickly, directly, and decisively. The naval contribution to dominant maneuver will use the sea to gain advantage over the enemy, while naval precision engagements will use sensors, information systems, precisely targeted weapons, and agile, lethal forces to attack key targets. Naval full-dimensional protection will address the full spectrum of threats, providing information superiority, air and maritime superiority, antisubmarine and surface warfare, theater air and missile defense, and delivery of naval fires. Finally, naval forces will be increasingly called upon to provide sea-based focused logistics for joint operations in the littorals.

Air Force
Global Engagement: A Vision for the 21st Century Air Force, the Air Force’s vision of air and space warfare through 2020, calls for maintaining and improving six core competencies built on a foundation of quality personnel and integrated by global battlespace awareness and advanced command and control. Air and space superiority will allow all U.S. forces freedom from attack and freedom to attack, while the Air Force’s ability to attack rapidly anywhere on the globe will continue to be critical. Rapid global mobility will help ensure the United States can respond quickly and decisively to unexpected challenges to its interests. The Air Force’s precision engagement core competency will enable it to reliably apply selective force against specific targets simultaneously to achieve desired effects with minimal risk and collateral damage. Information superiority will allow the Air Force to gain, exploit, defend, and attack information while denying the adversary the ability to do the same. Agile combat support will allow combat commanders to improve the responsiveness, deployability, and sustainability of their forces.
US Visions of Future Warfare by Service - Part One

Marine Corps
From the Navy’s vision of future warfare, contained in Forward . . . From the Sea, the Marine Corps derives its vision for future sea-based power projection operations. These are described in the operational concepts of Operational Maneuver From the Sea (OMFTS) and Ship-to-Objective Maneuver (STOM). The underpinning for both of these concepts is maneuver warfare, which demands tactically adaptive, technologically agile, and opportunistic forces. As such, OMFTS and STOM-configured forces must be able to rapidly reorganize and reorient in response to changing tactical opportunities—while dispersed both at sea and ashore over much greater distances—along the full spectrum of future operational environments. An important assumption for the OMFTS Marine Corps is that it will increasingly need to operate in urban or suburban environments. To make this vision a reality, the Marine Corps will need to rapidly assimilate improvements in warfighting capabilities gained through the RMA. Leveraging the increasing lethality of long-range precision weapons, the greater range and speed of maneuver made possible by new mobility technologies, and opportunities afforded by information dominance forms the foundation for these concepts at both the individual and unit levels.

Preventing or Reducing Conflicts and Threats.

- U.S. military forces and other DoD resources can be critical to efforts to prevent or reduce threats and conflicts. Their role in conflict prevention is a key rationale for the U.S. commitment to maintain forces overseas, conduct peacetime engagement activities, and fund various policy initiatives.

- Such preventive measures include focused efforts to:
  - Actually reduce or eliminate NBC capabilities, as has been done with the U.S.-North Korean Agreed Framework and the Cooperative Threat Reduction program with Russia, Ukraine, Belarus, Moldova, and Kazakhstan.
  - Discourage arms races and the proliferation of NBC weapons, as is being done by DoD efforts to control exports of proliferation-related equipment and technologies and monitor and support arms control agreements such as the Nuclear Non-Proliferation Treaty and the Missile Technology Control Regime.
  - Prevent and deter future terrorism and reduce U.S. vulnerability to terrorist acts through DoD efforts to enhance intelligence collection capabilities and protect DoD personnel and critical infrastructure.
  - Deter the production and flow of illegal drugs into the United States, using DoD manpower and assets in the Joint Interagency Task Forces—overseas and in international air and sea space contiguous to the U.S. borders—to directly assist law enforcement agencies seize over 100 metric tons of cocaine each year.
  - Lessen the conditions for conflict, as has the deployment of U.S. forces to Macedonia.
  - Relatively small and timely investments in such targeted prevention measures can yield disproportionate benefits, often mitigating the need for a more substantial and costly U.S. response later.
  - Deterring Aggression and Coercion. The third aspect of the military’s key role in shaping the international security environment is deterring aggression and coercion in key regions of the world on a day-to-day basis through the peacetime deployment of U.S. military forces abroad. The United States’ ability to deter potential adversaries in peacetime rests on several factors:
    - A demonstrated will and ability to uphold U.S. security commitments when and where they are challenged.
    - A declaratory policy that effectively communicates U.S. commitments and the costs to potential adversaries who might challenge these commitments.
    - Conventional warfighting capabilities that are credible across the full spectrum of military operations. This credibility is evidenced by U.S. forces and equipment strategically stationed or deployed forward, rapidly deployable power-projection forces, the U.S. ability to gain timely access to critical infrastructure overseas, and the demonstrated ability to form and lead effective military coalitions.
    - U.S. nuclear posture also contributes substantially to the ability to deter aggression in peacetime. The primary role of U.S. nuclear forces in the current and projected security environment is to deter aggression against the United States, its forces abroad, and its allies and friends. Although the prominence of nuclear weapons in the nation’s defense posture has diminished since the end of the Cold War, nuclear weapons remain important as one of a range of responses available to deal with threats or use of NBC weapons against U.S. interests. They serve as a hedge against the uncertain futures of potentially hostile nuclear powers and as a means of upholding U.S. security commitments to allies.